# Understanding adolescent information behavior from the perspective of informed decision making process

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SVEUČILIŠTE U ZADRU

POSLIJEDIPLOMSKI SVEUČILIŠNI STUDIJ

DRUŠTVO ZNANJA I PRIJENOS INFORMACIJA

**Alica Kolarić**

# UNDERSTANDING ADOLESCENT INFORMATION BEHAVIOR FROM THE PERSPECTIVE OF INFORMED DECISION-MAKING PROCESS

**Doktorski rad**

Zadar, 2020.

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Ja, Alica Kolarić**,** ovime izjavljujem da je moj **doktorski** rad pod naslovom **Understanding adolescent information behavior from the perspective of informed decision making process** rezultat mojega vlastitog rada, da se temelji na mojim istraživanjima te da se oslanja na izvore i radove navedene u bilješkama i popisu literature. Ni jedan dio mojega rada nije napisan na nedopušten način, odnosno nije prepisan iz necitiranih radova i ne krši bilo čija autorska prava.

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Sadržaj mojega rada u potpunosti odgovara sadržaju obranjenoga i nakon obrane uređenoga rada.

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# 1. Introduction

This dissertation rests on the belief that information is essential for young people's functioning and that it affects the quality of their lives.[1] Adolescence is a sensitive period of change, i.e. leaving childhood behind, and gradually taking over the responsibility for managing one's own life. It is a time of choices, *firsts*, and transitions – a time of making one's first major life decisions and of experiencing one's first taste of independence.[2] Moving towards adulthood, adolescents grow in autonomy, leaving behind the authority of parents and others who used to lead them through life, and starting to have their own ideas about living. As they become more autonomous, adolescents need to carry the burden of making their own decisions, such as who to look up to, who to become in the future, what life goals to pursue and how to achieve them. The world seems big, and life seems long – one only needs to choose, and things will work out somehow. After all, independence, autonomy and all the opportunities are laying on the horizon. However, decisions adolescents make shape their future, and some of them may have a long-term positive or negative consequences. One decision that is recognized as crucial for one's life is the decision on what career to pursue. Harmful effects of some decisions related to risky behaviors draw the attention of those who care about youth's well-being and poses various challenges, often linked to the time of adolescence. Therefore, we educate them on topics such as drugs and alcohol misuse, safe sexual behavior, dating violence, and others. General challenges of living in the modern society include the phenomena of modern consumerism and the omnipresence of advertising, which exposes adolescents to stories about *musts*, such as new gadgets, new clothes, makeovers, travel, and many other things, suggesting that having them will make life more fun and interesting, bring them greater freedom or bring some other positive life change. All these things have a huge impact on what young people want for themselves and where they see themselves in a year, five years, and generally in the future. Many other challenges lie before young people, such as how to get good grades and enroll into the university of their choice, whether to go ahead with some plan, that may not seem completely legal, how to deal with teen pregnancy, how to cope with dysfunctional family and keep your own life on the right track, and a multitude of others. Generally, adolescence is a period of physical and psychical maturation and social integration in the adult world, which is often accompanied by crises and conflicts.[3] Some are lucky enough to have smaller concerns which may be solved easier, but some have greater challenges to cope with. Eventually, they all need to make certain decisions necessary for dealing with life challenges. The capacity for making sound decisions is an essential element of the human condition. Those who have better decision-making skills, and know more about the matters they are dealing with, have better chances for solving them successfully. On the other hand, the lack of appropriate information diminishes one's chances to make decisions with satisfying outcomes. The way adolescents interact with information, whether they are well-informed and whether they understand well the encountered decision situation, impacts their decisions and decision outcomes and,

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[1] Cf. Todd, Ross J. Adolescents of the information age: patterns of information seeking and use, and implications for information professionals. // School libraries worldwide, 9, 2(2003), p. 27. URL: http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.548.1775&rep=rep1&type=pdf (2019-9-8)
[2] Cf. Kaplan, Paul S. Adolescence. Boston, New York: Houghton Mifflin Company, 2004. P. 13-24.
[3] Cf. Bastašić, Zlatko. Pubertet i adolescencija. Zagreb: Školska knjiga, 1995. P. 41-115.

eventually, the course of their lives. The concept of the informed decision suggests that sound decisions should be based on relevant knowledge, consistent with one's values and acted upon.[4] We may add that the knowledge which serves as a basis for well-informed decision needs to be based on good-quality information, i.e. accurate, current, useful and important.[5] However, living in a modern environment which is oversaturated with information, and being conditioned by general characteristics of humans such as limited cognitive capacities and influence of emotions, makes becoming well-informed quite a complex issue, far away from straightforward information search reagrding certain topic. Some argue that we live in the worst situation in history when it comes to learning how to make our own informed decisions.[6] In today's complex information environment, information is produced in many ways that go beyond the traditional publishing process. In the world of online information explosion, information can be created and shared by literally everyone, and much of the information on the Web is user-produced, making the assessment of the acquired information rather problematic. Screen media dominate everyday life communication, with more and more people having daily access to smartphones, other personally owned digital devices and laptops, which offer the most convenient way to seek information. Information sources such as social media play large and growing role in monitoring of what is going on in local communities and around the globe, while the phenomenon of fake news that has been drawing a lot of attention in the past few years, reminds us how false or misleading information found online may have very real influence on the society. It is argued that in such information environment, information professionals such as librarians need to strongly pursue their traditional role of information educators and teach information users how to think critically and evaluate the information they acquire and use in various life areas. Nowadays, information educators have to empower their users not only to effectively access information but also to understand which information to trust.[7] Having strong information literacy skills is crucial for successful management of personal lives, setting life goals and working towards their achievement, making decisions and solving problems, and for effective participation in a democratic society as well. How one navigates the world of information influences his or her decisions, attitudes, behaviors and, eventually, quality of life. Taking full advantage of life opportunities, including educational opportunities, making dietary, health, career, voting, and other everyday life decisions, as well as an engagement in civic and political processes, requires the capacity to acquire, understand and evaluate information, in order to make informed decisions. To develop the ability to take advantage of life opportunities, and to possibly avoid taking some wrong ways, one needs to be an effective consumer of information which support sound decision making.[8] It is well known that young people, although living their entire lives in a computerized world and using information and

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[4] Cf. Marteau, Theresa M.; Dormandy, Elizabeth; Michie, Susan. A measure of informed choice. // Health expectations 4, 2(2001), p. 99. URL: https://onlinelibrary.wiley.com/doi/epdf/10.1046/j.1369-6513.2001.00140.x (2019-10-20)

[5] Cf. Savolainen, Reijo. Everyday information practices: a social phenomenological perspective. Lanham; Toronto; Plymouth: The Scarecrow Press, 2008. p. 152.

[6] Cf. Todaro, Julie B. Foreword. // Information literacy and libraries in the age of fake news / Denise E. Agosto, editor. Santa Barbara; Denver: Libraries Unlimited, 2018. P. x.

[7] Cf. Agosto, Denise E. An introduction to information literacy and libraries in the age of fake news. // Information literacy and libraries in the age of fake news / Denise E. Agosto, editor. Santa Barbara; Denver: Libraries Unlimited, 2018. . 5-9.

[8] Cf. Winston, Mark. From information literacy to full participation in society: through the lens of economic inequality. // Information literacy and libraries in the age of fake news / Denise E. Agosto, editor. Santa Barbara; Denver: Libraries Unlimited, 2018. P. 52-53.

communication technology devices, are not information experts in terms of skilled accessing, critical evaluation and effective use of information. This is why it is crucial for us to understand how young people navigate their information environments and interact with information when they make decisions in various areas of their everyday life. The understanding of behaviors young people employ when acquiring information which supports their decision-making process, how they choose where to look for information, and how they evaluate its quality, is exceptionally important. However, adolescent information behavior as a part of the decision-making process is a relatively under-examined area in the library and information science field, both in the international context and in Croatia.[9] What we know so far is that adolescents employ a range of active and passive information behaviors when dealing with life challenges, concerns and decisions, favor people as information sources, but use the benefits of convenient access to online information as well, and that their endeavors to evaluate acquired information vary across the population and in many cases are seldom, modest and insufficient. To contribute to the development of aids and tools which would help adolescents in learning how to be better decision-makers and how to make well-informed decisions, first, we need to develop a deeper understanding of their information behavior and become aware of how they interact with information.

Young people are a population that needs to be in the constant focus of scholarly interest, being the most dynamic and vital part of contemporary society, which is characterized by fundamental and far-reaching changes, in Croatia and on the global level. Scholarly endeavors that seek to understand behaviors and attitudes of adolescents in today's Croatia focus on the topics such as youth professional aspirations and career choice[10], problematic behaviors[11], sexuality and related risk-taking behavior in adolescence and appropriate education[12], dating

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[9] Cf. Kolarić, Alica; Cool, Colleen; Stričević, Ivanka. Adolescent information behaviour in everyday life decision making: a literature review. // Vjesnik bibliotekara Hrvatske 61, 1(2018), 83-125. URL: http://www.hkdrustvo.hr/vjesnik-bibliotekara-hrvatske/index.php/vbh/article/view/648 (2019-12-14)

[10] Cf. e.g. Babarović, Toni; Šverko, Iva. Profesionalna zrelost učenika viših razreda osnovnih škola. // Suvremena psihologija 14, 1(2011), p. 91-108.; Tafra, Vitomir, Elezović, Ines; Sertić, Ivana. Percepcija karijere poduzetnika kod srednjoškolskih učenika strukovnih škola u Republici Hrvatskoj. // Učenje za poduzetništvo 2, 2(2012), p. 227-234.; Ilišin, Vlasta; Potočnik, Dunja. Profesionalne i životne aspiracije studenata Zagrebačkoga sveučilišta. // Sociologija i prostor 46, 3-4(2008), p. 285-309.; Babić, Dragutin; Lajić, Ivan. Obrazovne, radne i profesionalne težnje mladih otočana–primjer zadarskih otoka (Iž, Dugi otok, Ugljan). // Migracijske i etničke teme 20, 2-3(2004), p. 259-282.

[11] Cf. e.g. Livazović, Goran. Povezanost medija i rizičnih ponašanja adolescenata. // Kriminologija & socijalna integracija: časopis za kriminologiju, penologiju i poremećaje u ponašanju 20, 1(2012), p. 1-22.; Ricijaš, Neven; Dodig Hundrić, Dora; Huić, Aleksandra; Kranželić, Valentina. Youth gambling in croatia-frequency of gambling and the occurrence of problem gambling. // Kriminologija & socijalna integracija: časopis za kriminologiju, penologiju i poremećaje u ponašanju 24, 2(2016), 48-72.; Ricijaš, Neven; Kranželić, Valentina; Leskovar, Lorena. Prevalencija i učestalost konzumiranja psihoaktivnih tvari mladih u odgojnim ustanovama–razlike s obzirom na vrstu ustanove i znanje o psihoaktivnim tvarima. // Kriminologija & socijalna integracija: časopis za kriminologiju, penologiju i poremećaje u ponašanju 27, 1(2019), p. 3-34.

[12] Cf. e.g. Štulhofer, Aleksandar. Terra Incognita? Adolescentska spolnost i rizično ponašanje. // Društvena istraživanja: časopis za opća društvena pitanja 8, 2-3(40-41) (1999), p. 267-285.; Štulhofer, Aleksandar. Sociokulturni i psihosocijalni aspekti rizičnoga seksualnog ponašanja. // Medicus 18, 1(2009), p. 123-129.; Benković, Vanesa; Štulhofer, Aleksandar; Baćak, Valerio. Konstrukcija i evaluacija višedimenzionalnog instrumenta za procjenu zapreka uporabi kondoma. // Društvena istraživanja: časopis za opća društvena pitanja 20, 3(113) (2011), p. 751-770.; Petani, Rozana; Vulin, Anđela. Spolno ponašanje adolescenata, njihova informiranost i mišljenje o seksualnosti. // Acta Iadertina 15, 1(2018), p. 35-58.

violence[13] eating disorder risk[14], adolescent-peer-parents relationship dynamics[15], overall challenges of growing up and challenges specifically posed by modern and global society[16], and others. The Institute for Social Research in Zagreb published a series of studies that depict the population in the process of learning and finding ways to navigate and self-actualize in the world of adults, facing challenges of social integration in Croatian contemporary. The social context of their maturation is turbulent and relatively discouraging, characterized by direct and undirect war consequences, including long-lasting economic and social consequences, rising unemployment (especially among young people), a declining standard of living, and never-ending world-view and ideologically-political disputes.[17] What seems to characterize the youth in Croatia is the process of individualization on all levels, from life strategies to interpersonal relationships. They approach long-term insecure and unpredictable social circumstances pragmatically, relying on themselves and family resources when facing challenges, and in achieving life goals.[18] Moreover, they are characterized by the decline in enthusiasm and aspirations, and a value polarisation between traditional and modernist orientations, arising from value- and ideology-related turbulence in Croatian society.[19] Overall, this body of research depicts young people in Croatia as a heterogeneous group, differentiating by the level of education, which affects their social status, patterns of behavior, values, and attitudes[20]. The interest for youth well-being is framed by the national youth program (2003-2008, 2009-2013, 2014-2019, and 2019-2025, which is in progress), a government strategic document which aims at improving the activities of state administration bodies and public institutions which contribute to meeting the needs of young people and to increasing their life quality with the purpose of optimal social integration.[21] At the same time, the Croatian school system, which is

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[13] Cf. Ajduković, Marina; Ručević, Silvija. Nasilje u vezama mladih. // Medicus 18, 2(2009), p. 217-225.; Ajduković, Dean; Löw, Ajana; Sušac, Nika. Rodne razlike i prediktori partnerskog nasilja u mladenačkim vezama. // Ljetopis socijalnog rada 18, 3(2011), p. 527-553.

[14] Cf. e.g. Pokrajac-Bulian, Alessandra, Mohorić, Tamara; Đurović, Dušanka. Odstupajuće navike hranjenja, nezadovoljstvo tijelom i učestalost provođenja dijete kod hrvatskih srednjoškolaca. // Psihologijske teme 16, 1(2007), p. 27-46.; Ambrosi-Randić, Neala; Pokrajac-Bulian, Alessandra; Ogresta, Jelena; Lacovich, Mauro. Poremećaji hranjenja i internet: analiza sadržaja hrvatskih web stranica. // Psihologijske teme 17, 1(2008), p. 37-55.; Batista, Maja; Žigić Antić, Lana; Žaja, Orjena; Jakovina, Trpimir; Begovac, Ivan. Prediktori rizika za razvoj poremećaja jedenja u adolescentica s anoreksijom nervozom. // Acta clinica Croatica 57, 3(2018), p. 399-410.; Livazović, Goran; Mudrinić, Iva. Nezadovoljstvo tjelesnim izgledom i ponašanja povezana s poremećajima u prehrani adolescenata. // Kriminologija & socijalna integracija: časopis za kriminologiju, penologiju i poremećaje u ponašanju 25, 1(2017), p. 71-89.

[15] Cf. Đuranović, Marina. Obitelj i vršnjaci u životu adolescenata. // Napredak: časopis za pedagogijsku teoriju i praksu 154, 1-2(2013), p. 31-46.

[16] Cf. Vrcelj, Sofija. Izazovi kojima su pedagozi izloženi u savjetodavnom radu-globalizacijski kontekst i (anti) vrijednosti. // Školski vjesnik: časopis za pedagogijsku teoriju i praksu 65, 1(2016), p. 59-73.; Ilišin, Vlasta. Vrijednosti mladih u Hrvatskoj. // Politička misao 48, 03(2011), p. 82-122.

[17] Cf. Ilišin, Vlasta; Spajić Vrkaš, Vedrana. Uvod: konceptualni okvir istraživanja. // Generacija osujećenih. Mladi u Hrvatskoj na početku 21. stoljeća. / urednice Vlasta Ilišin, Vedrana Spajić Vrkaš. Zagreb: Institut za društvena istraživanja u Zagrebu, 2017. P. 11-18.

[18] Ibid., p. 20-21.

[19] Cf. Gvozdanović, Anja; Ilišin, Vlasta; Adamović, Mirjana; Potočnik, Dunja; Baketa, Nikola; Kovačić, Marko. Youth study Croatia 2018/2019. Friedrich-Ebert-Stiftung e. V., 2019. URL: https://www.fes-croatia.org/fileadmin/user_upload/FES_JS_KROATIEN_EN_WEB.pdf (2020-1-2)

[20] Cf. Ilišin, Vlasta; Bouillet, Dejana; Gvozdanović, Anja; Potočnik, Dunja. Mladi u vremenu krize: prvo istraživanje IDIZ-a i Zaklade Friedrich Ebert o mladima= Youth in a time of crisis: first IDIZ-Friedrich-Ebert-Stiftung Youth Survey, 2013. URL: http://www.idi.hr/wp-content/uploads/2014/03/mladi_uvk.pdf (2019-12-29)

[21] Cf. Republika Hrvatska, Ministarstvo za demografiju, obitelj, mlade i socijalnu politiku. URL: https://mdomsp.gov.hr/istaknute-teme/mladi-i-volonterstvo/mladi-9015/nacionalni-program-za-mlade-9024/nacionalni-program-za-mlade-novo/10280 (2020-1-2)

undergoing a rather turbulent transformation itself, does not provide systematic teaching of young people on how to become better decision-makers and make well-informed decisions.

Described circumstances prompted this dissertation which seeks to contribute to the understanding of adolescent information behavior in the context of making everyday life decisions, and to help in developing strategies and methods for teaching adolescents how to make informed decisions. It is founded on the belief that making well-informed decisions would positively affect their lives and contribute to their overall well-being.

The first part of the dissertation offers the theoretical and conceptual framework for the study. Underpinning theories and concepts include the concepts of information need, information, information behavior, Savolainen's concepts of everyday life information seeking (ELIS) and everyday life information practices, the concepts of credibility and cognitive authority, and Simon's decision-making theory. Overall, the theoretical part of the dissertation depicts a decision-making situation as a need-creating situation in circumstances in which one's initial state of knowledge about the decision is somehow lacking and is insufficient for making a well-informed decision. Considering adolescents' age and limited experience, it is likely that in most of their decisions, they lack knowledge. Effective information behavior should provide appropriate information that would increase one's state of knowledge and contribute to making an informed decision. The second part of the dissertation offers a brief overview of the existing body of research on adolescent needs and adolescent information behavior, with special attention given to adolescent information behavior in relation to everyday life challenges, concerns, and decisions. In the research part of the dissertation, adolescent information needs arising from everyday life decisions, and accompanying information behavior were investigated in the three-phase, sequential mixed method research, drawing on the social phenomenological point of view. The research was conducted among high-school students in the city of Rijeka, Croatia.

It is expected that this dissertation will offer valuable insights and contribute to a deeper understanding of adolescent information needs and information behavior in the context of making everyday life decisions. It will systematize the existing body of knowledge on the research topic and reflect upon it from the view of the research findings. Moreover, it will shed new light on an important area that has not been explored in Croatia yet and has been insufficiently explored in the international scholar community. It is also expected that the results will contribute to the development of strategies and methods for teaching decision-making skills to adolescents, information literacy being one of them, to help them make well-informed, sound decisions. Lastly, it will offer the methodological framework and strategy, built for conducting the research among the sensitive population of adolescents about their everyday life issues, to be used in some future studies.

Finally, it needs to be noted that being a librarian, the researcher has chosen the problem of adolescent information behavior in relation to making everyday life decisions to deal with, aware of how challenging it is to successfully navigate today's information environment characterized by a wealth of available information and information overload. This perspective might have yielded some personal assumptions, values, and biases.

# 2. Literature review

This chapter presents a review of the theories and the existing body of research which form the context for this dissertation. More specifically, it discusses the conceptual and theoretical framework which consists of prominent information needs and information behavior theories within the information science field, primarily Wilson's information behavior theory and Savolainen's everyday life information seeking concept, but also others, and of Simon's decision-making theory. It also reviews the highlights of the existing body of research on adolescent information behavior and the resulting concepts and theories, giving more attention to the research on adolescent information needs and everyday life information behavior.

## 2.1. The conceptual and theoretical framework

This section reviews key concepts and theories of information need and human information behavior areas of the library and information science field which underpin this work, as conceptualized by T. Wilson, R. Savolainen and other prominent scholars whose work provides the framework for this dissertation. It also offers an understanding of the decision-making process, as provided by prominent scholar H. Simon.

### 2.1.1. Information need

Information need is a term that does not have an agreed-upon definition. According to *Dictionary for library and information science*, it is a gap in one's knowledge, and if the gap is experienced "at the conscious level as a question, [it] gives rise to a search for an answer".[22] Some argue that what we call *information need* can be seen as an expression of some other kind of need and that it is, in fact, a secondary need, unlike primary and basic need from which it originates (e.g. if we need information on the nearest pizza restaurant, it is an expression of a need for a food).[23] Wilson and Nicholas argue that information needs arise from basic human needs: psychological, affective and cognitive needs.[24] Wilson suggests that people's information needs should not be viewed as some fundamental, innate, cognitive or emotional *need* for information. Instead, the concept should be based on the understanding of information (i.e. facts, data, opinion, advice) as means towards the end of satisfying people's fundamental needs.[25] Despite not having an agreed-upon definition, the concept has been widely used in the library and information science and is commonly seen as motivation for people's engagement

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[22] Cf. Reitz, Joan M. Online dictionary for library and information science. URL: https://www.abc-clio.com/ODLIS/odlis_i.aspx (2018-9-30)

[23] Cf. Bawden, David; Robinson, Lyn. Introduction to information science. London: Facet publishing, 2012. P. 189., Case, Donald O. Looking for information: a survey of research on information seeking, needs, and behavior. Amsterdam: Elsevier/Academic Press, 2007. P. 70.

[24] Cf. Wilson, Tom. D. On user studies and information needs. // Journal of Documentation 62, 6(2006), p. 658-670. URL: https://www.researchgate.net/profile/Tom_Wilson25/publication/249364883_On_User_Studies_and_Information_Needs/links/575086fd08ae1f765f93bc30.pdf (2017-7-13); Shenton, Andrew K.; Dixon, Pat. The nature of information needs and strategies for their investigation in youngsters. // Library & Information science research 26(2004b), p. 297.

[25] Cf. Wilson. On user., p. 665.

in information seeking.[26] Moreover, the fundamental assumption of theoretical conceptualization and research on information seeking is that people have information needs.[27] Case defines the concept of information need as "a recognition that your knowledge is inadequate to satisfy a goal that you have".[28] Bawden and Robinson explain that information needs are a part of overall information behavior and can be understood only in the wider context of the information use, for example in work or in life. Also, information need may be expressed implicitly or explicitly.[29] Some of the authors who are often cited in discussions on the concept are R. Taylor, N. Belkin, C. Kuhlthau and B. Dervin.[30] Taylor is known for his elaboration on how people develop their questions through four levels of information need when seeking information from a librarian. The levels include: (1) the *visceral* need which is "the actual, but unexpressed need for information" and may be unconscious and accompanied with feeling of dissatisfaction; (2) the *conscious* need which is "within-brain description of the need"; (3) the *formalized* need which is "the formal statement of the need and (4) the *compromised* need which is "the question as presented to the information system".[31] Belkin develops the concept of *anomalous state of knowledge (ASK)* to explain how information need arises from recognized anomaly or inadequacy (such as gaps, lacks, uncertainty, incoherence) in person's state of knowledge.[32] Kuhlthau draws attention to the role of affect in information behavior and shows that uncertainty which initiates the information seeking process is likely to be accompanied by feelings of anxiety.[33] In Dervin's Sense-making theory information needs arise out of recognized gaps that are inherent to reality. Sense-making is a theory for methodology, an approach to studying human sense-making as a way of moving through life by making sense out of encountering life situations.[34] Four life situations may cause people to stop in their movement across time-space: decisions (a choice between alternatives), problems, worries, and comprehending.[35] Over the years, Sense-making methodology has been expanded and transformed notably and has been used as a conceptual tool in plenty of information seeking

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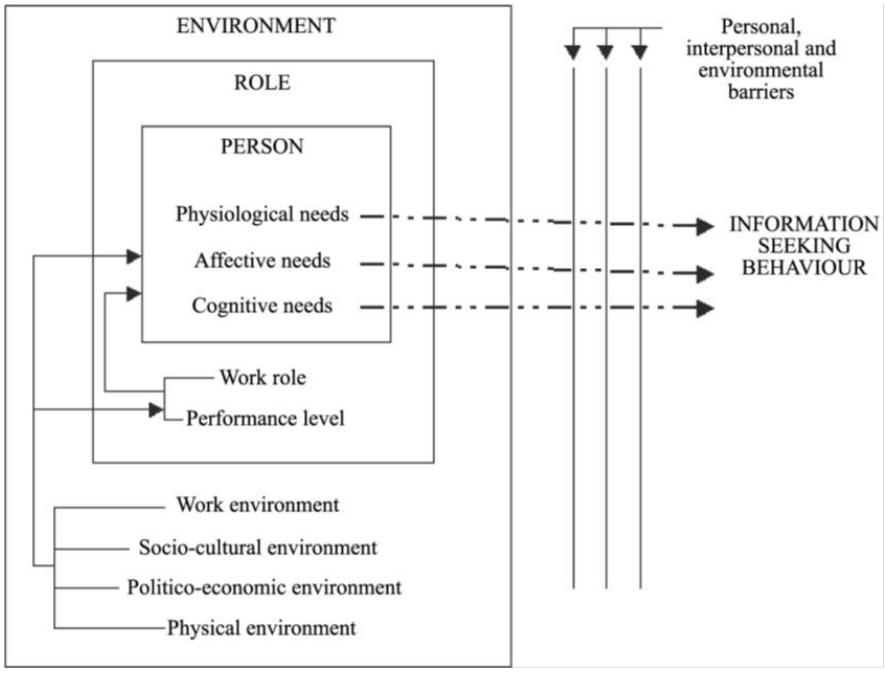
[26] Cf. Case, D. O. Op. cit., p. 69.
[27] Ibid., p. 76.
[28] Ibid., p. 5.
[29] Cf. Bawden, David; Robinson, Lyn. Op. cit, p. 189.
[30] Cf. Case, Donald O. Op. cit., p. 71-82.
[31] Cf. Taylor, Robert S. Question-negotiation and information seeking in libraries. / College & Research Libraries 76, 3(2015), p. 255. URL: http://crl.acrl.org/index.php/crl/article/viewFile/16421/17867 (2017-7-13); Taylor, Robert S. The process of asking questions. // Journal of the Association for Information Science and Technology 13, 4(1962), p. 392.
[32] Cf. Belkin, Nicholas J. Anomalous states of knowledge as a basis for information retrieval. / Canadian journal of information science 5, (1980), p. 133-143. URL: http://tefkos.comminfo.rutgers.edu/Courses/612/Articles/BelkinAnomolous.pdf (2017-7-13); Belkin, Nicholas J.; Oddy, Robert N.; Brooks, Helen M. ASK for information retrieval: Part I. Background and theory. // Journal of documentation, 38, 2(1982), p. 61-71. URL: http://surface.syr.edu/cgi/viewcontent.cgi?article=1150&context=istpub (2017-7-13)
[33] Cf. for example Kuhlthau, Carol C. Seeking meaning: a process approach to library and information services. Norwood, N.J.: Ablex, 1993.; Kuhlthau, Carol C. Inside the search process: information seeking from the user's perspective. // Journal of the American society for information science 42, 5(1991), p. 361-371. URL: http://tefkos.comminfo.rutgers.edu/Courses/612/Articles/Kuhlthau_Inside_91.pdf (2017-7-13)
[34] Cf. Dervin, Brenda. What methodology does to theory: Sense-making methodology as exemplar. // Theories of information behavior / Edited by Karen E. Fisher; Erdelez, Sanda; McKechnie, Lynne. Medford, New Jersey: Information Today, 2005. P. 26.
[35] Cf. Dervin, Brenda. Strategies for dealing with human information needs: information or communication?. // Journal of Broadcasting and Electronic Media 20, 3(1976), p. 332.

studies.[36] The Sense-making approach rests on a set of theoretical premises which are basis for set of methodological moves[37] and present "baseline assumptions about the nature of reality, the human relationship to that reality, the nature of information, human seeking of and use of information, the nature of communicating, and the most useful ways of research communicating behavior".[38] The nature of reality is seen as incomplete and in constant change, characterized by discontinuities and gaps. Using the metaphor of gap-bridging, Dervin illustrates how a need for information is caused by a gap in a person's lacking knowledge in the situation, which disables a person to make sense out of the situation.[39] Although she does not explicitly use the term "information needs", some authors, for example, Poston-Anderson and Edwards and Markwei and Rasmussen, interpret the *cognitive gap* as an *information need* and use it in their work.[40] In this theoretical context, information needs arise from recognized gaps in reality and induce information seeking behavior. In his work first published in 1981, Wilson argues that although information needs are largely presented in cognitive terms, information seeking can be induced by different types of personal needs: psychological, affective and cognitive.[41] He created a scheme to illustrate the emergence of information needs and accompanying information seeking behavior from personal needs in a wider context of an individual's environment, and the impact of social role and of barriers to information seeking (Figure 1).

**Figure 1 - Information needs and seeking**[42]




[36] Cf. Tidline, Tonyia J. Dervin's Sense-making. // Theories of information behavior / Edited by Karen E. Fisher; Erdelez, Sanda; McKechnie, Lynne. Medford, New Jersey: Information Today, 2005. P. 113-117.
[37] Cf. Dervin, Brenda. What methodology.
[38] Cf. Dervin, Brenda. An overview of sense-making research: concepts, methods and results. 1983. URL: https://www.ideals.illinois.edu/bitstream/handle/2142/2281/Dervin83a.htm (2017-7-18)
[39] Ibid.
[40] Cf. Poston-Anderson, Barbara; Edwards, Susan. The Role of information in helping adolescent girls with their life concerns. // School Library Media Quarterly 22, 1(1993), 25.; Markwei, Evelin; Rasmussen, Edie. Everyday life information-seeking behavior of marginalized youth: a qualitative study of urban homeless youth in Ghana. // International Information & Library Review 47, 1-2(2015), p. 12. URL: https://www.streetchildren.org/wp-content/uploads/2015/12/Everyday-Life-Information-Seeking-Behavior-of.pdf (2019-18-9)
[41] Cf. Wilson, Tom D. On user., p. 663.
[42] Ibid.

Overall, we may say that the concept of information needs is conceptualized as a gap or a lack in knowledge which is perceived as inadequate to serve some purpose or to reach some goal. It is accompanied by uncertainty and dissatisfaction and is a motivation for people's engagement in information seeking. Varlejs summarizes such an understanding of the concept by stating that information need "is the perception that there is an uncertainty, a gap or conflict in knowledge, a failure to make sense", and that it arises from a problematic situation.[43]

For the purpose of the study of young people's information behavior, Shenton and Dixon define information need as "the desire or necessity to acquire the intellectual material required by a person to ease, resolve or otherwise address a situation arising in his or her life." In this context, information is "perceived to include facts, interpretations, advice, and opinions".[44] However, information needs are not observable directly, as they exist only *inside of a person's head*. This is why information needs can be elicited only by a person reporting on his/her needs and may stay out of a researcher's reach if a person is unconscious of his/her needs, or is not able or not willing to articulate them.[45] Many authors point out the fact that people are not necessarily conscious of their information needs. Information need can be *delitescent* or *dormant*, as noted by Cronin[46], *unconscious* and *unexpressed*, as noted by Taylor[47], and *unrecognized*, as noted by Nicholas.[48] Shenton and Dixon identify two major problems for those who investigate youth information needs: the first one originates from the difficulty of defining *information need* as a research subject, the second problem lays in the difficulty of finding a suitable strategy to explore information needs[49]. This is why information needs researchers face many challenges.

### 2.1.2. Information

Over many decades a countless number of authors put significant effort to define elusive term *information*, many of them coming from the library and information science field. This resulted in numerous approaches and definitions, and so far there is not a single, widely agreed-upon definition or theoretical concept of information.[50] Case suggests that the reason partly lays in the fact that it has been a subject of attention of many disciplines and has been used to refer to various phenomena such as human thinking and learning, problem-solving, decision-making, the process of communication, information needs, recorded knowledge, judgments about the relevance and others.[51] On the other hand, some authors argue that we do not need one single definition of information but useful conceptualizations of information.[52] Therefore, we can

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[43] Cf. Varlejs, J. Information seeking: changing perspectives. // Information seeking: basing services on users' behaviors / J. Varlejs ed. Jefferson: McFarland, 1987. p. 67-82. As cited in Shenton, Andrew K.; Dixon, Pat. The nature. P. 298.
[44] Cf. Shenton, Andrew K.; Dixon, Pat. Models of young people's information seeking. // Journal of Librarianship and Information Science 35, 1(2003a), p. 8.
[45] Cf. Bawden, David; Robinson, Lyn. Op. cit, p. 188-189.; Case, Donald. O. Op. cit., p. 70.
[46] Cf. Cronin, Blaise. Assessing user needs. // Aslib proceedings 33, 2(1981), p. 40.
[47] Cf. Taylor, Robert S. Question-negotiation. P. 254-255.
[48] Cf. Nicholas, David. Assessing information needs: tools, techniques and concepts for the Internet age. 2nd ed. London: Aslilb, 2000. As cited in Shenton, Andrew K.; Dixon, Pat. The nature. P. 299.
[49] Cf. Shenton, Andrew K.; Dixon, Pat. The nature. P. 296-297.
[50] Cf. Bates, Marcia J. Information. // Encyclopedia of library and information sciences, 3rd Ed. New York: CRC Press, 2010. URL: https://pages.gseis.ucla.edu/faculty/bates/articles/information.html (2017-7-9); Case, Donald. O. Op. cit., p. 61; Bawden, David; Robinson, Lyn. Op. cit, p. 63.
[51] Cf. Case, Donald O. Op. cit, p. 42-43.; Bawden, David; Robinson, Lyn. Op. cit, p. 71.
[52] Cf. Case, Donald O. Op. cit., p. 61.

follow Belkin's suggestion and do not seek "one universally true definition of information", but instead try to find a concept of information which would be useful for this study.[53]

In the work which sets the scene for Sense-making theory, Dervin argues that people create their own understanding of the world. People take external information and organize it within their own, previously collected internal information, trying to make sense out of their world. From this position she posits three types of information understanding: (1) information as objective information which, however, „cannot completely describe reality", or data; it is external to people; (2) information as „structures imputed onto reality by people; order created; ideas" or people's representation of reality, subjective and internal to people and (3) information as „the procedures by which people acquire what they didn't previously know; by which people are informed or instructed".[54] Dervin explains some benefits of this typology. First, it posits that information may come from inside of people, and not only external sources. Second, it suggests that informal ways in which people inform themselves are also legitimate ways of gaining information and that informal sources of information, such as advice and guidance from others, have informational value. Third, as she says, „this typology suggests that a view of homo-sapiens as an information-processing being is not complete unless that view looks at how people create information as well as at how they collect, store, retrieve, and use information".[55] One of the core assumptions of Sense-making says that the information does not exist independent and external to humans but it is produced by a person observing the reality. According to Dervin, "all information is simply the sense made by individuals at specific moments in time-space".[56] Therefore, information is subjective. It is also a valuable tool that may help people in their endeavors to cope with their life challenges.[57]

Dervin was inspired by the work of a philosopher K. Popper, just as was B. Brookes, known as a founder of the cognitive paradigm in information science.[58] His approach is somehow similar to Dervin's view of humans as creators of information who create new knowledge out of their own internal information and information from their environment. Endeavoring to set the foundations of information science, Brooke posited *The Fundamental equation of information science* which describes how new knowledge is created by an input of information and is formulated as $K(S) + \Delta I = K(S + \Delta S)$. It expresses how a person's prior state of knowledge is changed into new knowledge, and information is seen as that what causes a change in a person's state of knowledge or structure of knowledge. He explains the relation between information and knowledge by stating that he understands „knowledge as structure of concepts linked by their relations and information as a small part of such a structure"[59]. He further explains that „the knowledge structure K[S] is changed to the new modified structure $K[S+\Delta S]$ by information $\Delta I$, as $\Delta S$ indicating the effect of the modification".[60] In other words,

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[53] Cf. Belkin, Nicholas J. Information concepts for information science. // Journal of documentation 34, 1(1978), p. 58.
[54] Cf. Dervin, Brenda. Strategies. P. 326.; Bawden, David; Robinson, Lyn. Op. cit, p. 71.
[55] Ibid.
[56] Cf. Dervin, B. An overview.
[57] Cf. Dervin, Brenda. Useful theory for librarianship: communication, not information. // Drexel Library Quarterly 13,3(1977), p. 18.
[58] Cf. Bawden, David; Robinson, Lyn. Op. cit, p. 50
[59] Cf. Brookes, Bertram C. The foundations of information science. Part I. Philosophical aspects. // Information Scientist 2, 3-4(1980), p. 131.
[60] Ibid.

we can say that information is a small piece of knowledge that changes peoples' knowledge state by interacting with their prior knowledge. Brooks also suggests that information is not only linguistic, but it can come in different forms and that the world around us is full of potential information. He argues that "in everyday world we depend greatly on information absorbed from our environment"[61], even in situations when we are not aware of responding to information, such as avoiding people in crowded streets.

In his book *Looking for information* which reviews the area of research on information seeking, needs and behavior, Case offers a broad definition of information. He borrows a phrase from anthropologist G. Bateson and suggests that information is "*any difference that makes a difference* – in essence, implying a change to the structure of human mind".[62]

Poston-Anderson and Edwards base their work on Dervin's sense-making theory and define information as "any idea, opinion, fact, belief, or imaginative message" that helps people in making sense of their world when investigating adolescent information behavior in relation to dealing with life concerns.[63] Julien's work on adolescent information behavior for making a decision on future careers also lays on the assumptions of Dervin's sense-making theory. She conceptualizes information as *help* – to bridge gaps in their understanding, people use information which help them to get pictures, ideas and understanding, to plan, decide and prepare, to get skills, to get started or motivated to keep going and get control, to feel as though things got calmer or easier, to get out of a bad situation, to reach a goal or accomplish things, to go on to other things, to avoid a bad situation, to take one's mind off things, to get relaxed or rested, to get pleasure, to get support, reassurance, or confirmation or to get connected to others.[64] Shenton and Dixon study information needs and behavior of young people and understand information as "the intellectual material needed by a person to ease, resolve, or otherwise address a situation arising in his or her life", adding that forms of information "include facts, interpretations, advice and opinions" and "may be conveyed via several channels and in a range of formats, pictorial among them".[65] Todd used Brooke's fundamental equation to show how information is used by changing one's state of knowledge as a consequence of exposure to information and identified five types of change in knowledge.[66] Hakim Silvio shows how information helps in development and growth by the unfolding and realization of one's creative potentials enabling a person to improve his or her conditions of living by the use of information.[67]

Out of the library and information science field, Herbert Simon, an influential author who dealt with the decision-making process, argued that people need information to improve their knowledge about alternative behaviors when making decisions. He explains that the state of

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[61] Ibid
[62] Cf. Case, Donald. O. Op. cit., p. 66.
[63] Cf. Poston-Anderson, Barbara; Edwards, Susan. Op. cit., p. 25.
[64] Cf. Julien, Heidi E. How does information help? The search for career-related information by adolescents. Unpublished doctoral dissertation. The University of Western Ontario London. 1997. p. 56. URL: http://www.collectionscanada.gc.ca/obj/s4/f2/dsk2/ftp02/NQ28498.pdf (2019-10-24)
[65] Cf. Shenton, Andrew K.; Dixon, Pat. The nature. P. 299-300.
[66] Cf. Todd, Ross J. Utilization of heroin information by adolescent girls in Australia: a cognitive analysis. // Journal of the American Society for Information Science. 50, 1(1999), p. 10-23. URL: http://tefkos.comminfo.rutgers.edu/Courses/612/Articles/ToddHeroin.pdf (2019-10-24)
[67] Cf. Hakim Silvio, Dominic. The information needs and information seeking behaviour of immigrant southern Sudanese youth in the city of London, Ontario: An exploratory study. // Library Review, 55, 4(2006), p. 261.

information or information which decision-makers have at his or her disposal shapes the process of making the decision in a certain way. He adds that the information which defines the state of information comes from both the decision maker itself and from his environment. Such an understanding of the concept of information emphasizes the role of information and knowledge in decision making process. [68]

All the authors cited above contribute to the understanding of information adopted in this dissertation. Information is any idea, fact, belief or advice that makes a change in one's knowledge and can be gained from the inside, i.e. peoples' prior knowledge and experience, or from the outside environment. Using information, people create new knowledge by integrating the information they acquire from their environment into the existing knowledge. Information help people in their endeavors to bridge the gap in their knowledge and make sense of their world as they move across time and space, in solving problems and making decisions, in dealing with life concerns and in coping with life challenges. In the decision-making process, information helps by increasing one's knowledge about the decision situation at hand, about decision alternatives, and possible consequences. For these reasons, people in the everyday world greatly depend indeed on the information they absorb from their environment.

### 2.1.3. Information behavior

Information behavior is a term that denotes "the many ways in which human beings interact with information"[69]. It also denotes a sub-discipline of library and information science which engages in research aimed at understanding „the human relationship to information".[70] Information behavior has been studied for over 50 years starting with user studies and communication behavior in the 1970s. During the 1990s, attention turned to information behavior of academics and practitioners, but also to information behavior in non-working and everyday life settings. From then onwards, the interest in the area has been increasing. Theories and models have been developed and applied in various contexts, proving the researchers' interest in the area of human information behavior.[71] The area encompasses efforts towards understanding interactions between people and information in various contexts. These efforts deal with concepts such as people's information contexts, information needs, types of information behavior and patterns of information access, information use, and concepts such as information sources and cognitive authority. Underlying these endeavors is the belief that information is essential for people's functioning and that it affects the quality of their lives.[72] In a nutshell, human information behavior is about how people interact with information.

Widely accepted Wilson's definition defines the concept by stating that "*Information behavior* is the totality of human behavior in relation to sources and channels of information, including both active and passive information seeking, and information use." He adds that information behavior includes "face-to-face communication with others, as well as the passive reception of information as in, for example, watching TV advertisements without any intention

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[68] Cf. Simon, Herbert A. A behavioral model of rational choice. // The Quarterly Journal of Economics 69, 1(1955). p. 100. URL: https://pdfs.semanticscholar.org/d823/7600841361f7811f5fd9effaed9d2e6e34b0.pdf (2017-6-30)
[69] Cf. Bates, Marcia J. Information behavior. // Encyclopedia of library and information sciences, 2010. p. 2381.
[70] Ibid.
[71] Cf. Bawden, David; Robinson, Lyn. Op. cit, p. 187-210
[72] Cf. Todd, Ross J. Adolescents. P. 27.

to act on the information given".[73] For Fisher, Erdelez, and McKechnie, the concept refers to "how people need, seek, manage, give, and use information in different contexts".[74] Case emphasizes that the concept "encompasses information seeking as well as the totality of other *unintentional* or *passive* behaviors (such as glimpsing or encountering information), as well as purposive behaviors that do not involve seeking, such as actively *avoiding* information.[75] Apparently, information behavior encompasses a range of behaviors characterized by different levels of active or passive and directed or undirected behaviors.

*Information seeking behavior* is a purposeful activity, a process in which people engage in to change their state of knowledge and it is closely related to learning and problem-solving.[76] It is goal-directed and taken in to satisfice some need recognized by an individual,[77] induced by an information gap or problematic situation in which one's current state of knowledge fails to suggest the way towards resolution.[78] Within the Sense-making theory, it includes internal and external, i.e. cognitive and procedural behavior which allows people to construct their movement through time and space.[79] Information seeking and use are activities which are central to sense-making, and take place in the *situation-gaps-uses* triangle as a part of peoples' endeavors to construct a sense of their world. Some authors (e. g. C. C. Kuhtlhau and T. Wilson) emphasize the relation of information seeking to the reduction of uncertainty which emerges when individuals realize that they are not comfortable with their level of certainty on some topics. It is related to a gap in knowledge or in understanding of specific situation and may result in information seeking. After information is sought and found, the conducted activity results in filing the gap, in better understanding and in reduction of uncertainty.[80] Studying information seeking behavior of young people, Shenton and Dixon define information seeking as "any action taken by an individual in response to a perceived need".[81]

Wilson argues that information seeking behavior may take several forms – an individual may make demands upon formal systems or information systems (such as libraries), or upon systems that are not primarily information systems, but may serve the purpose of information provision (such as car sales agencies).[82] Moreover, people may seek information from other people rather than from systems, which may result in the phenomena of *information exchange*, with the term "exchange" referring to the element of reciprocity. By exchanging information, people may seek various types of information: fact, advice or opinion. They may seek it using different

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[73] Cf. Wilson, Tom D. Human information behavior. // Informing Science : Special Issue on Information Science Research. 3, 2(2000), p. 49. URL: https://www.researchgate.net/profile/Tom_Wilson25/publication/270960171_Human_Information_Behavior/links/57d32fe508ae601b39a42875/Human-Information-Behavior.pdf (2019-10-24)

[74] Cf. Fisher, K. E.; Erdelez, S.; McKechnie, L. Preface. // Theories of information behavior. / Edited by Fisher, K. E.; Erdelez, S.; McKechnie, L. Medford, New Jersey: Information Today, 2005. p. xix

[75] Cf. Case, Donald. O. Op. cit., p. 5

[76] Cf. Marchionini, Gary. Information seeking in electronic environments. Cambridge university press, 1997. URL: https://www.researchgate.net/profile/Gary_Marchionini/publication/228057967_Information_Seeking_in_Electronic_Environment/links/55e4317508ae6abe6e8e9763.pdf (2018-6-17), p. 5

[77] Cf. Wilson, Tom D. Human. P. 49

[78] Case, Donald. Op. cit., p. 333

[79] Cf. Dervin, B. An overview.

[80] Cf. Case, Donald. Op. cit, p. 338; Kuhlthau, Carol C. Seeking meaning.; Wilson, Tom. Exploring models of information behaviour: the 'uncertainty'project. // Information Processing & Management, 35, 6(1999), p. 839-849.

[81] Cf. Shenton, Andrew K.; Dixon, Pat. Models. P. 8.

[82] Cf. Wilson, Tom D. On user. P. 659-660.

channels: in writing or orally. The sought and acquired information is at some point 'used', and the use may satisfy or fail to satisfy the individual's need.[83]

Not every recognition of information needs results in information seeking activity. Wilson poses that there are "a number of other potential impediments between the recognition of a need to be informed and the activation of a search for information".[84] In his revised model of information behavior from 1981., Wilson recognizes three types of barriers that may impede one's engagement in information seeking activity: personal barriers, social or role-related barriers and environmental barriers to information seeking behavior.[85] In his revised general model of information behavior presented in the work from 1997 and shown in Figure 2, he places information seeking behavior in a broader context of influencing factors and proposes the term *intervening variables* which he prefers over the term *barriers*. The intervening variables include psychological, demographic and role-related or interpersonal and environmental variables, but also information source characteristics. Demographic, physiological, cognitive and affective factors are personal variables (or barriers). Social-role or interpersonal variables refer, for example to traditional social roles that direct people's behavior including, for example the fear of social stigma. Environmental factors include time, geographical location and national cultures, while information source characteristics include ease of access, credibility, and channel of communication.[86]

**Figure 2 - Wilson's revised general model of information behavior**[87]

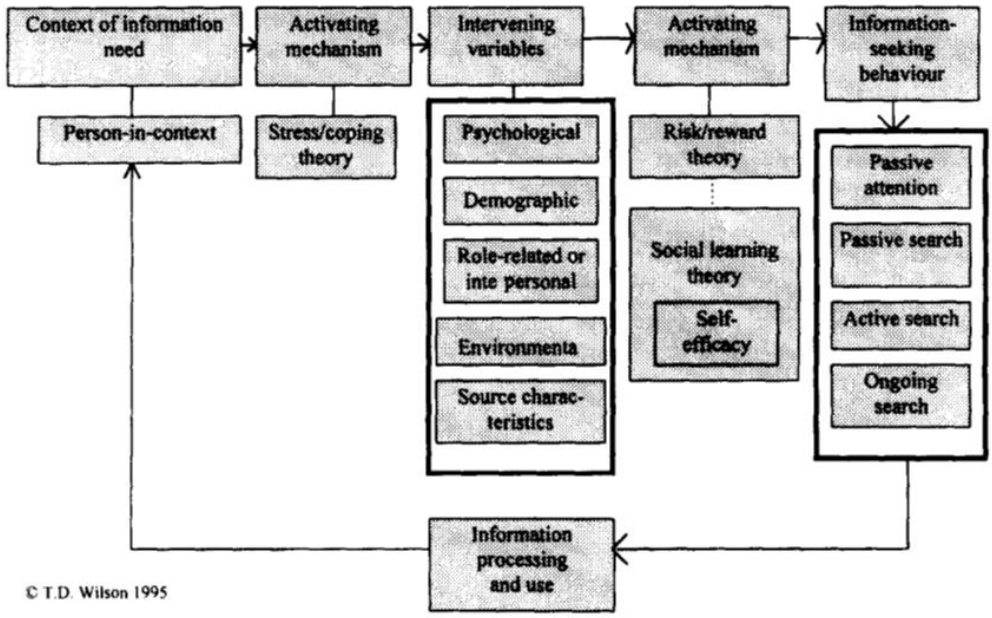


Fig. 5. A revised general model of information behaviour.

[83] Ibid.
[84] Cf. Wilson, Tom D. Information behaviour: an interdisciplinary perspective. // Information processing & management 33, 4(1997), 556. URL: https://s3.amazonaws.com/academia.edu.documents/41067415/Information_behaviour_Wilson.pdf?AWSAccessKeyId=AKIAIWOWYYGZ2Y53UL3A&Expires=1535198961&Signature=3uBeb%2ByuTbpprxkfJJ68J6OUGGo%3D&response-content-disposition=inline%3B%20filename%3DInformation_behaviour_Wilson.pdf (2018-08-25)
[85] Ibid., p. 552.
[86] Ibid., p. 569.; Ford, Nigel. Introduction to information behaviour. London: Facet, 2015. P. 125-131.
[87] Cf. Wilson, Tom D. Information. P. 569.

In line with Wilson's and Case's definition of information behavior, many acknowledged authors argue that people acquire information not only by purposive and active information seeking, but by employing behaviors which are passive, unintentional and/or undirected (e.g. Wilson, Bates, Savolainen, Williamson, Erdelez, Ross, Choo, but also others).[88] For the purposes of this dissertation, various modes of information behavior will be briefly described, stated by some of the prominent information behavior researchers and theorists.

Wilson incorporates different modes of information behavior in his revised model of information behavior, presented in Figure 2. He incorporates the findings from other disciplines and builds the model which includes the following modes of information behavior: information seeking behavior, passive attention, passive search, active search, and ongoing search.[89] *Passive attention* denotes behavior when information is acquired without intentional seeking, e. g. while listening to the radio or watching television. *Passive search* denotes behavior when one type of search results in acquiring information which is relevant to the person. *Active search* denotes active and purposive information seeking behavior while *ongoing search* denotes behavior which occurs when "active searching has already established the basic framework of knowledge, ideas, beliefs or values, but where occasional continuing search is carried out to update or expand one's framework".[90] Wilson notes that in consumer research, conducted by Bloch and colleagues, this type of behavior occurs independently of specific purchase needs or decisions, but is employed to gain knowledge which would be used in future purchase decisions and also simply as a pleasurable activity.[91]

Bates argues that it is reasonable to believe that we absorb a great deal of our knowledge "through simply being aware, being conscious and sentient in our social context and physical environment".[92] She differentiates four modes of information behavior: *being aware*, *monitoring*, *browsing* and *searching*, which take place depending on the level of active or passive behavior, and directed or undirected behavior one employs, as shown in Figure 3.

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[88] Cf. for example Wilson, Tom D. Information.; Bates, Marcia J. Toward an integrated model of information seeking and searching. // New Review of Information Behaviour Research 3(2002), 1-15. URL: https://pages.gseis.ucla.edu/faculty/bates/articles/info_SeekSearch-i-030329.html (2018-11-10); Savolainen, Reijo. Everyday life information seeking: approaching information seeking in the context of "way of life". // Library & Information Science Research 17(1995), p. 259-294. URL: http://pdfs.semanticscholar.org/3d0f/75c914bc3a34ef45cb0f6a18f841fa8008f0.pdf (2015-09-26); Williamson, Kristy. Discovered by chance: the role of incidental information acquisition in an ecological model of information use. // Library & Information Science Research, 20, 1(1998), p. 23-40.; Erdelez, Sanda. Information encountering: a conceptual framework for accidental information discovery. // Proceedings of an international conference on Information seeking in context. Taylor Graham Publishing, 1997. P. 412-421; Ross, Catherine S. Finding without seeking: the information encounter in the context of reading for pleasure. // Information Processing & Management, 35, 6(1999), 783-799. URL: http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.509.7770&rep=rep1&type=pdf (2018-11-14); Choo, Wei; Detlor, Brian; Don Turnbull, Don. Information Seeking on the Web: An Integrated Model of Browsing and Searching. // First Monday 5, 2(2000), 1-18. URL: https://www.researchgate.net/profile/Chun_Choo/publication/220167715_Information_Seeking_on_the_Web_An_Integrated_Model_of_Browsing_and_Searching/links/0046351e5a6ab96228000000.pdf (2018-11-14)

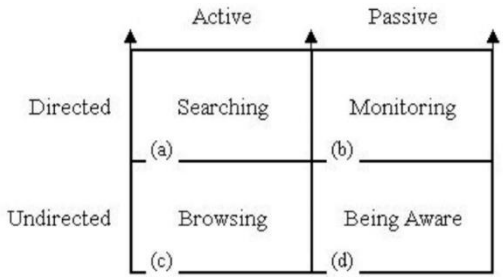
[89] Cf. Wilson, Tom D. Information. P. 569.

[90] Ibid., p. 562.

[91] Ibid.

[92] Cf. Bates, Marcia J. Toward.

**Figure 3 – Bates' modes of information seeking**




*Being aware* refers to passive undirected behavior through which people learn a great deal of what they know. *Monitoring* refers to directed and passive behavior by which people "maintain back-of-the-mind alertness for things that interest us and get answers to questions they have".[93] *Browsing* is the behavior that is a complementary opposite of monitoring. It refers to active, but undirected behavior when one has "no special information need or interest, but actively expose ourselves to possibly novel information", and is led by curiosity.[94] *Searching* refers to active and directed "active attempts to answer questions or develop understanding around a particular question or topic area".[95] Bates argues that by searching and monitoring people find the information they know they need, and by being aware and browsing they find the information they do not know they need. She also argues that 80 percent of what they need to know people probably gain by being aware, one percent of what they need to know people probably gain by directed searching, and the rest by browsing and monitoring.[96]

Aligned with Case, Wilson and Bates's understanding of information behavior which encompasses behaviors that are not only purposive, active and directed are the concepts developed by Savolainen. Savolainen establishes the concept of *everyday life information seeking* (ELIS) which denotes seeking information which people employ to orient themselves and to solve problems in everyday life. Everyday life information seeking takes two forms: active and passive. When a person faces some problem, he/she engages in active information seeking and seeks practical information, aimed at solving a problem. When one's life is not disturbed by some problem, decision or challenging situation, information seeking takes a passive form of passive monitoring of everyday life events and the person seeks orienting information.[97] Passive monitoring may result in an accidental acquisition of orienting information because people are exposed to everyday life information while *keeping an eye* on the environment and register information mediated through various media. If the found information is of interest, passive monitoring may change into active information seeking. In his later work, Savolainen adopts the ideas of social phenomenology and extends the scope of ELIS issues to those of everyday life information practices.[98] Within this new framework, he differentiates three modes of everyday information practices: information seeking, information use, and information sharing.[99] The concept of information sharing is close to Wilson's concept

[93] Cf. Bates, Marcia J. Toward.
[94] Ibid.
[95] Ibid.
[96] Ibid.
[97] Cf. Savolainen, Reijo. Everyday life information seeking: approaching. P. 272.
[98] Cf. Savolainen, Reijo. Everyday Information Practices. P. vi.
[99] Ibid., p. 4.

of *information exchange* and refers to "a two-way activity in which information is given and received in the same context".[100] In the broadest sense, information sharing includes "providing information, receiving information provided by other people, confirming receipt of the information, and confirming that the information is jointly understood".[101] It includes two major aspects: giving information to others to be shared and receiving information that has been given to be shared.[102] Since it takes place among people and in communities, the issues of information sharing are closely related to social capital. Phenomena such as social networks and norms as well as trust and mutual understanding take significant place in information sharing activity.[103]

Williamson is another author who was attracted by the phenomenon of gaining information through unpurposive and undirected behavior. As well as some other authors, she follows P. Wilson's idea of people frequently *discovering information* while they monitor the environment attempting to keep their *internal models up to date*.[104] The same as Bates, Williamson argues that people acquire information both deliberately and accidentally when information is not specifically sought for, but is accidentally found through engagement in routine activities with other purposes. This incidental acquisition of information takes place through activities such as conversations with friends or relatives while exchanging news and ideas, and it also results from "habits of reading and watching and listening to public vehicles of communication – newspapers, television, radio, magazines, and books".[105] Williamson argues that while people sometimes use mass media purposefully, more commonly they listen to the radio, watch television and read newspapers and other materials, such as pamphlets and leaflets, without the intention of finding some specific information. They also talk to other people like family members or work colleagues and exchange information without any intention. Nevertheless, in such activities, people often *pick up* information they were not aware they needed until they found it accidentally.[106] Williamson uses the term *incidental information acquisition* (which she considers synonymous with *accidental information discovery*) suggesting "that people find information unexpectedly as they engage in other activities", adding that "some of this information they did not know they needed until they heard or read it".[107] Her research shows that although people sometimes purposefully seek information to satisfy the perceived needs, they also monitor their world and acquire the information they were not aware of needing.[108] For example, a woman who calls a friend to find out whether this friend's house was damaged during a storm, and during the course of conversation she learns incidentally about alternative

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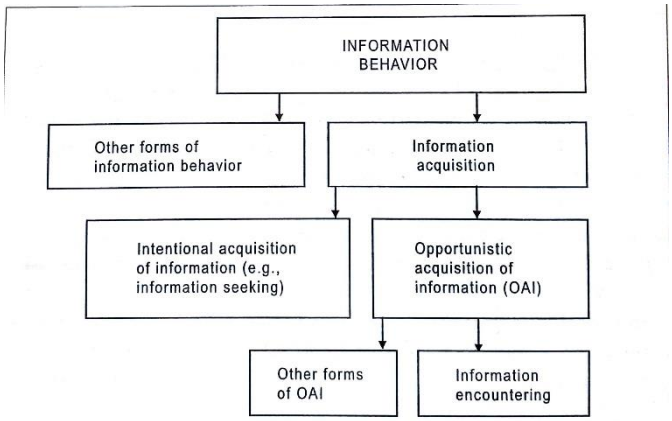
[100] Cf. Savolainen, Reijo. Motives for giving information in non-work contexts and the expectations of reciprocity. The case of environmental activists. // Proceedings of the Association for Information Science and Technology 44, 1(2007). P. 1. URL: https://www.asis.org/Conferences/AM07/proceedings/papers/10/10_paper.html (2018-2-6).
[101] Cf. Savolainen, Reijo. Everyday Information Practices. P. 183.
[102] Ibid., p. 183.
[103] Ibid., p. 184.
[104] Cf. Wilson, Patrick. Public knowledge, private ignorance. Westport, CT: Greenwood Press, 1997. P. 36. As cited in Williamson, Kristy. Op. cit., p. 24.; see also McKenzie, Pamela J. A model of information practices in accounts of everyday-life information seeking. // Journal of documentation, 59, 1(2003). p. 19. URL: https://s3.amazonaws.com/academia.edu.documents/38813449/McKenzie_J.Doc_2003.pdf?AWSAccessKeyId=AKIAIWOWYYGZ2Y53UL3A&Expires=1541963432&Signature=NWol6I3ZihlDAQMOo4VZn4Xsm9I%3D&response-content-disposition=inline%3B%20filename%3DA_model_of_information_practices_in_acco.pdf (2018-11-11)
[105] Cf. Wilson, Patrick. Public. P. 36-37. As cited in Williamson, Kristy. Op. cit., p. 23.-24.
[106] Cf. Williamson, Kristy. Op. cit., p. 25.
[107] Ibid., p. 24.
[108] Ibid., p. 35.

treatment for migraines that the friend's son undergoes, and which might be useful to her daughter who also suffered from migraines.[109]

Erdelez argues that the opportunistic acquisition of information (OAI) is "a common behavior in a modern environment saturated with information and pervasive technologies for its processing and accessing".[110] The experiences of acquiring information without them being purposefully sought are especially abundant in today's information-rich environment which enables user's mobility and disappearance of traditional task-oriented paths of information acquisition.[111] She establishes the concept of *information encountering* (IE) to denote "memorable experiences of accidental discovery of useful or interesting information"[112], and in her later work refines it as "a specific type of OAI" characterized as "an instance of accidental discovery of information during an active search for some other information".[113] In other words, information encountering takes place when one seeks information regarding one specific problem, and during the process unexpectedly encounters useful information related to some other problem. She illustrated the nested position of information encountering in the context of opportunistic information acquisition as presented in Figure 4.

**Figure 4 - Position of opportunistic acquisition of information and information encountering within the conceptual model of information behavior**[114]



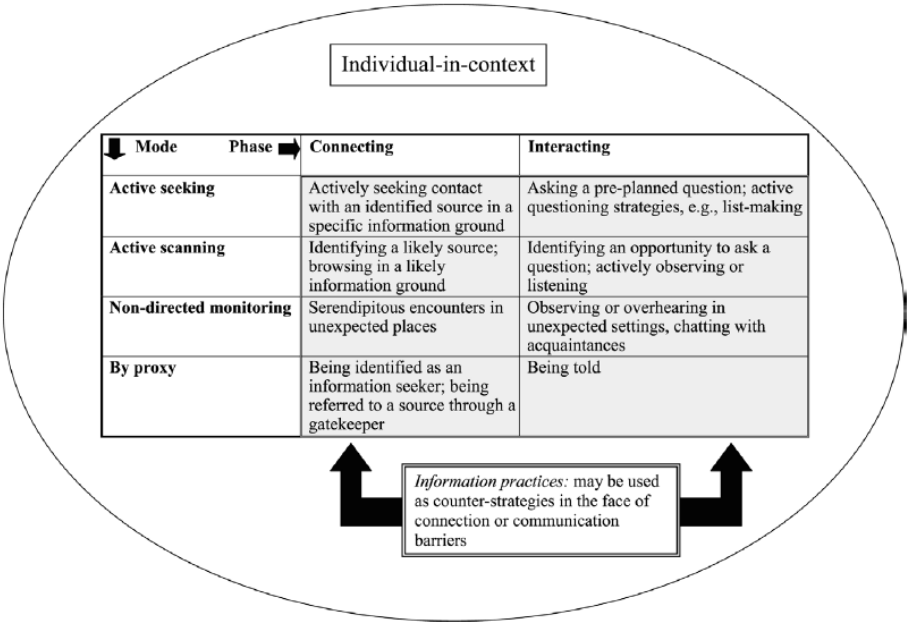

Furthermore, Erdelez builds upon the more specific definition of IE and develops a functional model by which she illustrates the embeddedness of IE within the process of information seeking. In the model she proposes typical functional elements of one IE episodes: *noticing* when one unexpectedly notices or encounters the information, *stopping* when one interrupts the initial information seeking activity, *examining* when one assess usefulness of the encountered information, *capturing* when one extract and saves useful encountered information for future use and *returning* when one returns to the initial information seeking task.[115] Not

[109] Ibid., p. 29.
[110] Cf. Erdelez, Sanda. Information encountering. // Theories of information behaviour / Karen E. Fisher; Sanda Erdelez; Lynne McKechnie. Medford, New Jersey: Information today, 2005. P. 179
[111] Cf. Erdelez, Sanda. Investigation of information encountering in the controlled research environment. // Information Processing & Management, 40, 6(2004), str. 1013.
[112] Cf. Erdelez, Sanda. Information encountering: a conceptual. P. 412.
[113] Cf. Erdelez, Sanda. Information encountering. P. 180
[114] Ibid.
[115] Cf. Erdelez, Sanda. Investigation. P. 1015

each IE episode includes all the elements, their occurrence depends on the information environment in which information encountering is taking place.[116]

McKenzie also argues against the neglection of less-directed information practices. She develops a two-dimensional model of everyday-life information practices, with the intention to provide an understanding of information seekers' practices in their sociocultural context by adopting a constructionist discourse analytic approach.[117] The model consists of four modes of information practices, each of them occurring in both stages of the information process. The model is presented in Figure 5.

**Figure 5 – McKenzie's two-dimensional model of the information practices**[118]




| Mode / Phase | Connecting | Interacting |
|---|---|---|
| **Active seeking** | Actively seeking contact with an identified source in a specific information ground | Asking a pre-planned question; active questioning strategies, e.g., list-making |
| **Active scanning** | Identifying a likely source; browsing in a likely information ground | Identifying an opportunity to ask a question; actively observing or listening |
| **Non-directed monitoring** | Serendipitous encounters in unexpected places | Observing or overhearing in unexpected settings, chatting with acquaintances |
| **By proxy** | Being identified as an information seeker; being referred to a source through a gatekeeper | Being told |

McKenzie identifies "a continuum of information practices, from actively seeking out a known source or planning a questioning strategy, to serendipitously being contacted by a previously unknown source or being given unasked-for advice"[119] and conceptualizes these practices in the following modes: *active seeking*, *active scanning*, *non-directed monitoring* and *by proxy*. In Figure 5, modes of information practices are listed in the first column. *Active seeking* refers to the most directed mode of information practice and include "seeking out a previously identified source, conducting a systematic, known-item search, asking a pre-planned question, and planning or employing active questioning strategies".[120] *Active scanning* refers to practices that take place on likely locations and include semi-directed browsing, scanning, systematic observation, identification of opportunities to ask questions, and active listening to conversations on likely locations (e.g. physicians' offices and prenatal classes). The practices also include the recognition of likely locations as potential information grounds and sources as potentially helpful. While active scanning occurs in a likely environment, the third mode of information practice is in its nature serendipitous. *Non-directed monitoring* refers to

[116] Ibid.
[117] Cf. McKenzie, Pamela J. // A model.
[118] Ibid., p. 26
[119] Ibid.
[120] Ibid.

"serendipitously encountering and recognizing a source (e.g. seeing a father pushing a double baby carriage, finding a book sale) in an unlikely place, while not seeking information at all (chatting with acquaintances), or while monitoring information sources (such as reading the daily newspaper) with no intent other than to become generally informed", and includes "incidentally observing informative behavior or physical characteristics or overhearing (rather than actively listening to) conversations between other people".[121] The practice denoted as *by proxy* refers to occasions when McKenzie's respondents "described making contacts with or interacting with information sources through the initiative of another agent, either the information source or some other gatekeeper or intermediary".[122] These practices are diverse and include the information seeker being identified "by an acquaintance or stranger, being referred to a source through a gatekeeper or intermediary, or being given advice, information or prescription".[123] In such a practice, it is the agent who approaches the person who needs information with a question and provides information about information sources. The information seekers are *being told* and acquire information without asking, in forms of receiving advice or instruction and by being directed and being informed by friends, family members, professionals and alike.

The stages of the information process are listed in the first row of the model. The first stage of the information process includes *making connections* with information sources by identifying or being identified by and making contact or being contacted by the source. The second stage includes *interacting with sources* or actual encounters with the sources after they were identified and contacted. The combination of the modes of information practice with the stage of the information seeking process reflects the holistic description of information practices of McKenzie's study participants.

#### 2.1.3.1. Savolainen's everyday life information seeking concept (ELIS) and everyday information practices

This dissertation is theoretically underpinned by Savolainen's conceptualization of information seeking in everyday life, expressed in the concept of ELIS (everyday life information seeking), as elaborated in his work from 1995.[124] Savolainen argues that today's modern society is characterized by growing individualization and people's tendency to place themselves in the center of their life experience. This is accompanied by increasing the necessity to make choices in order to master their own destiny. In this situation, people use information to be informed about the conditions of activity or choice situation while "the choices made by people are affected by the ways in which they seek and use information".[125]

Everyday life information seeking, the phenomenon which capture Savolainen's interest for decades, refers to "the ways in which people acquire information in non-work contexts, for example by monitoring daily events through media or seeking information to solve specific problems at hand."[126] The research in this area started with conducting a research on citizens' information needs in the United States in the 1970s. From the 1990s, the issues of people's

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[121] Cf. McKenzie, Pamela J. // A model. P. 27
[122] Ibid.
[123] Ibid.
[124] Cf. Savolainen, Reijo. Everyday life information seeking: approaching.
[125] Cf. Savolainen, Reijo. Everyday information practices. P. 1.
[126] Ibid., p. v.

everyday life and related information behavior draw significant research attention.[127] According to Savolainen, today's society is the period of new modernity which is characterized by heightened insecurities and risks. In such condition people's everyday lives are filled with the need to make decisions in order to manage their lives. To do that, they need to be familiar with the conditions in which their lives are taking actions. Therefore, the endeavors people make to manage everyday lives include and are influenced by the way people interact with information: how they find it and how they use it.[128] Information practices are an integral part of people's endeavors to make decisions, solve problems, carry out everyday life projects and generally master their destinies.

Savolainen approaches the issue of people's everyday life information behavior from the social constructivist viewpoint emphasizing the crucial influence of cultural and social factors.[129] Elaborating on the two major concepts which denote the general ways in which people deal with information, he argues in favor of the concept of 'everyday life information practices' over the concept of 'information behavior' since the discourse on information behavior draws on the cognitive viewpoint, while information practice draws from by the ideas of social constructionism.[130] He argues that the concept of human information behavior (HIB) is individualistic in its nature, unlike the concept of information practice, and emphasizes that information related activities take action within community and in interaction with other members of the community.[131] Additionally, Savolainen develops the concept of information practices as opposed to Wilson's concept of information behavior which includes the concept of 'needy' individuals who acquire the needed information through various sources and channels. By doing so, he shifts focus from the needs and cognitive structures of individuals to social context and interaction among members of communities.[132] In his later work, he establishes the concept of information practices that encompass the processes of information seeking, use and sharing embedded in people's cultural and social environment.[133]

In his highly influential work from 1995 named *Everyday life information seeking: approaching information seeking in the context of "way of life"*, Savolainen focuses on 'nonwork information settings' arguing that this sometimes overshadowed area of research deserves attention equal to that which is given to area of job-related information needs, seeking and use.[134] In his new approach to nonwork information seeking, Savolainen builds on Dervin's Sense-making theory which sees information seeking as a constructive process in the process of making sense out one's world, expressed by the metaphor of situation, gaps and uses. Savolainen argues that Sense-making theory focuses on sense-making individuals on a rather general level and that closer attention should be given to individual characteristics and to socio-cultural determinants of information seeking.[135] As defined in Savolanen's work from 1995,

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[127] Ibid, p. 1.
[128] Ibid.
[129] Cf. Savolainen, Reijo. Everyday life information seeking: approaching.; Savolainen, Reijo. Information behavior and information practice: reviewing the "umbrella concepts" of information-seeking studies. // The Library Quarterly 77, 2(2007), 109-132.; Savolainen, Reijo. Everyday information practices.
[130] Cf. Savolainen, Reijo. Information behavior and information practice.; Savolainen, Reijo. Everyday information practices.
[131] Cf. Savolainen, Reijo. Everyday information practices. P. 40.
[132] Ibid., p. 3-4.
[133] Ibid.
[134] Cf. Savolainen, Reijo. Everyday life information seeking: approaching.
[135] Ibid.

the concept of *everyday life information seeking* (ELIS) denotes the acquisition of information which people use to orient themselves and to solve the problems in everyday life (as he notes, problems such as those related to consumption or health care). The ways people seek information in everyday life are highly determined by values, attitudes, and interests which are characteristic of their way of life.[136] He develops the model of information seeking in everyday life aiming to show the role of social and cultural factors that affect people's preferences in choosing and using information sources in everyday life context.[137] The everyday life information seeking model (ELIS model) offers a framework for studying everyday life information seeking in the context of two central concepts: *way of life* and *mastery of life*. Savolainen draws on the theory of habitus developed by Pierre Bourdieu who posits habitus as a relatively stable system of embodied dispositions that are socially and culturally determined. Such a system determines how people perceive the world around them and how they act within. Being an internalized set of norms and social expectations, habitus directs choices people make in everyday life.

Savolainen introduces the concept *way of life* as a more practical counterpart of habitus or 'the practical manifestation of habitus'.[138] As he explains, the way of life constitutes through everyday activities and their mutual valuation, involves choices made in everyday life and is shaped by social and cultural determinants. *Way of life* refers to the *order of things*, which is reflected in the choices people make in everyday life. The term *things* denotes various daily activities, such as household care or hobbies, while the term *order* refers to preferences that are given to these activities.[139] Objective factors, such as working hours and the length of daily leisure time, and subjective factors, which refer to preferences given to ways of spending leisure time, determine one's order of things. Order of things corresponds with *cognitive order* which reflects person's perception of how things are when they are *normal* or how life should be organized and lived. People maintain their life in such order by making daily choices. Savolainen acknowledges that people often seek variation in life, but all the same, they seek coherence which creates the possibility to plan and manage their lives in the way they find meaningful. Moreover, the order of things which a person finds meaningful needs maintaining.

The second core concept, *mastery of life*, denotes activities a person takes to keep his or her life in the desired order. Information seeking and use are considered to be integral components of mastery of life. When life goes as it is expected, mastery of life is passive, but when the order of things is somehow threatened, mastery of life becomes active. Mastery of life is a general readiness to approach everyday problems in certain ways which are in line with one's values.[140] The process of development of one's mastery of life is shaped by the culture of a social class a person is born into. With its values, the culture directs ways of approaching everyday problems, habits, and attitudes. Consequently, people perform their daily activities in order which is desirable and natural to them and as long as they believe it is meaningful. Models for development of mastery of life are usually found at home and at school, or more generally in

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[136] Cf. Savolainen, Reijo. Everyday life information seeking: approaching. P. 267.
[137] Cf. Savolainen, Reijo. Everyday life information seeking: approaching.; Savolainen, Reijo. Everyday life information seeking. // Theories of information behavior / edited by Karen E. Fisher; Sanda Erdelez; Lynne (E. F.) McKechnie. Medford, NJ: Information Today, 2005. P. 143-148.; Savolainen, Reijo. Everyday information practices.
[138] Cf. Savolainen, Reijo. Everyday life information seeking: approaching. P. 262.
[139] Ibid.
[140] Cf. Savolainen, Reijo. Everyday life information seeking: approaching. P. 264.

one's community. Furthermore, besides referring to activities taken to keep life in the desired order, mastery of life refers to the evaluation of these activities and to life goals on a more general level.[141] Also, Savolainen notes that mastery of life is rather habitual and that a considerable part of the activities taken is happening without any deeper reflection.

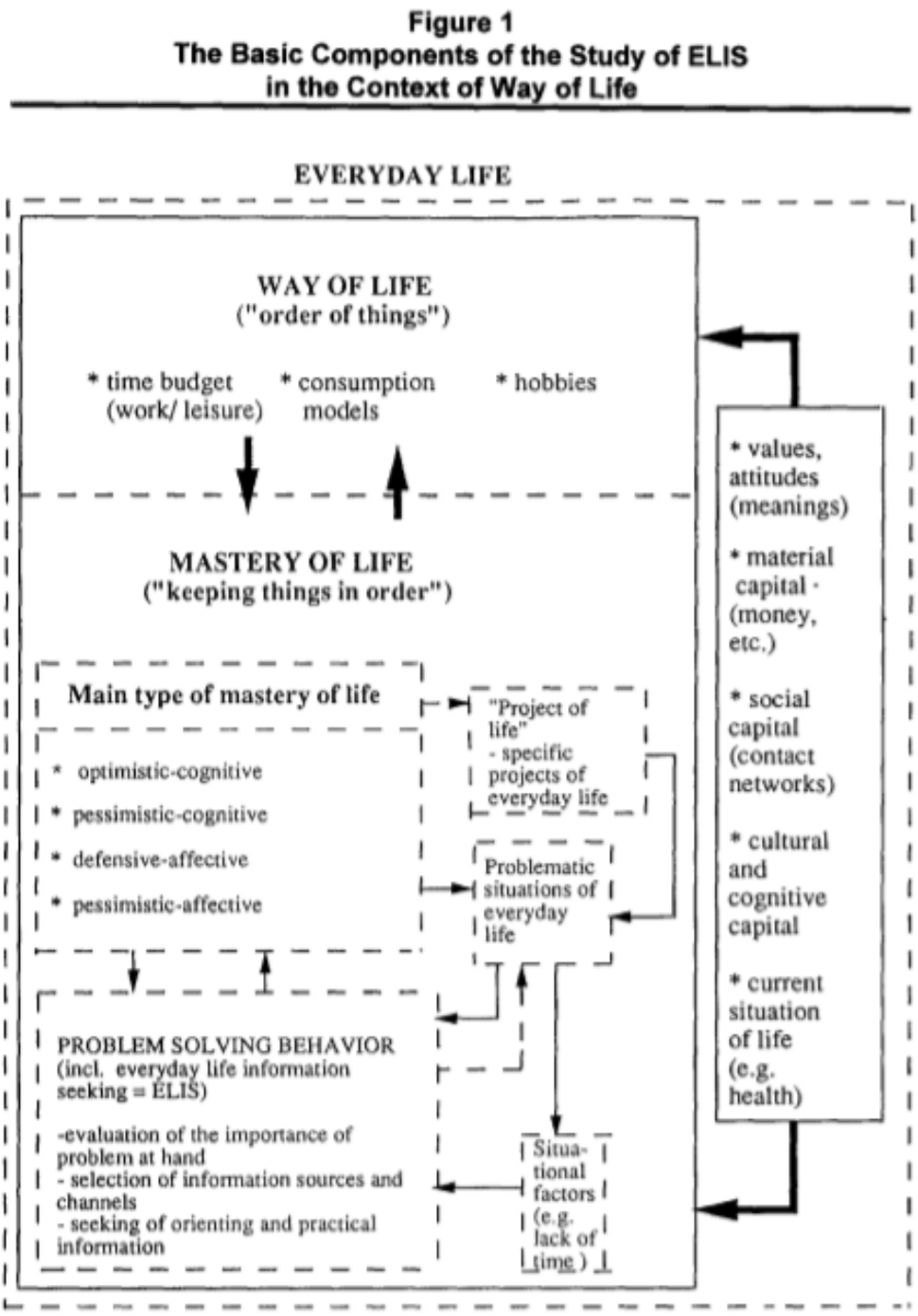
Savolainen notes two dimensions of everyday life information seeking: *seeking of orienting information* regarding current events and *seeking of practical information* for solving specific problems. These two types of information seeking may be closely intertwined in practice. When life goes as it should go, and when everything is in a desired and meaningful order, mastery of life is passive and information seeking takes the form of *passive monitoring* of everyday life events. In that case, seeking orienting information takes a passive form.[142] Orienting information is often found accidentally. People are exposed to everyday life information and often need only to keep an eye on the environment and to register information which is mediated through various media. When a person notices information which attracts his/her attention because it is related to something of interest, passive monitoring may change into active information seeking. On the other hand, seeking practical information in everyday life takes place in specific problem-solving situations and it is conducted for the purpose of solving encountered problems that threaten the meaningful order of things.

When that meaningful and desired order is disturbed, a person turns to his or her own experiences seeking ways of how to put his or her life back on track (or in the desired order). One's experience includes experience about which information sources and channels would be useful for solving encountered everyday life problems. Savolainen explains that person's experiences affect his or her information orientation and lead to certain information-seeking habits and consequently to the development of a profile of information orientation which includes attitudes and stances towards information seeking and use in specific problem situations.[143] Information-seeking habits established in such a way are a part of mastery of life or activities people engage in to keep their life in desired order and to live their lives in a way they believe it should be lived. Moreover, a person's mastery of life is molded by specific ways in which people orientate themselves in problem situations. Savolainen distinguishes four types of mastery of life, based on two dimensions that describe people's problem-solving behavior. These two dimensions are characterized by (1) cognitive or affective approach to problems and by (2) optimistic or pessimistic approach to problems. Based on these different approaches to problem-solving, Savolainen establishes four ideal types of mastery of life which carry implications for information-seeking behavior. These four types are: (1) *optimistic-cognitive mastery of life* which is characterized by a belief in positive outcomes and systematic information seeking from different sources and channels; (2) *pessimistic-cognitive mastery of life* which is characterized by more moderate confidence in positive outcome, but nevertheless may be accompanied by equally systematic information seeking; (3) *defensive-affective mastery* of life characterized by an optimistic view regarding problem solution and by strong impact of affective dimension on information seeking and (4) *pessimistic-affective mastery of life* which is characterized by a person's lack of trust in his or her ability to solve problems and a small role of information seeking in approaching, that is avoiding to approach problem-

[141] Ibid., p. 282.
[142] Ibid., p. 272.
[143] Cf. Savolainen, Reijo. Everyday life information seeking: approaching. P. 265.

solving.[144] Figure 6 shows the relations among the three integral Savolainen's concept: the way of life, mastery of live and everyday life information seeking (ELIS), and other concepts relevant for the study on how people manage their lives with the help of seeking information in everyday life.

**Figure 6 - The basic components of study of ELIS in the context of way of life**[145]




As already mentioned, in his later work Savolainen adopts the ideas of social phenomenology and develops the concept of information practices. The concept of everyday information practices refers to a set of socially and culturally established, and often habitual,

[144] Ibid., p. 266.
[145] Cf. Savolainen, Reijo. Everyday life information seeking: approaching. P. 268.

ways in which people identify, seek, and share information.[146] ELIS is a major component of everyday life practices with two major aspects: orienting information seeking through monitoring everyday life events (through sources such as media) and seeking of problem-specific information for performing some specific task or for solving a problem. Savolainen remarks that although we differentiate orienting information seeking and seeking problem-solving information for the purpose of analysis, in practice these practices intertwine and that the boundary between seeking of orienting information and practical information is not necessarily clear. Nevertheless, the distinction enables us for "a more specified analysis of everyday-life seeking practices".[147]

Information seeking, information use and information sharing are three modes of everyday information practices, and information sharing refers to the two-way activity of giving and receiving information in the same context.[148] Everyday life information practices are often habitual. Savolainen argues that people seldom think about collecting, processing and using information as activities separate from the task or problem they are dealing with. Information practices are embedded in everyday life contexts and therefore invisible to a certain extent.[149] Information practices take place in the context of *the life world* and serve as help and tools for advancing and achieving an individual's projects and goals.[150] One's life world is a major context of everyday life practices, including information practices, and is not private but rather shared with other members of the community. People often take their environment for granted and perceive it as natural. However, it is the environment that shapes the ways people gain knowledge including system of typical solutions for typical problems. This is why people's everyday life practices are guided not only by cognitive factors or their knowledge but also by social rules. These rules are mainly learned from and used by other members of the community or social group.[151] Savolainen posits that an individual's life world consists of many different projects and that everyday life information practices are a component of these projects. Even more, information practices gain their meaning from projects which people strive to carry out. Two main types of projects are generic and specific projects. Generic projects are common to majority of the society members, such as household management or monitoring everyday life events. Specific projects are characteristic of a particular life situation and may be understood as change projects, such as pregnancy. They often presuppose the active seeking of problem-specific information. Another type of project is pursuit project which is less dependent on immediate needs and continually present, e.g. furthering a general interest such as hobby. Everyday information practices provide information needed to further people's everyday projects.[152] Like everyday life practices which are perceived as a part of natural order and are passed down by upbringing, so are the experiences about the usefulness of different information sources. These experiences influence one's information orientation and may lead to specific

[146] Cf. Savolainen, Reijo. Everyday information practices. P. 2.
[147] Cf. Savolainen, Reijo. Everyday information practices. P. 5-6, 83.
[148] Cf. Savolainen, Reijo. Motives. P. 1.
[149] Cf. Savolainen, Reijo. Everyday information practices. P. 3.
[150] Ibid., p. 50.
[151] Cf. Savolainen, Reijo. Everyday information practices. P. 26-28.
[152] Ibid., p. 53-57.

information seeking habits.[153] Savolainen adds that information seeking and use habits are often rooted in an unconscious level and are not a subject of reflection.[154]

It was already noted that social and cultural factors affect people's preferences in choosing and using information sources in everyday life. Savolainen adds that everyday life information practices are also significantly determined by one's *information horizons*. He borrows the term from D. Sonnenwald and defines the *information source horizon* as a set of information sources of which an individual is aware, and which have been used by the individual over the years. Moreover, information source horizons are part of a broader context of the perceived information environment.[155] When construing their information source horizons, people assess the relevance of information sources available in their environment and select sources which they consider helpful for dealing with problematic issues related to their everyday projects. That means that the information source horizon covers only a part of the actual information environment. Furthermore, selected information sources are positioned within the horizon according to one's preference: the sources considered to be the most relevant are placed closest to the individual and less relevant farther on. Shaped in such a way, information source horizons affect one's strategies of information seeking by suggesting which sources should be used first. Moreover, information source horizon of a person may be constructed differently, depending on the current specific interest. For example, if the interest is related to a hobby, the preferred source may be a group of people who share the same interest, and if the interest is related to health, the preferred source may be a physician or a book. The interest at hand directs the preference for information in terms of its content.

The selection and positioning of individual sources in one's information source horizon are based on different *source preference criteria*, such as information content and easy accessibility of the source. Information sources horizon is constructed by drawing on diverse source preference criteria that are used to place diverse information sources and channels within the information horizon. Source preference criteria are the criteria "by which diverse information sources and channels are placed in the information source horizon".[156] There are two types of information source horizons: first which is relatively stable and represents the ways in which people tend to value information sources across situations, and second which is dynamic and is problem and situation-specific. This dynamic type of information source horizon is sensitive to the unique demands of a project or situation at hand. The information source horizon may change due to experiences of the use of alternative information sources. The constellation of the preferred sources may also change, depending on the content of the information needed. For example, a physician may be the preferred source when it comes to giving a piece of advice on health issues, but not when it comes to deciding on buying a car.[157] Figure 7 presents information source horizons and source preferences in the context of seeking information.

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[153] Cf. Savolainen, Reijo. Everyday information practices. P. 52-53.
[154] Ibid., p. 53.
[155] Ibid., p. 60-61.
[156] Cf. Savolainen, Reijo. Everyday information practices. P. 92
[157] Ibid., p. 61-63.

**Figure 7 - Information source horizons and source preferences in the context of seeking information**[158]

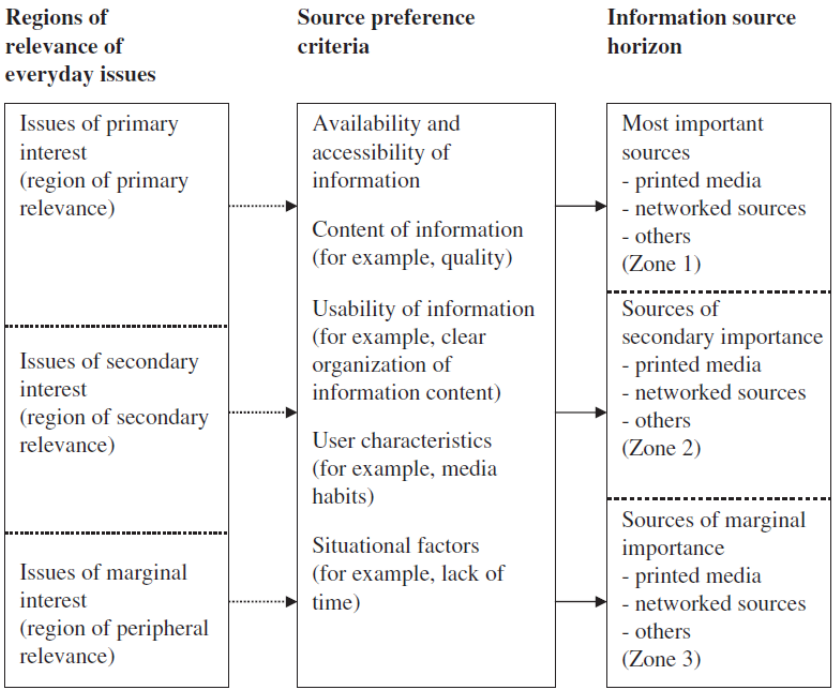


FIG 1. Information source horizons and source preferences in the context of seeking orienting information.

Savolainen follows P. Wilson's tripartite concept of *interest*, *concern*, and *caring* to explain the intensity and focus of everyday life information seeking in solving everyday life problems. *Interest* is understood as "a general level of orientation toward some issue".[159] Interest may vary in the level of intensity and may be active or passive. When interest is active, one is inclined to find out more about a topic and engage in active information seeking.[160] Savolainen illustrates the thesis that one's inclination towards engagement in active information seeking depends on his or her level of interest regarding the topic by describing a hypothetical situation of a person who is generally interested in the topic of diabetes. A person may be interested in the topic and follow it by reading newspaper articles discussing the growing number of people affected and the ways it can be prevented. However, if the person himself or herself gets affected and starts to notice some typical symptoms of diabetes, his or her interest turns into a *concern* which implies "one's readiness to act, to exert control, or influence".[161] A concern may also be active or passive: if it is active, "a person tries to find out more information to make sense of the situation or solve a problem".[162] He or she starts to seek information systematically in order to learn more. When a person seeks information from a physician and is diagnosed with diabetes, concern turns to *caring*. Then the person engages in active and systematic information seeking in order to learn more and becomes able to manage his or her health condition. If the condition gets better, his or her attitude takes the opposite direction. Gradually, caring and concern turn to interest whereas seeking and acquiring problem-specific information

[158] Ibid., p. 91.
[159] Ibid., p. 113
[160] Cf. Savolainen, Reijo. Everyday information practices.
[161] Ibid.
[162] Ibid.

gives way to seeking and acquiring orienting information.[163] Furthermore, Savolainen argues that an individual's perception of the reliability and trustworthiness of information are source preference criteria and guide the choice and use of information sources, especially when information seeker encounters conflict information.[164] Taking into consideration the role of information seeking in problem-solving, Savolainen argues that in order to be a successful problem-solver in the information society, one would need to have a high rate of cognitive competence, be able to think systematically, seek information energetically and be optimistic about the solvability of problems. To have such characteristics, one should be an *information superman*, which is hardly possible.[165] This is why Savolainen remarks that people's information seeking behavior is guided by the principles of *good enough* and *satisficing*. Like Simon, (but other authers as well) who recognizes that the principle of *good enough* is constitutive of human information behavior (or practices, as Savolainen prefers to denote the way people deal with information). He sees the principle reflected in the ways people assess media credibility and cognitive authority.[166] That is in line with people's tendency to apply *the principle of the least effort* which guides the choice of information sources and channels in job-related and nonwork information seeking and is the phenomenon that has been known across the library and information science field for decades.[167] While writing of *immediate availability* which is often a very important factor in choosing information sources, Savolainen points out the problematic nature of people's propensity to use sources that are easy to access. Information sources and channels which are most easily available and accessible may not be the most helpful and effective in problem-solving. On the contrary, the most helpful sources may be in libraries, databases or available in foreign languages and therefore difficult to access. Furthermore, as his research shows how belonging to a social class may affect the selection of information sources, Savolainen warns about the inequality of people as information seekers.[168] This lack of equal opportunities which may be caused by belonging to a disadvantaged social class may consequently affect their ability to solve problems that arise in everyday life.

As mentioned previously, a person's information-seeking habits are molded by his or her way of life and gained experience. Information seeking habits include evaluation of information sources and channels relevance which is also directed by experience, habits, and a way of life. This evaluation is based on familiarity and experience on the effectiveness of information sources and channels in past information-use situations. Different information sources are perceived as familiar or unfamiliar in the context of one's way of life, and their use seems natural and self-evident in specific problem situations. Consequently, the selection and use of specific information sources and channels is often a matter of habit. Savolainen concludes that everyday life information seeking is often guided by unreflected assumptions about appropriate information sources: "In most cases, the relevance of different information sources and channels is evaluated on the basis of their familiarity and effectiveness in information use situations. Because different information sources and channels are perceived as familiar or unfamiliar in the context of way of life, their use becomes natural or even self-evident in certain

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[163] Ibid.
[164] Ibid., p. 149.
[165] Cf. Savolainen, Reijo. Everyday life information seeking: approaching. P. 286.
[166] Cf. Savolainen, Reijo. Everyday information practices. P. 203.
[167] Cf. Savolainen, Reijo. Everyday life information seeking: approaching. P. 266
[168] Ibid., p. 288.

problem situations. No wonder that ELIS seems to be often directed by unreflected assumptions concerning the availability of certain channels and sources and the easiness of their use".[169]

As elaborated earlier in this work, way of life or order of things, and mastery of life or activities that are taken to keep the desired and meaningful way of life determine each other. Person's way of life (or the picture of life which defines the life as it should look like), and mastery of life (or activities a person takes to put that picture to life or to put his or her life in desired order) are affected by some factors, for example values, attitudes, the current phase of life, such as adolescence. Furthermore, it is affected by material, social, cultural and cognitive capital, and current life situation. These factors together provide *basic equipment* to seek and use information. While material capital refers to purchasing power, social capital refers to the nature of contact networks and cultural capital to cognitive resources which are acquired through education and life experience. The value of a person's *basic equipment* or overall capital (i.e. material, social and cultural capital) is determined in relation to the capital owned by others. This value of a person's *basic equipment* determines his or her basic conditions of the way of life and mastery of life.[170] From that, we can conclude that people are provided with the basic equipment of different values and therefore are not equally equipped to seek information and manage their lives (i.e. orient themselves and solve arising problems). Savolainen notes that way of life and mastery of life provide only general criteria for choosing and using information sources and channels which indicates what choices are natural and self-evident to people, basing on their prior experiences of effective information seeking and use and strategies used in solving problems. Some specific features of the problem situation, such as the range of available information sources and acuteness of the problem, also affect these activities.[171]

To validate his ELIS model, Savolainen investigates the role of way of life in directing information seeking behavior in the study presented in the paper "Everyday life information seeking: approaching information seeking in the context of 'Way of life'". He compares the information seeking behavior of two groups whose ways of life may significantly differ given they belong to different social classes. It was assumed that the level of education and the nature of professional tasks are the factors that mostly produce differences in ways of life of social classes. His study shows that one's way of life and the mastery of life are based on social class affecting practices of information seeking.[172] Savolainen notes that concepts of the way of life and the mastery of life are wide and heterogeneous which makes them convenient for analysis of everyday life information practice. However, he adds that there are parts of everyday life information seeking which may be better explained by other factors such as current life situations or the degree of difficulty of the problem a person deals with.[173]

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[169] Cf. Savolainen, Reijo. Everyday life information seeking: approaching. p. 267.
[170] Ibid., p. 267.
[171] Ibid., p. 267
[172] Cf. Savolainen, Reijo. Everyday life information seeking: approaching. P. 288.
[173] Ibid., p. 289.

#### 2.1.3.2. Credibility and cognitive authority

The phenomena of credibility and cognitive authority have been the subject of interest in library and information science for decades now, and their evolution can be traced in related fields such as communicology and psychology as well.[174] Nowadays, the need for tackling these phenomena is perhaps more important than ever. Information-rich environment, such as the one characterizing modern society, poses notable challenges before those who seek and use information. Alternative information sources compete for their attention, inducing constant need for assessment and judgment on which information to rely upon. The assessments of information credibility and cognitive authority are ubiquitous activities because people constantly and inevitably assess the value of information while they seek and use information in various contexts. Accessibility of a wide range of information sources results in challenging evaluations, putting the issues of credibility and cognitive authority assessment into the focus of research.[175] Judging about information and information sources becomes especially challenging when one encounters conflict information. Credibility and cognitive authority are closely related, but different concepts difficult to define unambiguously.[176] The concept of cognitive authority was developed by Patrick Wilson in the 1980s. It denotes the phenomenon of people giving their trust to other people for gaining information and knowledge from some specific domain, in which these others are considered knowledgeable and competent. Cognitive authority is a kind of influence which those who are our cognitive authorities have on our thinking. We believe that their influence is proper because we consider them worthy of belief, credible. Therefore, cognitive authority is closely related to credibility. Credibility itself has two main components: competence and trustworthiness. According to Wilson, a person is trustworthy if he or she is "honest, careful in what he says and disinclined to deceive", and competent "in some area of observation or investigation if he is able to observe accurately and investigate successfully".[177] From the very beginning of our lives, we recognize those whom we consider being our cognitive authorities: first parents, then teachers, and so on. Wilson explains the phenomena by saying that a person A is a cognitive authority for another person B with respect to sphere of interest S, and to degree that what A says on questions within the sphere S carries weight for B.[178] It is also important to note that cognitive authorities are not necessarily other people – books, journals, newspapers, and all other information sources can be one's cognitive authority. Furthermore, Wilson problematizes *bases of authority* or reasons people believe the others worthy of cognitive authority.[179] A person may be considered deserving of cognitive authority if he or she is held an expert in the field. Another basis may be one's thinking well about another person or if the person is trusted, perceived competent or successful. Personal trust, belief in a person, person's experience and reputation are also possible basis for perceived cognitive authority.[180]

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[174] Cf. Rieh, Soo Y. Credibility and cognitive authority of information. // Encyclopedia of Library and Information Sciences. Third Edition. 1: 1. p. 1337-1344. URL: https://deepblue.lib.umich.edu/bitstream/handle/2027.42/106416/Rieh_ELIS_published.pdf?sequence=1 (2019-5-16)
[175] Cf. Rieh, Soo Y. Credibility. P. 1337.; Savolainen, R. Everyday information practices. P. 150.
[176] Ibid.
[177] Cf. Wilson, Patrick. Second-hand knowledge: an inquiry into cognitive authority. Westport, Connecticut, London, England: Greenwood, 1983. P. 15.
[178] Ibid., p. 13.
[179] Ibid., p. 20.
[180] Ibid., p. 21-28.

Savolainen also deals with perceived media credibility and cognitive authority of available information sources - two key phenomena which influence and direct the selection and use of information sources.[181] Overall, perceived credibility and cognitive authority of sources significantly direct the selection and use of information sources.[182] Savolainen uses the term *credibility* to denote the believability of diverse sources in relation to each other and across different situations, and the term *cognitive authority* to denote believability of individual sources in specific situations.[183] Moreover, he emphasizes that the questions of cognitive authority deal with "the ways in which individual sources are recognized as competent and trustworthy enough to be taken seriously and thus capable of influencing the individual's thinking and decision-making".[184] Savolainen notes that people often judge the quality of information based on the authority of sources, where *quality* refers to characteristics such as good, accurate, current, useful and important.[185]

Another scholar whose research contributed to the understanding of the phenomena of information credibility and cognitive authority and activities related to their assessment is Rieh.[186] She notes that the assessment of credibility and cognitive authority is a ubiquitous human activity and an ongoing, iterative processes because people constantly assess and select information when seeking and using information, based on its perceived value.[187] It is also a subjective process which depends on one's beliefs, current state of knowledge and prior experience.[188] Rieh also investigates two closely related phenomena of credibility and cognitive authority, stating that while credibility mainly refers to believability, cognitive authority refers to influence which is perceived as proper by the one who judges the information.[189] Credibility may be defined with concepts such as believability, trustworthiness, fairness, accuracy, trustfulness, factuality completeness, precision, freedom from bias, objectivity, depth and informativeness, and two key dimensions for credibility assessment are trustworthiness and expertise. Trustworthiness involves "the perceived goodness and morality of the source", and the perception that "a source is fair, unbiased, and truthful".[190] Expertise reflects "perceived knowledge, skill, and experience of the source" and is related to one's perception of "a source's ability to provide information that is both accurate and valid".[191] However, trustworthiness and expertise do not necessarily come together: one may be perceived as an expert in a certain domain, but not as moral, fair and truthful. Likewise, one may be perceived as honest and trustworthy, but not knowledgeable in some specific domain. According to Rieh, the most credible information is "found in those perceived to have high levels of trustworthiness and expertise".[192] Also, credibility does not reside in information object or source - it is a person

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[181] Cf. Savolainen, R. Everyday Information Practices.
[182] Ibid., p. 163.
[183] Ibid., p. 156.
[184] Ibid., p. 164.
[185] Cf. Savolainen, R. Everyday Information Practices. P. 152.
[186] Cf. e. g. Rieh, Soo Y. Credibility.; Rieh, Soo Y. Judgement of information quality and cognitive authority in the Web. // Journal of the American society for information science and technology, 53, 2(2002), p. 145-161. URL: https://repository.arizona.edu/bitstream/handle/10150/106023/rieh_jasist02_dlist.pdf?sequence=1 (2019-5-19)
[187] Cf. Rieh, Soo Y. Credibility. P. 1337.
[188] Ibid.
[189] Ibid.
[190] Ibid.
[191] Ibid., p. 1338.
[192] Ibid., 1338.

who makes an assessment and judgment that attach the quality or characteristic of credibility to information and information sources. Rieh further explains that people have their own experience, knowledge, and beliefs which guide their own credibility judgments, which is why assessment and judgment of credibility are subjective. Overall, people base the assessment whether the information is trustworthy on their own expertise and knowledge.[193] Just as Wilson and Savolainen, Rieh notes that authority always relates to some specific knowledge domain. One who is cognitive authority may be an authority in one domain, but not in the other - "a person can speak with authority within one sphere, but with no authority on questions outside that sphere".[194] Also, it always involves two people - the one who gives authority to another, i.e. recognizes some person, book or any other source of information as cognitive authority. As noted earlier, cognitive authority is a kind of influence which is considered proper and because of that cognitive authorities deeply of profoundly influence others' thoughts, decisions and actions.[195] Moreover, cognitive authority is a matter of degree. The weight that information given by a cognitive authority carries for others may vary.[196] The fact that people take information provided by others more or less seriously gains on importance when the information provided are in conflict. This is why cognitive authorities who influence our thoughts, decisions, and actions are people whose words weigh more - "cognitive authorities are those people whose opinions and advice are taken more seriously with more weight being placed on their words than on the words of others".[197] Just as Wilson, Rieh tackles the *bases of cognitive authority*, stating that two bases of cognitive authority are being an expert and being reputable. To be an expert, one needs to be knowledgeable, skilled, trained and educated in the domain.[198] Moreover, cognitive authority seems to be somehow transferable. The phenomenon that one tends to trust another person who is trusted by his or her cognitive authority makes a central feature of cognitive authority, according to Rieh.[199]

As stated earlier, cognitive authorities are not necessarily other people. Second-hand knowledge, as Wilson denotes it, may come from all possible sources of knowledge and opinion. This raises some important questions such as which sources may be taken seriously and how much weight we need to give to what they say. Rieh explains that people test the cognitive authority of information provided by different sources, and just as Wilson does, tackles the issue of basis for assessing cognitive authority. For example, basis for cognitive authority judgments of a text may be its author i. e. his reputation and accomplishments, the publisher and its reputation, text type such as encyclopedia and dictionaries, and intrinsic plausibility of the text which may be tested for example by reading a few sentences which may serve a basis for a judgement.[200]

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[193] Cf. Rieh, Soo Y. Credibility. P. 1338.
[194] Ibid., p. 1340.
[195] Cf. Rieh, Soo Y. Credibility. P. 1340; Savolainen, R. Everyday information practices. P. 164.
[196] Cf. Rieh, Soo Y. Credibility. P. 1340.
[197] Ibid.
[198] Ibid.
[199] Ibid.
[200] Cf. Rieh, Soo Y. Credibility. P. 1340-1341

### 2.1.4. Decision making process

As Hansson put it simply, "almost everything that a human being does involves decisions".[201] When making decisions, people choose between options, trying to obtain as good an outcome as possible, according to their standards of what is good and what is bad.[202] Indeed, making decisions is an integral part of human lives: we make decisions in our personal lives, in family life, in organizations, in our wider communities, at a level of state and its institutions.[203] We make smaller decisions which can be made easier, such as what clothes to wear in daily occasions, and more difficult ones such as which school or university to enter, whether to accept a job offer, which offer to accept when selling a house and alike. The consequences of smaller daily decisions are less significant and have smaller impact on human lives, while poor decisions on more important and significant matters may have long term or even permanent consequences.[204] The need to investigate the ways people make decisions has been known since ancient Greece. That was the time of dealing with the practical side of decision-making in terms of recommendations of what to do and not to do[205], while modern decision theory represents "the product of the joint efforts of economists, mathematicians, philosophers, social scientists, and statisticians toward making sense of how individuals and groups make or should make decisions".[206] Decision-making is a process that lasts a certain amount of time and ends with a decision. That process may last just a few seconds, but it can also last for hours, days, months or even years.[207] During decades of decision-making research, the concept of decision-making was defined in various ways. It is usually viewed as the act or process of evaluating and choosing a preferred option or a course of action from a set of options or alternatives[208], taken *in response to a perceived problem*[209] to achieve *a decision maker's objective or objectives*[210]. It is also as a *goal-directed behaviour in the presence of options*[211] which *precedes and underpins almost all deliberate or voluntary behavior*[212]. Moreover, decisions are understood as *a choice of action — of what to do or not do*, which are *made to achieve goals, and based on beliefs about what actions will achieve the goals*[213]. Herbert Simon's understanding of the concept of decision-making is quite broad and includes (1) encountering a problem that needs attention and attending to that problem, which includes setting priorities since not all the problems can be attended, (2) thinking about alternatives as solutions of the problem and (3) evaluation of alternative solutions and choosing among them. In the end, decision making

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[201] Cf. Hansson, Sven O. Decision theory: a brief introduction, 2005. P. 5. URL: http://people.kth.se/~soh/decisiontheory.pdf (2019-10-20)
[202] Ibid., p. 13
[203] Cf. Sikavica, Pere; Hunjak, Tihomir; Begičević Ređep, Nina; Hernaus, Tomislav. Poslovno odlučivanje Zagreb: Školska knjiga, 2014. P. 3.
[204] Ibid., p. 11.
[205] Cf. Peterson, Martin. An introduction to decision theory. New York: Cambridge University Press, 2009. P. 11.
[206] Cf. Resnik, Michael D. Choices: an introduction to decision theory. Fifth ed. Minneapolis: University of Minesota Press, 2000. P. 3.
[207] Sikavica, Pere; Hunjak, Tihomir; Begičević Ređep, Nina; Hernaus, Tomislav. Op. cit. p. 10.
[208] Cf. Colman, Andrew M. A dictionary of psychology. New York: Oxford University Press, 2001. P. 187.; Case, Donald O. Op. cit., p. 331.
[209] Cf. Case, Donald O. Op. cit., p. 331.
[210] Cf. Radford, K. J. Decision making, individuals. // Encyclopedia of human behavior. / Ramachandran, V. S., eds. San Diego, CA : Academic Press, 1994. p. 73.
[211] Cf. Hansson, Sven O. Op. cit., p. 6.
[212] Cf. Colman, Andrew. Op. cit., p. 187.
[213] Cf. Baron, Jonathan. Thinking and deciding. 4th edition. New York: Cambridge University Press, 2008. P. 6.

encompasses (4) implementation.[214] This dissertation accepts the understanding of the decision-making process which is in line with those listed and describes it as a process of evaluating and choosing among decision options in response to a perceived problem which is worth attending to, to achieve a decision maker's goal.

It is a widespread belief that appropriate information and knowledge are crucial in the process of making a decision. The concepts of an *informed decision* or *informed choice* and *informed consent* vividly illustrate the common belief that a decision/a choice and an acceptance of one of the decision options need to be based on information and knowledge. Informed decision is „one that is based on relevant knowledge, consistent with the decision maker's values and behaviourally implemented"[215], while informed consent refers to „voluntary agreement by a patient to undergo a medical treatment or procedure, or by a research participant or subject to take part in an experiment or other research study, given in full knowledge of the nature of the procedure and its potential risks and benefits"[216]. A person who makes a decision needs to gather information to learn about possible decision alternatives, compare and evaluate the alternatives and eventually choose the most acceptable one.[217] Simon compares the decision-making process to the process of *reasoning* suggesting that values and facts (i.e. information) may serve as premises and the reached decision may be seen as inference, inferred from these premises.[218] This is why we may state that the decision-making process is *powered by information*.[219] One of the basic assumptions of classical rational-choice theory model of decision making is that a decision-maker possesses perfect knowledge and all relevant information needed in the decision making process. It is argued that this assumption is one of deficiencies of rational-choice theory since decision-makers usually do not possess all information, especially in modern age when the problem of information overload is broadly recognized.[220]

Contrary to previous thinking about the decision-making process, in the 1950s H. Simon sets the aim to investigate actual processes that humans perform while making decisions. For Simon, a real-life decision involves some goals and values, facts or information about the environment and some inferences drawn from facts and values.[221] The complexity of the environment in which decision-making takes place and limitations of humans' cognitive capacities make maximization impossible in real decision-making situations.[222] Simon introduces his theory of *bounded rationality* which initiated research in psychology and behavioral economics, had a significant impact on the development of later theories of decision making and provided a

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[214] Cf. Simon, Herbert A. Decision making: rational, nonrational, and irrational. // Educational Administration Quarterly, 29, 3(1993), p. 394-395.
[215] Cf. Marteau, Theresa M.; Dormandy, Elizabeth; Michie, Susan. Op. cit., p. 99.
[216] Cf. Colman, Andrew M. Op. cit., p. 365.
[217] Cf. Case, Donald O. Op, cit., p. 86.
[218] Cf. Simon, Herbert A. Theories of decision-making in economics and behavioral science. // The American economic review 49, 3(1959), p. 273. URL: http://directory.umm.ac.id/articles/Simon1959Theories%20of%20Decision-Making%20in%20Economics%20and%20Behavioral%20Science.pdf (2019-10-20)
[219] Cf. Sikavica, Pere; Hunjak, Tihomir; Begičević Ređep, Nina; Hernaus, Tomislav. Op. cit., p. 158.
[220] Ibid., p. 86.
[221] Cf. Simon, Herbert A. Theories of decision-making. P. 273.
[222] Cf. Campitelli, Guillermo; Gobet, Fernand. Herbert Simon's decision-making approach: investigation of cognitive processes in experts. // Review of General Psychology 14, 4(2010), p. 355.

conceptual framework for later behavioral decision research.[223] His approach to decision-making can be summarized in three main assumptions. Firstly, human rationality is not pure nor perfect, but rather limited or *bounded*. Secondly, quality of decisions which people make depends on their expertise. Lastly, for understanding decision-making, it is necessary to investigate the cognitive processes involved, and not only the performance.[224]

As Simon explains, human rationality is limited by the complexity of the world people live in, the inadequacy of knowledge and human cognitive capacities and the inconsistency of an individual's preferences and believes.[225] With his concept of *bounded rationality*, he brings decision-making into the scope of limited human rationality. While opposing the idea of purely rational *economic man* which is postulated by traditional economic theory, Simon explains that the economic man is assumed "to have knowledge of the relevant aspects of his environment which, if not absolutely complete, is at least impressively clear and voluminous"[226]. Since the complexities of the environment in which decisions are made exceed human thinking powers[227], Simon sets the task to "replace the global rationality of economic man with a kind of rational behavior that is compatible with the access to information and the computational capacities that are actually possessed by organisms, including man, in the kinds of environments in which such organisms exist"[228]. He introduces *hard facts of the actual world* into the concept of a rational decision-maker and points out to physiological and psychological limitations in the context of decision making. If human computational powers were unlimited, one would make a decision simply by consulting his or her preferences and choose the course of action which would yield maximum utility in the given situation (and this is what the rational man of classical economy theory does). However, people are limited by their bounded rationality and cannot perform such operations – "Faced with complexity and uncertainty, lacking the wits to optimize, they must be content to satisfice – to find *good enough* solutions to their problems and *good enough* courses of action" [229]. Therefore, human rationality is *approximate* and it is *rationality in a broader sense*, different from the rationality of economic man who is seen as utility maximizer, and shaped by human constraints.[230] Since human rationality is bounded by internal as well as external constraints, this broader concept of rationality refers to a style of behavior that is appropriate to the achievement of given goals, within the limits imposed by these given

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[223] Ibid., p. 362.
[224] Cf. Campitelli, Guillermo; Gobet, Fernand. Op. cit., p. 354.
[225] Cf. Simon, Herbert A.; Dantzig, George B.; Hogarth, Robin; Plott, Charles R.; Raiffa, Howard; Schelling, Thomas C.; Shepsle, Kenneth A.; Thaler, Richard; Tversky, Amos; Winter, Sidney. Decision making and problem solving. Interfaces 17, 5(1987), p. 13.
[226] Cf. Simon, Herbert A. A behavioral. P. 99.
[227] Cf. Simon, Herbert A. System principles. // Models of Thought / edited by Herbert A. Simon, 3-6. New Haven, London: Yale University Press, 1979. p. 3.
[228] Cf. Simon, Herbert A. A behavioral. P. 99.
[229] Cf. Simon, Herbert A. System. P. 3.
[230] Cf. Simon, Herbert A. Rational choice and the structure of the environment. // Psychological Review 63, 2(1956), p. 129. URL: http://www.corwin.com/sites/default/files/upm-binaries/25239_Chater~Vol_1~Ch_03.pdf (2019-10-21); Simon, Herbert A. Rationality as process and as product of thought. // The American economic review 68, 2(1978), p. 2. URL: http://www.business.illinois.edu/josephm/BA504_Fall%202008/Session%208/Simon%20(1978).pdf (2019-10-21)

constraints.[231] Almost four decades later, Simon stays with his broad understanding of rationality giving his understanding of rational behavior:

„Behavior is rational, and the decisions leading up to behavior are rational if it turns out that the behavior prescribed is well adapted to its goals – whatever those goals might be. Rationality is the set of skills or aptitudes we use to see if we can get from here to there – to find courses of action that will lead to the accomplishment of our goals. Action is rational to the degree that it is well adapted to those goals. Decisions are rational to the extent that they lead to such action.“[232]

Such an understanding of rationality and decision-making reveals a dynamic and adaptive nature of the decision-making process. People adopt and use simplification technics, *mechanisms for coping with complexity* [233] - heuristics, to bring the world of human decisions within the scope of human capabilities.[234] Simon and Newell ascribe the power of heuristics to narrowing the scope of search for alternative solutions by focusing on promising ones and ignoring the rest. They use the metaphor of finding a needle in a haystack to vividly illustrate the power of heuristics explaining that it does not matter how large the haystack is if we can be quite sure in which small part the needle lies.[235] The key heuristic is the mechanism of *satisficing* which aims at good when the best is incalculable. Given that humans possess only limited information and limited computational capabilities, they do not *optimize* but adapt well enough to *satisfice*.[236] Simon's concept of *satisficing* explains that while making decisions, people do not seek for the best choice, but satisfy with good enough one. The Scottish word *satisficing* (meaning *satisfying*) denotes "problem-solving and decision making that sets an aspiration level searches until an alternative is found that is satisfactory by the aspiration level criterion and selects alternative.“[237] Instead of seeking all possible alternative behaviors, people bring decision making into the scope of their limited capacities, they stop the search for alternatives when the first acceptable alternative occurs and satisfy with this first good enough alternative. What is good enough or satisfactory is defined by a mechanism called *aspiration level*. Aspiration level expresses what we believe is reasonable to achieve if we make a good decision and carry it out.[238] People use their experience to "construct an expectation of how good a solution can be reasonably achieved, and to stop searching when an option that satisfies this expectation is found“.[239] Moreover, aspiration level may change and adjust during the process of decision making, depending on the alternatives found.[240] This adjustment of

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[231] Cf. Simon, Herbert A. A behavioral. P. 101.; Simon, Herbert A. Theories of bounded rationality. // Decision and organization 1, 1(1972), p. 161. URL: http://innovbfa.viabloga.com/files/Herbert_Simon___theories_of_bounded_rationality___1972.pdf (2017-6-30)
[232] Cf. Simon, Herbert A. Decision making: rational, nonrational. P. 393.
[233] Cf. Simon, Herbert A. System. P. 3
[234] Cf. Simon, Herbert A.; George B. Dantzig, George B.; Hogarth, Robin; Plott, Charles R.; Raiffa, Howard; Schelling, Thomas C.; Shepsle, Kenneth A.; Thaler, Richard; Tversky, Amos; Winter, Sidney. Decision Making and Problem Solving. P. 13; Simon, Herbert A. A behavioral. P. 100.
[235] Cf. Simon, Herbert A.; Newell, A. Human problem solving: the state of the theory in 1970. // American Psychologist 26, 2(1971). p. 151. URL: http://www.cog.brown.edu/courses/cg195/pdf_files/fall07/Simon%20and%20Newell%20(1971).pdf (2017-6-26)
[236] Cf. Simon, Herbert A. Rational choice. P. 129.
[237] Cf. Simon, Herbert A. Theories of bounded. P. 168.
[238] Cf. Simon, Herbert A. Decision making: rational, nonrational. P. 396.
[239] Cf. Campitelli, Guillermo; Gobet, Fernand. Op. cit., p. 361.
[240] Cf. Simon, Herbert A. A behavioral. P. 112. ; Simon, Herbert A. Theories of decision-making. P. 263-264.

aspiration level shows adaptive nature of human decision making.[241] When performance is below an aspiration level, it induces search behavior, particularly this for new alternatives of action. The absence of available alternative which satisfies current aspirations results in the search behavior and the revision of targets.[242] For example, when a person decides on selling a house, he or she sets an aspiration level – a price which he/she believes would be acceptable for him/her to sell. Aspiration level can be adjusted depending on offers that possible buyers make. In the end, the person decides which price would be acceptable and accepts the first satisfying offer. He or she does not maximize but *satisfice*.[243] When people set an aspiration level as a criterion to decide which decision alternative is satisfactory and then choose the first alternative which meets the criterion, they do not evaluate all possible decision alternatives to choose the best one. Instead, they *satisfice* and choose the one that is good enough. Therefore, people can make relatively good decisions without analyzing all the alternatives, which is in most situations impossible. They can make good enough decisions with reasonable amounts of calculation and with incomplete information.[244] The concept of bounded rationality claims that people are able to reach good and reasonable decisions, or as Simon would say, satisficing decisions in a way that is compatible with our limited mental capabilities.[245]

Explaining the models of rational behavior, both the global kinds which were usually constructed in his time and those that would take into consideration limitations of human rationality, Simon lists their elements. The elements include: (1) a set of behavior alternatives, (2) the subset of behavior alternatives which a decision-maker actually considers, perceives or recognizes, (3) the possible decision outcomes or the possible future states of affairs, (4) a pay-off function which represents the value, utility or goal as expected outcomes of choice, (5) information about which outcomes will occur if a particular alternative is chosen (this information may be incomplete because some of the possible outcomes may be unknown to a decision-maker) and (6) information about probability that a particular outcome will occur if a particular behavior alternative is chosen.[246] As we learned earlier, in most of their decisions people cannot be in advance fully familiar with all alternatives and choice outcomes. Therefore, Simon explains that people may introduce information gathering steps into the decision-making process to learn more about alternative behaviors and their outcomes.[247] Likewise, when people cannot find a satisfactory alternative among the alternatives they consider, they search for additional existing alternatives and engage in information gathering or, as we may call it, information seeking.[248] Therefore, we may generally say that when people need additional information to improve their knowledge about alternative behaviors, they may seek for information. It is safe to say that people rarely have enough information and knowledge about decisions they deal with. Searching for additional information about decision alternatives, a process mentioned earlier when elaborating on adaption of aspiration level, makes human decision making a dynamic process.

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[241] Cf. Simon, Herbert A. Rational choice. P. 130.
[242] Cf. Simon, Herbert A. Theories of decision-making. P. 263-264.
[243] Cf. Simon, Herbert A. A behavioral. P. 117-118.
[244] Cf. Campitelli, Guillermo; Gobet, Fernand. Op. cit., p. 355.
[245] Cf. Simon, Herbert A. Decision making: rational, nonrational. P. 397.
[246] Cf. Simon, Herbert A. A behavioral. P. 102.
[247] Ibid, p. 106.
[248] Ibid., p. 111-112.

Simon acknowledges the place of information and knowledge of relevant aspects of decision situation in the process of making decisions but argues that not all information can be possessed or available, and that decision maker's knowledge cannot be perfect. The information which the decision maker has at his or her disposal, or *the state of information* to use Simon's words, shapes the process of making a decision in a certain way. The information which defines the state of information comes both from the decision maker itself and from his environment. As Simon put it, "the state of information may as well be regarded as a characteristic of the decision-maker as a characteristic of his environment".[249] When discussing human problem-solving, Simon and Newell use the term *a state of knowledge* to denote "what the problem solver knows about the problem at a particular moment of time —knows in the sense that the information is available to him and can be retrieved in a fraction of a second".[250] The importance of decision-makers' *state of information* or *state of knowledge*, and how it influences their decisions, was shown by Simon and his associates in the research conducted among experts and novices in domain-specific situations. They found important differences in the ways experts and novices make decisions in domain-specific problems.[251] For example, it was shown that expert's knowledge saves one's time by avoiding exploring useless alternatives. To solve problems, people search alternatives selectively, depending on their prior knowledge about problem situations to search effectively, and when they do not have the knowledge, they do not do well.[252] A certain domain-specific knowledge helps in making decisions in the scope of that knowledge.[253] Consequently, the quality of decisions that people make depends on their knowledge and expertise.[254] Simon also remarks that human knowledge is subjective, and so are human decisions that are based on that knowledge. The decision maker's information about his environment is subjective and merely weak approximation to the real environment because of the unperfect nature of perception and cognition.[255]

Agosto uses Simon's concept of satisficing and related stopping behavior to understand adolescent information seeking behavior in the World Wide Web environment.[256] In this dissertation, adolescent information behavior for making decisions in everyday life will also be investigated on the backdrop of Simon's thought.

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[249] Ibid., p. 100.
[250] Cf. Simon, Herbert A.; Newell, A. Human. P. 151.
[251] Cf. Campitelli, Guillermo; Gobet, Fernand. Op. cit., p. 359.
[252] Cf. Simon, Herbert A. Decision making: rational, nonrational. P. 400.
[253] Ibid, p. 407.
[254] Cf. Campitelli, Guillermo; Gobet, Fernand. Op. cit., p. 354.
[255] Cf. Simon, Herbert A. Theories of decision-making. P. 272.
[256] Agosto, Denise E. Bounded rationality and satisficing in young people's Web-based decision-making. // Journal of the American society for Information Science and Technology 53(2002), 16-27.; Agosto, Denise E. A model of young people's decision-making in using the Web. // Library& Information Science Research 24(2002), 311-341.

## 2.2. Adolescents information needs and information behavior research

The youth information behavior seems to be a vibrant research area across a wide range of disciplines, from education (e.g. Sanford and Madill, 2007)[257], psychology (e.g. McKellar, Sillence and Smith, 2019)[258], human-computer interaction (e.g. Duarte Torres, Weber and Hiemstra, 2014)[259], communication (e.g. Valenzuela, Bachmann and Aguilar, 2016)[260], health studies (Moreno, Kerr and Lowry, 2019)[261], economy (e.g. Förster, Happ and Walstad, 2019; Boyd Thomas, Woodward and Herr, 2000)[262] and others, including library and information science.[263] This does not come as a surprise, considering that information is one crucial component of orienting in everyday life in all possible aspects, including dealing with everyday life challenges, solving problems and making decisions of any kind. Having the appropriate information and knowledge seems irreplaceable for young people who are growing in autonomy leaving adult authorities behind them and moving forward facing challenges of maturation process with its physical, psychological and social implications, at the same time.

This chapter brings the review of research studies on adolescent information needs and adolescent information behavior which are relevant for this dissertation. The research area of youth information behavior in the library and information science field developed over the last thirty years and is thoroughly presented in comprehensive publications such as those by Chelton and Cool, Beheshti and Large and Bilal and Beheshti and in the chapter recently published by Agosto.[264] The area which went through a substantial growth will not be fully covered for that

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[257] Sanford, Kathy; Madill, Leanna. Critical literacy learning through video games: Adolescent boys' perspectives.// E-learning and digital media 4, 3(2007), 285-296. URL: https://journals.sagepub.com/doi/pdf/10.2304/elea.2007.4.3.285 (2019-10-13)

[258] McKellar, Kerry; Sillence, Elizabeth; Smith, Michael A. Sexual health experiences, knowledge and understanding in low SES female teenagers: A diary approach. // Journal of adolescence 73(2019), 122-130.

[259] Duarte Torres, Sergio; Weber, Ingmar; Hiemstra, Djoerd. Analysis of search and browsing behavior of young users on the web. // ACM Transactions on the Web (TWEB) 8, 2(2014): 7. URL: https://wwwhome.ewi.utwente.nl/~hiemstra/papers/tweb2014.pdf (2019-10-13)

[260] Valenzuela, Sebastián; Bachmann, Ingrid; Aguilar, Marcela. Socialized for news media use: how family communication, information-processing needs, and gratifications determine adolescents' exposure to news. // Communication Research 46, 8(2016), 1095-1118.

[261] Moreno, Megan A.; Kerr, Bradley; Lowry, Sarah J. A longitudinal investigation of associations between marijuana displays on Facebook and self-reported behaviors among college students. // Journal of Adolescent Health 63, 3(2018), 313-319. URL: https://europepmc.org/articles/pmc6152839 (2019-10-13)

[262] Förster, Manuel; Happ, Roland; Walstad, W. B. Relations between young adults' knowledge and understanding, experiences, and information behavior in personal finance matters. // Empirical Research in Vocational Education and Training 11, 1 (2019), 2. URL: https://ervet-journal.springeropen.com/articles/10.1186/s40461-019-0077-z (2019-10-13); Boyd Thomas, Jane; Woodward, Ginger, A.; Herr, David. An investigation of the effect of jean purchase criteria and store selection on US teenagers' purchasing behaviours. // Journal of Fashion Marketing and Management: An International Journal 4, 3(2000), 253-262.

[263] Agosto, Denise E. Thoughts about the past, present and future of research in youth information behaviors and practices. // Information and Learning Sciences 120, 1/2(2019), p. 109.

[264] Cf. Youth information-seeking behaviour: theories, models and issues. / Edited by Mary K. Chelton and Colleen Cool. Lanham: Toronto: Oxford : The Scarecrow Press, 2004.; Youth information-seeking behaviour II: context, theories, models, and issues. / Edited by Mary K. Chelton and Colleen Cool. Lanham: Toronto: Plymouth : The Scarecrow Press, 2007.; The information behaviour of a new generation: children and teens in the 21st century. / Edited by Jamshid Beheshti and Andrew Large. Lanham: Toronto: Plymouth : The Scarecrow Press, 2013.; New directions in children's and adolescent's information behavior resaerch. / Edited by Dania Bilal and Jamshid Beheshti. Bingley: Emerald Group Publishing Limited, 2014.; Agosto, Denise E. Thoughts.

would be far beyond the dissertation purpose, and because it would not be possible considering its limited length. Instead, this chapter will outline some of the main themes occurring in the body of research and will offer a more detailed review of the research studies on narrower topics of adolescent information needs and information behavior in everyday life, which are most relevant for this work.

Most of the youth information research in the library and information science field to date has been focused on school-aged children's behavior~~s~~, with less work focused on understanding the behavior~~s~~ of adolescents.[265] Todd's review of the adolescent information seeking and use research identifies the streams of research developed around three broad topics: (a) adolescents' learning in the school library, including students' engagement with school libraries and information literacy skills, (b) adolescent information behavior in electronic environments, especially their behavior on the World Wide Web, and (c) adolescent everyday life information behavior, including their interaction with information in the context of dealing with life challenges such as growing up, identity, relationships, careers, and lifestyle choices.[266] Over the last decade, the everchanging information environment brought some other topics into the area focus, such as assessment of information credibility and networked communication.

### 2.2.1. Adolescent information needs

Some fifteen years ago, Shenton and Dixon noted that little research has been done on youth information needs and that the topic has been poorly covered in the literature of information science.[267] However, some substantial body of knowledge developed over the last decades, allowing us to identify some main information needs which originate from adolescent everyday life situations. A considerable number of researchers focused on understanding adolescent information needs, starting from early studies in the 90s till nowadays.

Among the first research which identifies adolescent information needs is Poston-Anderson and Edward's (1993) study of adolescent girls' information seeking behavior related to their life concerns. The girls needed three types of information: facts, interpretations, and understandings. Their information needs originated from concerns about relationships (with peers, in some cases to drugs, and parents or family) and education and work (choosing a career, part-time job, schoolwork, choosing subjects, etc.)[268]. Todd and Edwards (2004) found that drugs are one of major current life concerns for the adolescents who participated in their studies.[269] Ten years later, Shenton and Dixon (2003) reveal that young people's information needs arise from school tasks and activities, but also from everyday life, and may be imposed, self-initiated or arising from circumstances. They created a typology of major types of young people's information needs, which includes: advice, spontaneous 'life situation' information about occurring problems or curiosities, personal information, affective support, empathetic understanding of others, support for skill development, school-related subject information, interest-driven information, consumer information and self-development information,

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[265] Cf. Agosto, Denise E. Thoughts. P. 110.
[266] Cf. Todd, Ross J. Adolescents. P. 27-46.
[267] Cf. Shenton, Andrew K.; Dixon, Pat. The nature. P. 296.
[268] Cf. Poston-Anderson, Barbara; Edwards, Susan. Op. cit., p. 26-27.
[269] Cf. Todd, Ross J.; Edwards, Susan. Adolescents' information seeking and utilization in relation to drugs. // Youth Information-Seeking Behavior : Theories, Models, and Issues / Mary K. Chelton; Colleen Cool. Lanham : Scarecrow, 2004. P. 353-386.

information to help preparing for forthcoming challenges, and reinterpretations and supplementation of already known information, as well as verificational information to confirm or reduce some doubts.[270] Agosto and Hughes-Hassell (2006a, 2006b) explored everyday life information behavior of urban young adults and concluded that adolescents seek and process everyday life information to facilitate the teen-to-adulthood maturation process. They propose a theoretical and empirical model of adolescent everyday life seeking behavior. The theoretical model includes seven areas of adolescent development, including the social self, the emotional self, the reflective self, the physical self, the creative self, the cognitive self, and the sexual self[271]. The empirical model connects information needs topics to areas in the theoretical model - the social self includes information needs related to friend/peer/romantic relationships, social activities, popular culture, fashion, and social/legal forms; the emotional self includes needs related to familial relationships, emotional safety, religious practice; the reflective self includes information needs about self-image, philosophical concerns, heritage/cultural identity, civic duty, college, career, self-actualization; the physical self includes information needs about daily life routine, physical safety, goods and services, personal finances, health, job responsibilities; the creative self includes information needs related to creative performance and creative consumption; the cognitive self includes information needs related to academics, school culture and current events, and the sexual self includes information needs related to sexual safety and sexual identity[272]. Agosto and Hughes-Hassell's major finding stems from comparison of the empirical model to the results of past youth information behavior research which shows that urban youth from their study tended to have the same types of information needs as the participants from previous studies. This finding suggests that adolescents have similar information needs across socioeconomic, ethnic, cultural, and geographic boundaries[273].

Nwagwu (2009) reports on the information needs of younger adolescent girls in a rural community in Nigeria, which are: education, reproductive health, (HIV/AIDS, pregnancy) and children's rights, safety and protection from abuse. Information needs of older adolescents are related to income and employment (job searching, career information etc.), health (HIV/AIDS, general well-being), education (school, higher education etc.), and life skills (decision making, safe sex, how to stay healthy, how to look after and protect oneself, how to be successful and financially capable)[274]. The main information needs of South Korean adolescents seem to be cognitive information needs related to academical success, and socio-affective needs arising from the need to make friends and have a social life, as Koo (2012) finds in his study[275]. Franklin's (2013) study everyday life information behavior of suburban teenagers in a highly

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[270] Cf. Shenton, Andrew K.; Dixon, Pat. Models. P. 10.
[271] Cf. Agosto, Denise E.; Hughes-Hassell, Sandra. Toward a model of the everyday life information needs of urban teenagers, part 1: theoretical model. // Journal of the American Society for Information Science and Technology 57, 10(2006a), p. 1394–1403.
[272] Cf. Agosto, Denise E.; Hughes-Hassell, Sandra. Toward a model of the everyday life information needs of urban teenagers, part 2: empirical model. // Journal of the American Society for Information Science and Technology 57, 11(2006b), p. 1419.
[273] Ibid. p. 1425.
[274] Cf. Nwagwu, Williams E. Participatory gender-oriented study of the information needs of the youth in a rural community in south-eastern Nigeria. // African Journal of Library, Archives & Information Science, 19, 2(2009), 133-138.
[275] Cf. Koo, Joung H. Recent South Korean immigrant adolescents' everyday life information seeking when isolated from peers: a pilot study. // The Journal of Research on Libraries and Young Adults. 2012. URL: http://www.yalsa.ala.org/jrlya/2012/09/recent-south-korean-immigrant-adolescents-everyday-life-information-seeking-when-isolated-from-peers-a-pilot-study/ (2017-11-9)

technological school library setting is prompted by rapid ICT development which changed the everyday life information seeking behaviors of young people. He modifies the original adolescent ELIS typology posited by Agosto and Hughes-Hassell and adds another area to existing areas of adolescent development to the ELIS model, “playful self”, which "encompasses habits of gaming and play, including the blending of work and play while in academic settings"[276]. Markwei and Rasumssen (2015) identify that the most frequent information need among homeless Ghanaian youth are about money and shelter, while their other information needs include education and employment[277]. Similarly, Buchanan and Tuckerman (2016) identify that the most important information needs that adolescents who are not in education, employment or training (NEET) relate to are employment, education, and training. Other information needs relate to finance, health and housing[278]. Rafedzi and Abrizah (2016) explore information needs of male juvenile delinquents in a prison setting and find that they need: day-to-day prison life information for security, mutual support and information about prison operations for daily comfort; information about their families to dealwith loneliness and future hopes; information on sex for dealing with sex-related curiosity; health information for well-being; recreational information; legal information for future hopes and academic or educational information for future vocations[279]. It seems that the disadvantaged youth from these three studies show similar information needs which might arise from their disadvantaged life situations. Lloyd and Wilkinson (2016) reveal that refugee youth experience complex information needs related to becoming a part of community, relating to peers, dealing with social challenges that arise from cultural expectations, learning the rules of the social game, finding employment, fulfilling family expectations and staying connected[280]. Bopape, Dikotla, Mahlatji, Ntsala, and Makgahlela (2017) find that the most basic information needs of youth in one South African public library include guidance, educational programs, health information, and crime-prevention information[281]. Ibegbulam, Akpom, Enem, and Onyam (2018) reveal that adolescent female students experience reproductive health information needs and use the internet to meet their needs[282].

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[276] Cf. Franklin, Lori L. Everyday life information seeking (ELIS) practices of suburban teens in a highly technological school library: a case study. (doctoral dissertation, Emporia State University, 2013), p. 181. URL: https://esirc.emporia.edu/bitstream/handle/123456789/3252/Franklin%20dissertation.pdf?sequence=1 (2019-9-8)

[277] Cf. Markwei, Evelin; Rasmussen, Edie. Op. cit., p. 17-18.

[278] Cf. Buchanan, Steven; Tuckerman, Lauren. The information behaviours of disadvantaged and disengaged adolescents. // Journal of Documentation 72, 3(2016), p. 537. URL: https://www.storre.stir.ac.uk/bitstream/1893/29262/1/Accepted%20Manuscript.pdf (2019-18-9)

[279] Cf. Rafedzi, E. R. K.; Abrizah, A. Information needs of male juvenile delinquents: the needs to be met in a prison setting. // Information Development 32, 3(2016), p. 598-601. URL: https://www.researchgate.net/profile/Jet_Angah/publication/295626355_Information_needs_of_male_juvenile_delinquents_the_needs_to_be_met_in_a_prison_setting/links/56cc15a708ae1106370c9bb1/Information-needs-of-male-juvenile-delinquents-the-needs-to-be-met-in-a-prison-setting.pdf (2019-10-15)

[280] Cf. Lloyd, Annemaree; Wilkinson, Jane. Knowing and learning in everyday spaces (KALiEds): mapping the information landscape of refugee youth learning in everyday spaces. Journal of Information Science 42, 3(2016), p. 12. URL: https://discovery.ucl.ac.uk/id/eprint/10062116/1/Lloyd-Zantiotis_Revised%20Resubmit%20%20Final%20%20Master%20Copy%20%2020151007.pdf (2019-10-16)

[281] Cf. Bopape, Solomon; Dikotla, Maoka; Mahlatji, Matlala; Ntsala, Morongoenyane; Makgahlela, Lefose. Identifying the information needs of public library and information services users in Limpopo province. // South African Journal of Libraries and Information Science 83, (2017), p. 1-10.

[282] Cf. Ibegbulam, Ijeoma J.; Akpom, Chinwendu C.; Enem, Fidelia N.; Onyam, Dora I. Use of the Internet as a source for seeking among adolescent girls in secondary schools in Enugu, Nigeria. // Health Information & Libraries Journal 35, 4(2018), p. 298-308.

It is worth noting that much of adolescent health information needs research is conducted in medical science and other health-related disciplines. Studies such as those conducted by, Perkins, and Dunn (2014), DeRouen and colleagues (2015), Cheung, Zebrack, and Cheung (2017), Shahhosseini, Simbar and Ramezankhani (2011)[283], show that adolescents have diverse and considerable health information needs arising from their diverse health conditions. A substantial body of research deals, for example, with the information needs of adolescent and young adult cancer survivors (e.g. Hauff, Abel, Hersh, Isenberg, Spoljaric, Hayashi and King 2019; Shay, Parsons and Vernon 2017; Zebrack 2009 and others)[284].

Only two studies have been conducted on youth information needs in Croatia. Stričević (2006) investigated adolescents' information needs, expressed in information inquiries in a public library. Library users' information needs were related to library collections items, mostly about compulsory school reading books, and completing other school assignments. The research showed that information inquiries about free reading books in free time, both fiction and non-fiction, and about everyday life information (topics related to growing up, sexuality, drugs, peer violence and alike), were rather rare. This finding raised some questions about fulfilling the library's purpose of providing everyday life information, important for a young individual's life[285]. In the study on health information needs and health information behavior of high school students, Martinović, Bakota, and Badurina (2018) found that they have information needs related to various diseases, such as headaches, allergies, skin diseases, menstrual problems, depression, etc.[286]

### 2.2.2. Adolescent information behavior research

#### 2.2.2.1. Electronic information systems

We can trace the research on youth information seeking behavior back to the early period from 1980 and 1990, characterized by the development of electronic-based information systems. In this period, the research interest focused on how young people understand and use

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[283] Cf. Austin, Joan K.; Perkins, Susan M.; Dunn, David W. A model for internalized stigma in children and adolescents with epilepsy. // Epilepsy & Behavior. 36(2014), 74-79.; DeRouen, Mindy C.; Smith, Ashley Wilder; Tao, Li; Bellizzi, Keith M.; Lynch, Charles F.; Parsons, Helen M., Kent, Erin E.; Keegan, Theresa HM; AYA HOPE Study collaborative group. Cancer-related information needs and cancer's impact on control over life influence health-related quality of life among adolescents and young adults with cance. // Psycho-Oncology 24, 9(2015), p. 1104-1115.; Cheung, Christabel; Zebrack, Brad; Cheung, Christabel K. What do adolescents and young adults want from cancer resources? Insights from a Delphi panel of AYA patients. // Supportive Care in Cancer. 25, 1(2017), P. 119-126.; Shahhosseini, Zohreh; Simbar, Masumeh; Ramezankhani, Ali. Female adolescents health-information needs: a qualitative study. // Journal of Mazandaran University of Medical Sciences 20, 80(2011), p. 82-85.

[284] Cf. Hauff, Marnie; Abel, Regina; Hersh, Juliana; Isenberg, Jill; Spoljaric, Debra; Hayashi, Robert J.; King, Allison A. Adolescent survivors' information needs for transitions to postsecondary education and employment. // Pediatric blood & cancer 66, 4(2019), e27547.; Shay, L. Aubree; Parsons, Helen M.; Vernon, Sally W. Survivorship care planning and unmet information and service needs among adolescent and young adult cancer survivors. // Journal of adolescent and young adult oncology 6, 2(2017), p. 327-332. https://www.liebertpub.com/doi/pdfplus/10.1089/jayao.2016.0053 (2019-10-16) ; Zebrack, Brad. Information and service needs for young adult cancer survivors. // Supportive Care in Cancer 17, 4(2009), p. 349-357.

[285] Cf. Stričević, Ivanka. Utvrđivanje informacijskih potreba i čitateljskih interesa mladeži u narodnoj knjižnici. (doctoral dissertation, Filozofski fakultet u Zagrebu, 2006), p. 151-165.

[286] Cf. Martinović, Ivana; Bakota, Sara; Badurina, Boris. Informacijske potrebe i informacijsko ponašanje učenika i učenica I. gimnazije u Osijeku pri pretraživanju zdravstvenih informacija.// Vjesnik bibliotekara Hrvatske 61, 2(2018), p. 1-27. URL: https://hrcak.srce.hr/index.php?show=clanak&id_clanak_jezik=318139 (2019-10-13)

electronic information systems, starting from questions primarily focused on how effectively they use the systems to broader approaches that incorporated current theoretical developments in the information science field.[287] The shift from a system-oriented to a user-oriented paradigm that was taking place at that time in the scholarly and professional field of librarianship and information science, and was identified by Dervin and Nilan,[288] reflects also in youth information behavior research focusing on the cognitive processes and mental strategies underlying information seeking process. In this period, the studies were conducted in efforts to design better information systems and to empower youth with information-seeking abilities, such as those of Marchionini and his colleagues and Borgman, but also of others.[289]

#### 2.2.2.2. Learning in the school library

Perhaps the best-known scholar who investigated students' learning in a school library setting is Carol Kuhlthau.[290] Kuhtlhau was examining the information search process (ISP) from the users' perspective across decades, starting with studies of the library search process of high school students in assigned library research.[291] She proposed the model of Information Search Process (ISP) which maps the stages through which students proceed in their information seeking in the cognitive, behavioral, and affective domains. ISP is recognized as the constructive activity of finding meaning from information which extends student's state of knowledge on some topic, and is not limited to one encounter with information, but rather incorporates a series of encounters within time and space. ISP is typically carried out through six stages: initiation, selection, exploration, formulation, collection and presentation, each accompanied with typical feelings (starting with uncertainty and anxiety and ending with relief/satisfaction or disappointment), thoughts, actions and appropriate task which needs to be accomplished.[292] Kuhlthau and Todd investigated school libraries across Ohio state to understand and demonstrate the impact of school libraries on student achievement. They showed that effective school library is informational, but also transformational and formational and that it helps in knowledge creation, production, dissemination and knowledge use, as well as in the development of information values.[293] There are other scholars who examined students' information seeking and learning in school library setting, such as McGregor and Williams and Wavell, and others.[294] More recent studies depict schools and school libraries as

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[287] Cf. Cool, Colleen. Information-seeking behaviors of children using electronic information service during the early years: 1980-1990. // Youth information-seeking behaviour: Theories, models and Issues. / Edited by Mary K. Chelton and Colleen Cool. Lanham: Toronto: Oxford : The Scarecrow Press, 2004. P. 1-2.
[288] Cf. Dervin, Brenda; Nilan, Michael. Information needs and uses. Annual Review of Information Science and Technology 21(1986), p. 3-33.
[289] Cf. Cool, Colleen. Op. cit., p. 16-27.
[290] Cf. Kuhlthau, Carol C. Student learning in the library: what library power librarians say. // Youth information-seeking behaviour: Theories, models and Issues. / Edited by Mary K. Chelton and Colleen Cool. Lanham: Toronto: Oxford : The Scarecrow Press, 2004. P. 37-63.
[291] Cf. See for example Kuhlthau, Carol Collier. Developing a model of the library search process. // Reference Quartely 28, 2(1988). p. 232-242.; Kuhlthau, Carol Colier. Inside.
[292] Cf. Kuhlthau, Carol C. Seeking meaning.
[293] Cf. Todd, Ross. J.; Kuhlthau, Carol C. Student learning through Ohio school libraries, Part 1: How effective school libraries help students. // School Libraries Worldwide, 11, 1(2005), p. 63-88. URL: https://www.researchgate.net/profile/Carol_Kuhlthau/publication/265043672_Student_Learning_Through_Ohio_School_Libraries_Part_1_How_Effective_School_Libraries_Help_Students/links/55bcd92708ae9289a098436f.pdf (2019-9-7)
[294] Cf. McGregor, Joy H. Information Seeking and Use: Students' thinking and their mental models. // Journal of youth services in libraries, 8, 1(1994), p. 69-76.; Williams, Dorothy; Wavell, Caroline. The impact of the school

places of access to digital information and communication technology where adolescents blend work and play and meet their everyday life information needs, as shown in the study by Franklin[295], and participate in school-based digital literacy programs which can attenuate digital divide effects, as shown by Reynolds and Chiu.[296]

#### 2.2.2.3. World Wide Web

A substantial number of research studies focus on children's and adolescents' information seeking behavior in electronic environments, and specifically on their behavior on the World Wide Web. From late 90s on, much attention has been given to the question on how the youth seek information on the World Wide Web (e.g Hirsh, 1997; Akin, 1998: Fidel at al., 1999; Bilal, 2000, 2001; Nahl and Harada, 2004; Watson, 2004; Large and Beheshti, 2000; Lazonder, Biemans and Wopereis, 2000; Agosto, 2002 etc.; Burford and Park, 2014; Anderson, 2017; Taylor, 2018; Kwasitsu and Matsushima, 2019).[297] These studies show that although youth

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library resource centre on learning. Library and Information Commission Research Report 2001. URL: http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.129.471&rep=rep1&type=pdf (2019-9-8)

[295] Cf. Franklin, Lori L. Op. cit.

[296] Cf. Reynolds, Rebecca; Chiu, Ming Ming. Reducing digital divide effects through student engagement in coordinated game design, online resource use, and social computing activities in school. // Journal of the Association for Information Science and Technology, 67, 8(2016), p. 1822-1835. URL: https://s3.amazonaws.com/academia.edu.documents/37761726/Reynolds_et_al-2015-Journal_of_the_Association_for_Information_Science_and_Technology.pdf?response-content-disposition=inline%3B%20filename%3DReducing_digital_divide_effects_through.pdf&X-Amz-Algorithm=AWS4-HMAC-SHA256&X-Amz-Credential=AKIAIWOWYYGZ2Y53UL3A%2F20190908%2Fus-east-1%2Fs3%2Faws4_request&X-Amz-Date=20190908T154953Z&X-Amz-Expires=3600&X-Amz-SignedHeaders=host&X-Amz-Signature=155c907dd64845984a543ac8022c706b7eb2927369f451b50401da4f5799f5b0 (2019-9-8)

[297] Cf. Hirsh, Sandra G. How do children find information on different types of tasks? Children's use of the science library catalog. Library Trends, 45, 4(1997), p. 725-745.; Akin, Lynn. Information overload and children: a survey of Texas elementary school students. // School Library Media Quarterly Online 1(1998), p. 1-11 1998. URL: http://www.ala.org/aasl/sites/ala.org.aasl/files/content/aaslpubsandjournals/slr/vol1/SLMR_InformationOverload_V1.pdf (2019-9-8); Fidel, Raya; Davies, Rachel K.; Douglass, Mary H.; Holder, Jenny K.; Hopkins, Carla J.; Kushner, Elisabeth J., Miyagishima, Bryan K.; Toney, Christina D. A visit to the information mall: Web searching behavior of high school students. // Journal of the American Society for Information Science, 50, 1(1999), p. 24-37. Bilal, Dania. Children's use of the Yahooligans! Web search engine: I. Cognitive, physical, and affective behaviors on fact-based search tasks. Journal of the American Society for information Science, 51, 7(2000), p. 646-665.; Bilal, Dania. Children's use of the Yahooligans! Web search engine: II. Cognitive and physical behaviors on research tasks. Journal of the American Society for Information Science and Technology, 52, 2(2001), p. 118-136.; Nahl, Diane; Harada, Violet H. Composing Boolean search statements: self-confidence, concept analysis, search logic, and errors. // Youth information-seeking behaviour: Theories, models and Issues. / Edited by Mary K. Chelton and Colleen Cool. Lanham: Toronto: Oxford : The Scarecrow Press, 2004. P. 119-144.; Watson, Jinx Stapleton. “If you don’t have it, you can’t find it”: a close look at students’ perception of using technology. Ibid, p. 145-180. Large, Andrew; Beheshti, Jamshid. The Web as a classroom resource: reactions from the users. // Journal of the American Society for Information Science, 51, 12(2000), p. 1069-1080.; Lazonder, Ard W.; Biemans, Harm J.; Wopereis, Iwan. Differences between novice and experienced users in searching information on the World Wide Web. // Journal of the American Society for Information Science, 52, 6(2000), p. 576-581. URL: https://www.researchgate.net/publication/220434466_Differences_between_novice_and_experienced_users_in_searching_information_on_the_World_Wide_Web (2019-9-8); Agosto, D.E. Bounded rationality and satisficing in young people’s web-based decision making. // Journal of the American Society for Information Science and Technology, 53, 1(2002), p. 16-27.; Burford, Sally; Park, Sora. The impact of mobile tablet devices on human information behaviour. // Journal of documentation 70, 4(2014), p. 622-639. URL: https://www.researchgate.net/profile/Sally_Burford/publication/260267831_The_impact_of_mobile_tablet_devices_on_human_information_behaviour/links/56554ae308ae1ef9297719a0/The-impact-of-mobile-tablet-devices-on-human-information-behaviour.pdf; Andersson, Cecilia. “Google is not fun”: an investigation of how Swedish teenagers frame online searching. // Journal of Documentation 73, 6(2017), p. 1244-1260.; Taylor, Natalie

generally enjoys searching the World Wide Web, appreciating its variety of formats, pictures, the multitude of subjects and easy access to information, they face difficulties that limit the effectiveness of their information seeking and use. Some of the difficulties relate to insufficient search strategies and skills including tendency to conduct simple searches, difficulty with composing Boolean search statements, preference for browsing and lack of analytics-based strategies, information overload which comes along with a wealth of available information, superficial assessment Websites quality and relevance, termination of the seeking process, accepting and satisfying and *good enough* information rather than seeking for information relevance, insecurity, and uncertainty when searching and impatience with slow response. Generally, youth show somewhat lacking ability to effectively seek, manage and use the sheer quantity of information available.[298] Google search engine seems to be the first choice when seeking information and its usage and a part of daily lifestyle habit.[299] It is used for fact-finding, as a neutral infrastructure, and as an authority.[300] Constant changes in information environment and in the ways information is transmitted through new technologies (such as mobile tablet devices which allow constant access to online digital information) cause new changes in youth information behaviour.[301] A very illustrative example in support of that idiosyncratic and unpredictable information search is the behavior of some college students who employ systematic search protocols only when these are imposed[302].

#### 2.2.2.4. Credibility and cognitive authority assessment

From an early age of youth information behavior research, the question of how young people assess relevancy, accuracy, and quality of acquired information occupied the researchers' attention (e.g. Limberg, 1999; Shenton and Dixon, 2004)[303]. Overall, attempts which the youth make to assess the accuracy of acquired information seem to be seldom and modest[304]. Not surprisingly, the prevailing use of the World Wide Web raises questions about assessment of credibility and quality of information found online (e.g. Rieh and Hilligoss, 2008; Flanagin and Metzger 2010; Fergie, Hunt and Hilton 2013; Subramaniam, Taylor, St. Jean, Follman, Kodama, Casciotti, 2015 etc.; Anderson, 2017; Hawkins, 2017; Loke, Schubert and Majid, 2017; Hirvonen, Tirroniemi and Terttu, 2019)[305]. Choosing credible information in an online

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Greene. Youth information-seeking behavior and online government information: Tweens' perceptions of US federal government websites. // Journal of Documentation 74, 3(2018), p. 509-525.; Kwasitsu, Lishi, and Ann Matsushima Chiu. Mobile information behavior of Warner Pacific University students. // Library & Information Science Research 41(2019), p. 139–150.

[298] Cf. Todd, Ross J. Adolescents. P. 38.

[299] Cf. Andersson, Cecilia. Op. cit., p. 1244.; Kwasitsu, Lishi, and Ann Matsushima Chiu. Op. cit., p. 147.

[300] Cf. Andersson, Cecilia. Op. cit., p. 1244.

[301] Cf. Burford, Sally; Park, Sora. Op. cit., p. 635.

[302] Cf. Kwasitsu, Lishi, and Ann Matsushima Chiu. Op. cit., p. 147.

[303] Cf. Limberg, Louise. Experiencing information seeking and learning: a study of the interaction between two phenomena. Information Research, 5, 1(1999). URL: http://informationr.net/ir/5-1/paper68.html (2019-9-21); Shenton, Andrew K.; Dixon, Pat. Issues arising from youngsters' information-seeking behavior. Library & Information Science Research 26, 2(2004a), p. 77-200.

[304] Cf. Limberg, Louise. Op. cit.; Shenton, Andrew K.; Dixon, Pat. Issues. P. 189.

[305] Cf. Rieh, Soo Young; Hilligoss, Brian. College Students' Credibility Judgments in the Information-Seeking Process. // Digital Media, Youth, and Credibility. / Edited by Miriam J. Metzger and Andrew J. Flanagin. Cambridge, MA: The MIT Press, 2008. 49–72. URL: https://www.researchgate.net/profile/Brian_Hilligoss/publication/242583996_College_Students'_Credibility_Judgments_in_the_Information-Seeking_Process/links/573def9508ae9f741b2ffd7e.pdf (2019-9-11); Flanagin, Andrew J.; Metzger, Miriam J. The perceived credibility of online encyclopedias among children. In Fourth International AAAI Conference on Weblogs and Social Media. (2010). P. 242. URL:

environment oversaturated with information is challenging for anyone, but especially for the youth. They often lack the developmental characteristics, general knowledge, and critical literacy skills which would help them to determine the credibility of information. That limits their abilities to adequately evaluate mixed quality information available in today's web-based information environment.[306] The studies show that although the youth may show concern about information acquired online and a level of criticism toward its accuracy[307], they perceive many advantages of online information acquisition, such as speed and convenience of access[308], access to information which otherwise might not be accessible (such as other people's personal experience on social media), anonymity which provides opportunity for hassle-free access to information, and others.[309] It seems that credibility judgments that the youth make vary across the population. Studies conducted among college students show that they employ some specific information seeking strategies to deal with concerns related to credibility of online information[310], such as starting with the sources considered knowledgeable and trustworthy and verifying accuracy by comparing information from different sources.[311] When facing uncertainty about acquired information, whether it is caused by contradictory information from different sources or something else, some adolescents employ method of re-evaluation and verification of information. "Bounding" or limiting credibility assessment within certain social contexts is also among means of credibility judgment.[312] Other studies show that credibility judgment is a process rather than a discrete evaluation event and includes two distinct kinds of judgments: predictive judgment and evaluative judgment[313]. It also proved to be primarily influenced by "contextual-level credibility clues"[314] which indicates that the youth is drawn more toward surface cues rather than the actual content, at least when no obvious errors stand out.[315] The very significant finding suggests that adolescents tend to pay greater attention to the credibility of information when pursuing long term goals and matters of more significant consequences (such as academic achievement, health, finances), and when the use of

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https://pdfs.semanticscholar.org/f7b1/f98c367d854e99c090c960c03449bc8bca9d.pdf (2019-9-14); Fergie, Gillian; Hunt, Kate; Hilton, Shona. What young people want from health-related online resources: a focus group study. // Journal of youth studies 16, 5(2013), p. 579-596. URL: https://www.tandfonline.com/doi/full/10.1080/13676261.2012.744811 (2019-9-15); Subramaniam, Mega; Taylor, Natalie Greene; St. Jean, Beth; Follman, Rebecca; Kodama, Christie; Casciotti, Dana. As simple as that?: Tween credibility assessment in a complex online world. // Journal of Documentation 71, 3(2015), p. 550-571.; Hawkins, Blake. Does quality matter? Health information behaviors of LGBTQ youth in Prince George, Canada. // Proceedings of the Association for Information Science and Technology 54, 1(2017), p. 699-701.; Loke, Cliff; Foo, Schubert; Majid, Shaheen. Video seeking behavior of young adults for self directed learning. // International Conference on Asian Digital Libraries. // Choemprayong, S.; Crestani, F.; Cunningham, S. (eds). Cham: Springer, 2017. P. 314-324.; Hirvonen, Noora; Tirroniemi, Alisa; Kortelainen, Terttu. The cognitive authority of user-generated health information in an online forum for girls and young women. // Journal of Documentation 75, 1(2019), p. 78-98.

[306] Cf. Subramaniam, Mega; Taylor, Natalie Greene; St. Jean, Beth; Follman, Rebecca; Kodama, Christie; Casciotti, Dana. Op. cit., p. 551-555.

[307] Cf. Rieh, Soo Young; Hilligoss, Brian. College Students'. P. 64; Flanagin, Andrew J.; Metzger, Miriam J. Op. cit., p. 239.; Fergie, Gillian; Hunt, Kate; Hilton, Shona. Op. cit., p. 593.

[308] Cf. Rieh, Soo Young; Hilligoss, Brian. College Students'. P. 64.

[309] Cf. Fergie, Gillian; Hunt, Kate; Hilton, Shona. Op. cit., p. 588.

[310] Cf. Fergie, Gillian; Hunt, Kate; Hilton, Shona. Op. cit., p. 588 – 591.; Rieh, Soo Young; Hilligoss, Brian. College Students'.

[311] Cf. Rieh, Soo Young; Hilligoss, Brian. College Students'. P. 64.

[312] Cf. Rieh, Soo Young; Hilligoss, Brian. College Students'.

[313] Cf. Subramaniam, Mega; Taylor, Natalie Greene; St. Jean, Beth; Follman, Rebecca; Kodama, Christie; Casciotti, Dana. Op. cit., p. 550.; Rieh, Soo Young; Hilligoss, Brian. College Students'. P. 64.

[314] Cf. Flanagin, Andrew J.; Metzger, Miriam J. Op. cit., p. 242.

[315] Ibid.

information affects other people.[316] It is also worth emphasizing that some adolescents are aware of the difference between factual and informative websites and social media websites as two different types of health-related information sources, and employ different evaluation strategies. Factual websites are evaluated by checking URLs, logos, organizations' information pages and language used. Opinions and personal experiences featured on social media websites are evaluated by various criteria, such as the number of views, 'likes' and 'dislikes' facilities, user-ratings, and other users' interaction which is seen as the regulatory function that a group of users together provide to create some kind of quality control over content.[317] User-generated health-related content on an online forum is held as a credible source of opinion and experimental information, and various strategies are used for evaluation of the obtained information, including author-related cues, argumentation, and tone, veracity, and comparison with their prior knowledge and verification with information obtained from other sources.[318] On the other hand, disadvantaged teens showed to make unfounded credibility judgments, based on mere recognition of some familiar generic words, such as "information" or "health", which is potentially dangerous.[319] Factors that influence their credibility assessment strategies include limited English-language vocabularies, media preferences, familiarity (or lack of familiarity) with sources and preference to non-textual formats (such as audio and video).[320] A recent study shows that Google search engine is perceived as a trustworthy authority across various contexts – the participants show belief that the engine assesses critically the search results and shows that in results ranking.[321] The study on LGBTQ concerns on health information shows that they vary in their propensity towards engagement in assessment of quality of acquired information, based on the factors such as relevancy and source of information, some of them being rather uncritical, but others skeptical. However, most of them are critical when it comes to information acquired online, and they view multiple sources and double-check the information before using it in their everyday health practices.[322] At the same time, the study conducted among younger adolescents who turn to the internet for health-related information shows that they lack some critical digital health literacy skills to adequately asses the credibility of online health information.[323] When searching *YouTube* videos to support self-directed learning, post-secondary students showed to employ two-level assessment. At the first level they use heuristic cues to shortlist the search results, and at the second level they decide whether to accept the video and complete search or to continue searching. Socially generated cues such as the comments of the video are used to assess quality and suitability of the video and to affirm the selection.[324] In all, this brief overview of the youth's credibility and authority assessment reveals that although some of the youth approach online information cautiously and employ various strategies to assess information credibility, there are also those with less ability

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[316] Cf. Rieh, Soo Young; Hilligoss, Brian. College Students'. P. 64.
[317] Cf. Fergie, Gillian; Hunt, Kate; Hilton, Shona. Op. cit., p. 590-591.
[318] Cf. Hirvonen, Noora; Tirroniemi, Alisa; Kortelainen, Terttu. Op. cit., p. 78.
[319] Cf. Subramaniam, Mega; Taylor, Natalie Greene; St. Jean, Beth; Follman, Rebecca; Kodama, Christie; Casciotti, Dana. Op. cit.
[320] Ibid.
[321] Cf. Andersson, Cecilia. Op. cit., p. 1254-1257.
[322] Cf. Hawkins, Blake. Op. cit., p. 700.
[323] Cf. St. Jean, Beth; Greene Taylor, Natalie; Kodama, Christie; Subramaniam, Mega. Assessing the digital health literacy skills of tween participants in a school-library-based after-school program. / Journal of Consumer Health on the Internet 21, 1(2017), p. 56-57.
[324] Cf. Loke, Cliff; Foo, Schubert; Majid, Shaheen. Op. cit., p. 319-323.

to deal with its questionable quality and credibility. In challenging information environments, the youth's ability to adequately assess quality and credibility of obtained information varies across population and seems to depend on various factors, such as age-related abilities, social and cultural background and others.

#### 2.2.2.5. Networked communication

Over the last decade, the ubiquitous use of social networking sites and other means of networked communication drew the research focus toward networked communication behaviors. Questions were raised around following topics: adolescents' preferences and concerns related to the use of social media, and generally information communication technologies (ICTs) for personal communication (e.g. Agosto and Abbas, 2010; Agosto, Abbas and Naughton, 2012)[325], supportive communication and advice exchange on sensitive and intimate topics (Yeo and Chu, 2017)[326], academic help-seeking (Laplante, 2014)[327] and job information seeking (Mowbray, Hall, Raeside and Robertson, 2018)[328]. Topics related to online privacy and safety (Agosto and Abbas, 2017) and to unwelcome mean and cruel behaviors) social media environment (Bowler, Knobel and Mattern, 2014)[329] also got considerable attention. The body of research shows that many adolescents are heavy users of information communication technologies for quick and easy communication and for relationship building and maintenance.[330] They use mobile phone texting and social networking sites, especially Facebook, for mediated communication and share a set of known social rules which guide the use of information and communication technologies.[331] Social networking sites such as Facebook may facilitate supportive communication and advice exchange among young adults on sensitive health topics, such as sexuality and intimacy.[332] Social media platforms showed to be very useful tools for networking by allowing access to weak ties and novel information to

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[325] Cf. Agosto, Denise E.; Abbas, June. High school seniors' social network and other ICT use preferences and concerns. // Proceedings of the 73rd ASIS&T Annual Meeting on Navigating Streams in an Information Ecosystem-Volume 47, 65. American Society for Information Science, 2010. P. 1-10. URL: https://asistdl.onlinelibrary.wiley.com/doi/pdf/10.1002/meet.14504701025 (2019-9-10); Agosto, Denise E.; Abbas, June; Naughton, Robin. Relationships and social rules: teens' social network and other ICT selection practices. // Journal of the American Society for Information Science and Technology 63, 6(2012), p. 1108-1124.

[326] Cf. Yeo, Tien Ee Dominic; Chu, Tsz Hang. Sharing "Sex Secrets" on Facebook: a content analysis of youth peer communication and advice exchange on social media about sexual health and intimate relations. // Journal of health communication 22, 9(2017), p. 753-762.

[327] Cf. Laplante, Audrey. Social capital and academic help seeking: late adolescents' use of people as information sources. // New directions in children's and adolescents' information behavior research. / Edited by Dania Bilal and Jamshid Beheshti. Bingley: Emerald, 2014. P. 67-103.

[328] Cf. Mowbray, John; Hall, Hazel; Raeside, Robert; Robertson, Peter J. Job search information behaviours: an ego-net study of networking amongst young job-seekers. // Journal of Librarianship and Information Science 50, 3(2018), p. 239-253. URL: https://www.napier.ac.uk/~/media/worktribe/output-1025030/job-search-information-behaviours-an-ego-net-study-of-networking-amongst-young.pdf (2019-9-22)

[329] Cf. Agosto, Denise E.; Abbas, Junne. "Don't be dumb—that's the rule I try to live by": A closer look at older teens' online privacy and safety attitudes. // New Media & Society 19, 3 (2017), p. 347-365.; Bowler, Leanne; Knobel, Cory; Mattern, Eleanor. From cyberbullying to well-being: a narrative-based participatory approach to values-oriented design for social media. // Journal of the Association for Information Science and Technology 66, 6(2015), p. 1274-1293. URL: esearchgate.net/profile/Cory_Knobel/publication/267929370_From_Cyberbullying_to_Well-Being_A_Narrative-Based_Participatory_Approach_to_Values-Oriented_Design_for_Social_Media/links/5a0b1e41a6fdccc69eda0194/From-Cyberbullying-to-Well-Being-A-Narrative-Based-Participatory-Approach-to-Values-Oriented-Design-for-Social-Media.pdf (2019-9-10)

[330] Cf. Agosto, Denise E.; Abbas, June. High school. P. 1.

[331] Cf. Agosto, Denise E.; Abbas, June; Naughton, Robin. Relationships. P. 1116.

[332] Cf. Yeo, Tien Ee Dominic; Chu, Tsz Hang. Op. cit.

young job seekers.[333] However, phone calls and in-person visits seem to be preferred for academic help and considered more efficient – benefits of social networking sites are not fully utilized for this purpose.[334] Selection of ICT for everyday life use seems to depend on six major factors: relationship factors (degree of closeness and size of audience), information/communication factors (urgency and depth of information), social factors (social acceptability of use and social use), system factors (speed and ease of use, convenience and availability, functionality, information duration), self-protection factors (privacy, security and communication overload concerns), and recipient factors (technological skills and access/connectivity).[335] For academic help-seeking, availability seems to be the most important criteria for deciding who to approach.[336] In spite of the widespread use of technology for quick and easy communication, adolescents also express frustrations with communication overload which challenges the concept of the digital native and its simplistic view of today's young people as uniformly enthusiastic and skilled technology users.[337] Awareness of safety and privacy issues showed to develop over time, with more concern devoted to online privacy and protection of personal information, and less to online safety.[338] Misuse of social media such as cyberbullying can be addressed by taking a different approach to social media design, focused on users' personal empowerment, empathy, reflection, and attention hold.[339]

#### 2.2.2.6. Everyday life

Research interest in youth information behavior related to personal and everyday life issues started in the 90s and has been growing ever since. In the early years, Poston-Anderson and Edwards (1993)[340], Julien (1997a, 1997b, 1998, 1999, 2004)[341] and Todd (1999)[342] and Todd and Edwards (2004)[343] draw attention to information behavior related to youth everyday life concerns, risk-taking behavior, and career-making decisions. In the 2000s, Shenton and Dixon

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[333] Cf. Mowbray, John; Hall, Hazel; Raeside, Robert; Robertson, Peter J., Op. cit., p. 27.
[334] Cf. Laplante, Audrey. Op. cit. P. 67.
[335] Cf. Agosto, Denise E.; Abbas, June; Naughton, Robin. Relationships. P. 1114.
[336] Cf. Laplante, Audrey. Op. cit. P. 67.
[337] Cf. Agosto, Denise E.; Abbas, June; Naughton, Robin. Relationships. P. 1117-1120.
[338] Cf. Agosto, Denise E.; Abbas, Junne. Don't be dumb. P. 347.
[339] Cf. Bowler, Leanne; Knobel, Cory; Mattern, Eleanor. P. 18-19.
[340] Cf. Poston-Anderson, Barbara; Edwards, Susan. Op. cit.
[341] Cf. Julien, Heidi E. How does information help? The search for career-related information by adolescents. (doctoral dissertation, The University of Western Ontario London. 1997a) URL: http://www.collectionscanada.gc.ca/obj/s4/f2/dsk2/ftp02/NQ28498.pdf (2019-10-24); Julien, Heidi. How career information helps adolescents' decision-making. // Proceedings of an international conference on Information seeking in context. London: Taylor Graham Publishing, 1997b. p. 371 – 385. URL: http://www.informationr.net/isic/ISIC1996/96_Julien.pdf (2015-09-15); Julien, Heidi. Adolescent career decision making and the potential role of the public library. // Public Libraries, 37, 6(1998), p. 376-381.; Julien, Heidi. Barriers to adolescents' information seeking for career decision making. // Journal of American Society for Information Science 50, 1(1999), 38-48.; Julien, Heidi. Adolescent decision making for careers: an exploration of information behavior. // Youth Information-Seeking Behavior: Theories, Models, and Issues / Mary K. Chelton; Colleen Cool. Lanham: Scarecrow, 2004. p. 321-352.
[342] Cf. Todd, Ross J. Utilization.
[343] Cf. Todd, Ross J.; Edwards, Susan. Op. cit.

(2003a, 2003b)[344], Agosto and Hughes-Hassell (2005, 2007) [345],and Lu (2009; 2010; 2011)[346] focused on everyday life information behavior of young adults and children, Hulgren (2009)[347] explored information behaviour of school leavers who are about to make choices on future and career, while Qayyum, Williamson, Ying-Hsang, and Philip (2010)[348] dealt with young adults seeking news. More recent research seems to be focused on specific population, the use of the newest information and communication technology, health information behavior and leisure everyday life information behavior. Koo (2012)[349], Lilley (2014)[350], Markwei and Rasumssen (2015)[351] and Buchanan and Tuckerman (2016),[352] and Hawkins (2017)[353] directed research attention from general youth population to somewhat special and underprivileged populations, while Franklin (2013)[354] explored specific types of information behavior of upper-income students who have access to the newest ICT. Aillerie and McNicol (2018)[355] explored how adolescents' use of social networking sites for everyday life information seeking. Adolescent health information behavior captures the research attention of Basic and Erdelez (2014, 2015) who investigated health information behavior of college students[356], of Hawkins (2017) who

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[344] Cf. Shenton, Andrew K.; Dixon, Pat. Models.; Shenton, Andrew; Dixon, Pat. Youngsters' use of other people as an information-seeking method. // Journal of Librarianship and Information Science 35, 4(2003b), p. 219-233.
[345] Cf. Agosto, Denise E.; Hughes-Hassell, Sandra. People, places, and questions: an investigation of the everyday life information-seeking behaviors of urban young adults. // Library & Information Science Research, 27, 2(2005), 141-163. URL: https://pdfs.semanticscholar.org/ab84/09873710a9ae404793ee93cd353ebdfcb8a3.pdf. (2017-11-11); Hughes-Hassell, Sandra; Agosto, Denise E. Modeling the everyday life information needs of urban teenagers. // Youth Information Seeking Behaviors: Context, Theories, Models, and Issues II / edited by M. K. Chelton, C. Cool. Lanham; Toronto; Plymouth: Scarecrow Press, 2007. p. 27-61.
[346] Cf. Lu, Ya-Ling. Children's information seeking in coping with daily-life problems: an investigation of fifth- and sixth-grade students. // Library & Information Science Research 32(2010), p. 85-86.; Lu, Ya-Ling . Children's strategies in coping with daily life: does information matter? // Proceedings of annual conference of the American society for information science 2009. Vancouver, Canada. URL: http://www.asis.org/Conferences/AM09/open-proceedings/openpage.html. (2015-09-20);
Lu, Ya-Ling. Everyday hassles and related information behavior among youth: a case study in Taiwan. Information Research 16,1(2011). URL: http://www.informationr.net/ir/16-1/paper472.html (2015-08-16)
[347] Cf. Hultgren, Frances. Approaching the future: a study of Swedish school leavers' information related activities. (doctoral dissertation, Department of Library and Information Science/ Swedish School of Library and Information Science University College of Borås/Göteborg University, 2009) URL: https://www.diva-portal.org/smash/get/diva2:876905/FULLTEXT01.pdf (2019-17-9)
[348] Cf. Qayyum, M. Asim; Williamson, Kirsty; Liu, Ying-Hsang; Hider, Philip. Investigating the news seeking behavior of young adults. // Australian academic & research libraries 41, 3 (2010), p. 178-191. URL: https://www.tandfonline.com/doi/pdf/10.1080/00048623.2010.10721462 (2019-10-0)
[349] Cf. Koo, Joung H. Op. cit.
[350] Cf. Lilley, Spencer C. The social information grounds of Maori secondary school students. // New directions in children's and adolescents' information behavior research. / Edited by Dania Bilal and Jamshid Beheshti. Bingley: Emerald, 2014. P. 191-213.
[351] Cf. Markwei, Evelin; Rasmussen, Edie. Op. cit.
[352] Cf. Buchanan, Steven; Tuckerman, Lauren. Op. cit.
[353] Cf. Hawkins, Blake. Op. cit.
[354] Cf. Franklin, Lori L., Op. cit.
[355] Cf. Aillerie, Karine; McNicol, Sarah. Are social networking sites information sources? Informational purposes of high-school students in using SNSs. // Journal of Librarianship and Information Science 50, 1(2018), p. 103-114. URL: https://journals.sagepub.com/doi/pdf/10.1177/0961000616631612 (2019-9-22)
[356] Cf. Basic, Josipa; Erdelez, Sanda. Active and passive acquisition of health-related information on the Web by college students. // Proceedings of the American Society for Information Science and Technology 51, (2014), p. 1-5. URL: https://asistdl.onlinelibrary.wiley.com/doi/pdf/10.1002/meet.2014.14505101149 (2019-9-20); Basic, Josipa; Erdelez, Sanda. The role of risky behaviors and health education in college students' health information acquisition on the internet. // Proceedings of the Association for Information Science and Technology 52, 1(2015), p. 1-10. URL: https://asistdl.onlinelibrary.wiley.com/doi/pdf/10.1002/pra2.2015.145052010049 (2019-9-20)

explored health information behavior of LGBTQ youth[357], of Ibegbulam, Akpom, Enem, and Onyam (2018) who explored reproductive health information behaviour of Nigerian adolescent girls[358], of Porsteinsdottir and Kane who investigated health information behaviour of Swedish adolescents (2018)[359], and of Dorado, Obille, Garcia and Olgado's who studied sexual information behaviour of Filipino University Students[360]. In Croatia, Martinović, Bakota, and Badurina (2018) explored health information behavior of high school students[361]. Leisure related information behavior is explored by Kisilowska and Mierzecka (2019)[362]. The following section brings a short overview of the main contributions to everyday life adolescent behavior research.

Poston-Anderson and Edwards explored adolescent girls' life concerns and what role information plays in dealing with them.[363] With the underlying assumption that girls try to face life concerns actively and seek information which would help, information is conceptualized as „any idea, opinion, fact, belief, or imaginative message that helps them to make sense of it"[364]. Most of the adolescent girls were able to express their information needs and perceived that helpful information is available, and tried to acquire the information needed. They sought answers on factual questions, questions related to understanding~~s~~, and questions that demanded interpretations, judgments, and opinions. The answers to factual questions were obtained by asking family, friends, and teachers, while the school library and public library generally were not perceived as places where they could find the needed information. Those who thought that they might find the information in a library, needed information related to education and work.

Julien explored the information behavior of adolescents who deal with a decision about future careers.[365] Career decisions are being made based on self-assessment and exploration of possible occupations which makes self-knowledge and specific career-related information critical components of career decision-making.[366] The study showed that adolescents seek career information purposefully, and also find it incidentally during the course of everyday life.[367] Many adolescents pick up career-related information incidentally, through interactions with peers, guidance counselors, parents and teachers without intention to acquire career-related information. When purposefully seeking information, Julien's participants turn mostly to familiar and accessible sources of help such as themselves, i.e. their own thinking, materials in school career centers (pamphlets and books), guidance counselors, friends, parents, and

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[357] Cf. Hawkins, Blake. Op. cit.
[358] Cf. Ibegbulam, Ijeoma J.; Akpom, Chinwendu C.; Enem, Fidelia N.; Onyam, Dora I. Op. cit.
[359] Cf. Porsteinsdottir, Guorun; Kane, Bridget. Health information seeking among young adults in Sweden. // In 2018 IEEE 31st International Symposium on Computer-Based Medical Systems (CBMS) (2018), p. 262-267.
[360] Cf. Dorado, Dan Anthony D.; Obille, Kathleen Lourdes B.; Garcia, Rhianne Patricia P.; Olgado, Benedict Salazar. Sexual Information Behavior of Filipino University Students. // Information in Contemporary Society. iConference 2019. Lecture Notes in Computer Science, vol 11420. / Taylor N., Christian-Lamb C., Martin M., Nardi B. (eds). Cham: Springer, 2019. P. 283-289.
[361] Cf. Martinović, Ivana; Bakota, Sara; Badurina, Boris. Op. cit.
[362] Cf. Kisilowska, Małgorzata; Mierzecka, Anna. (2019). Emotions, experience, identity – motivations of the teens' information behaviour in the area of culture. // Information Research 24, 1(2019). Paper isic1826. URL: http://InformationR.net/ir/24-1/isic2018/isic1826.html (2019-10-13)
[363] Cf. Poston-Anderson, Barbara; Edwards, Susan. Op. cit.
[364] Cf. Poston-Anderson, Barbara; Edwards, Susan. Op. cit., p. 25.
[365] Cf. Julien, Heidi. Adolescent decision.; Julien, Heidi. Barriers.; Julien, Heidi. How career information.; Julien, Heidi. Adolescent career.
[366] Cf. Julien, Heidi. Barriers. P. 38.
[367] Cf. Julien, Heidi. Adolescent career. P. 378.

appreciate information acquired from people working in careers of interest and older students attending post-secondary educational institutions of interest. They showed tendency towards interpersonal sources of information and believe that an ideal source of help would be a person, appreciating feelings which may be expressed by a person, which indicated that the internet cannot replace access to knowledgeable and caring advisors. The adolescents obtained two types of help from information sources: instrumental help which assists them to gain ideas, improve understanding, make plans and decisions, and emotional help which motivates them, provides reassurance, confirmation, and support, and makes the process calmer and easier. Formal information sources, such as guidance counselors and books and pamphlets provide mostly instrumental help, while informal sources of help, such as friends and parents provided mostly emotional support for decision making. However, when formal sources provide their help in the context of a trusting and friendly relationship, this type of help is more useful to adolescents. The public library showed to be the least used and the least helpful source of information.[368] Barriers to career information seeking which prevent adolescents from acquiring information and diminish their potential to make informed career decisions include complexity of information seeking process, information scatter, lack of knowledge of where to get answers to their questions, being daunted by the volume of information needed, lacking confidence or trust in help providers, emotional barriers.[369] Some gender differences in information behavior include more purposive information seeking and usage of a wider variety of sources among adolescent girls, than among boys.[370]

Todd investigated how adolescents cognitively utilize information on the drug heroin and found how information changes one's state of knowledge[371]. Adolescents employ three cognitive strategies when utilizing information (appending, inserting and deleting), which results in five types of effects of cognitive information utilization and describes how the knowledge is changed. These five effects are: (1) get a complete picture, (2) get a changed picture, get a clearer picture, (3) get a verified picture, and (3) get a position in a picture.[372] The description of new knowledge construction draws on Brooke's Fundamental equation of information science. Todd's study shows how differences in adolescents' initial knowledge result in different new knowledge and that the same information given to different adolescent individuals will not have the same effect on their cognitive creation of the new knowledge.[373]

Todd and Edwards found that drugs are one of the major current life concerns for the adolescents who participated.[374] However, they do not seek information because of perceived barriers, such as the risk of being excluded from peer groups or having teachers and parents doubting the motives of their questions. Therefore, these adolescents live in the world which may be described as information-poor, although it may, in fact, be rich with information. Issues related to concepts of insiders and outsiders, judgments about risks, costs and benefits, and social norms created "an information world rich in potential sources, but in reality for them a world that is devoid of sources of information that can help them in relation to their needs about

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[368] Cf. Julien, Heidi. How does information. P. 89.; Julien, Heidi. Adolescent career. P. 377-378.; Julien, Heidi. How career information. P. 376.-378.
[369] Cf. Julien, Heidi. Barriers. P. 43.
[370] Cf. Julien, Heidi. Adolescent career. P. 380.
[371] Cf. Todd, Ross J. Utilization.
[372] Ibid., p. 14-20.
[373] Ibid., p. 22.
[374] Cf. Todd, Ross J.; Edwards, Susan. Op. cit.

drugs", because adolescents do not feel free to share their information needs and seek information.[375]

Shenton and Dixon found that the youth's engagement in information seeking activity is induced by information needs that arise from some life situations. Goals such as reducing anxiety, making a decision, developing greater understanding, finding out about a subject or solving a problem induce needs, while information seeking activity occurs as a means of addressing information needs and reaching goals. However, young people do not necessarily seek to address information needs - they may choose not to if they believe it is not worth an effort or if they do not know how to address the needs.[376]

Agosto and Hughes-Hassell explored everyday life information seeking behavior of urban teens to determine what people sources and channels they consult, what types of media they most commonly use, and what are the most frequent information need topics.[377] Their study shows that friends and family are teen's preferred sources for everyday life information, mobile phones are the preferred method of mediated communication, and most common areas of everyday life information seeking are schoolwork, time-related queries, and social life. Teen's preference for people as information sources is proven, as well as their negative views of libraries and librarians from some previous studies.

Lu explored preadolescents' information behavior in coping with daily life hassles and problems[378]. Her major finding reveals that preadolescents do not engage in information seeking only to solve problems, but also to escape from them, to temporarily disengage and face problems later or to change their mood. Moreover, information seeking may be motivated by emotions, especially negative ones such as helplessness. When children do not want to seek or use information because they believe that information is useless and unhelpful, they employ behavior of information avoidance. Other reasons for not seeking information include personal attitudes such as laziness or lack of patience, social constraints such as not having a computer or not being able to go to a library, belief that some form of distraction would be more helpful, e.g. listening to music or watching TV, preference for gaining social support and relying on their own powers and capabilities to solve problems. Lu emphasizes how the developmental stage influences information behavior and that older children are more prone to seek information to cope with daily life problems[379].

Meyers, Fisher, and Marcoux investigated the everyday life information behavior of preteens and identified the crucial impact of social and affective factors on process and outcome of information seeking[380]. Moreover, trust and perceived social costs also make critical determinants of information behavior. Preadolescents employ multiple source strategies for finding information, favoring interpersonal sources, but using also used telephones, instant messaging, the internet, etc. Barriers to information seeking and use include power and authority structure of their social context, and their information grounds include physical

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[375] Ibid., p. 379.
[376] Cf. Shenton, Andrew; Dixon, Pat. Youngsters'.; Shenton, Andrew K.; Dixon, Pat. Models. P. 10.
[377] Cf. Agosto, Denise E.; Hughes-Hassell, Sandra. People.; Hughes-Hassell, Sandra; Agosto, Denise E. Modeling.
[378] Cf. Lu, Ya-Ling. Children's strategies.; Lu, Ya-Ling. Children's information seeking.; Lu, Ya-Ling. Everyday.
[379] Cf. Lu, Ya-Ling. Children's information seeking.
[380] Cf. Meyers, Eric M.; Fisher, Karen E.; Marcoux, Elizabeth. Making sense of an information world: the everyday-life information behavior of preteens. // The Library Quarterly 79, 3(2009), p. 301-341.

settings such as school and public parks, where they gather and socialize, and virtual environments, such as weblogs and chat rooms[381].

Hultgren explored the information behavior of school leavers who are about to make choices related to their future.[382] Students exhibited four different approaches to information seeking: (1) active information seeking aimed at negotiating risk, serving as a tool in making connections between educational interests and the future labor market, (2) active information seeking about career pathways and occupational knowledge, skills and practices, serving to find pathways to occupations and to orient within an occupational domain, (3) seeking information to extend transitions, keeping career information 'on hold' and seeking information associated with extended transition, and (4) information seeking deferred or avoided, as potentially threatening or meaningless.[383] The different approaches were associated with self-perceived different types of social identities, and the process of becoming informed showed to be highly interactive and socially situated.[384]

Qayyum, Williamson, Ying-Hsang, and Philip revealed that for seeking news, young adults still favored print newspapers, although using a variety of sources, such as online news sources, print newspapers, television, and radio. *Facebook* was the only social networking tool used to access news, providing the *online equivalent of word of mouth*.[385]

Koo[386], Lilley[387], Markwei, and Rasumssen[388] and Buchanan and Tuckerman[389], and Hawkins[390] directed research attention from general youth population to somewhat special and underprivileged populations, such as recent immigrants who have not established new peer groups yet[391], indigenous youth[392], homeless youth[393], disadvantaged and disengaged youth who are not in education, employment or training[394], and LGBTQ youth[395]. Their respondents exhibited wide range of information behavior: intentionally seeking information to meet, only cognitive needs, but not socio-affective needs[396]; active search, passive search while engaged in some other activity, passive attention when information is acquired with no intention of seeking for it, and *community approach* - free and voluntary information sharing among members of community to promote their well-being;[397] non-motivated and passive information behaviour of those who live in an impoverished information world.[398] They exhibit heavily reliance on their social networks to acquire information through interpersonal transactions.[399]

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[381] Cf. Meyers, Eric M.; Fisher, Karen E.; Marcoux, Elizabeth. Op. cit., p. 320.
[382] Cf. Hultgren, Frances. Approaching.
[383] Cf. Hultgren, Frances. Approaching. P. 186.
[384] Ibid., p. 146.
[385] Cf. Qayyum, M. Asim; Williamson, Kirsty; Liu, Ying-Hsang; Hider, Philip. Op. cit., p. 187.
[386] Cf. Koo, Joung H. Op. cit.
[387] Cf. Lilley, Spencer C. Op. cit.
[388] Cf. Markwei, Evelin; Rasmussen, Edie. Op. cit.
[389] Cf. Buchanan, Steven; Tuckerman, Lauren. Op. cit.
[390] Cf. Hawkins, Blake. Op. cit.
[391] Cf. Koo, Joung H. Op. cit.
[392] Cf. Lilley, Spencer C. Op. cit.
[393] Cf. Markwei, Evelin; Rasmussen, Edie. Op. cit.
[394] Cf. Buchanan, Steven; Tuckerman, Lauren. Op. cit.
[395] Cf. Hawkins, Blake. Op. cit.
[396] Cf. Koo, Joung H. Op. cit.
[397] Cf. Markwei, Evelin; Rasmussen, Edie. Op. cit.
[398] Cf. Buchanan, Steven; Tuckerman, Lauren. Op. cit.
[399] Cf. Lilley, Spencer C. Op. cit., p. 191.; Markwei, Evelin; Rasmussen, Edie. Op. cit. p. 18.

This body of work shows how various social contexts shape adolescent information behavior which proved to be context-sensitive to a high degree.

On the other hand, Franklin focused his work on the everyday life information of upper-income students working in a highly technological high school library, arguing that rapid information and communication technology development changed the behavior of young people.[400] Her study found that the students were true 21st century students who live in a resource-rich environment that shapes their learning activities and everyday life information seeking practices in a specific way.[401] The upper-income students who have access to the newest ICT prefer relying on themselves as a primary source of information through consultation with their personally-owned mobile digital devices, and then approach friends and adults to meet their everyday life information needs. They also tend to blend play with work - while working assignments in the school library, they, for example, watch *YouTube* videos, surf the web text, etc. Exploring the adolescent's use of the social networking sites for everyday life information seeking, such as *Facebook* and *Twiter,* Aillerie and McNicol found that social networking sites are used as information sources, especially for information related to social activities.[402]

Basic and Erdelez[403] focused on how college students use the Internet as a source of health information and found that they acquire health information by both active and passive behaviors. They seek information intentionally more often than they stumble upon it accidentally[404], and those of them who are enrolled in health-related courses obtain health information more often and by both intentional search and incidental discovery.[405] When intentionally seeking health information, search engines and Wikipedia are students' first choice source. Health information is most often passively encountered on social networking sites and using search engines.[406] The study on health information behavior conducted by Ibegbulam, Akpom, Enem, and Onyam shows that Nigerian adolescent female students use the internet to meet their reproductive health information needs, especially on topics such as sexual hygiene, abstinence from premarital sex, and avoidance of sexual abuse. Their preference for the internet is caused by privacy it allows and wealth of information it offers[407]. Swedish adolescents from Porsteinsdottir and Kane's study showed to be active consumers of health information, but not only to help themselves, but also to help friends and family[408]. The study conducted among Filipino University Students by Dorado, Obille, Garcia and Olgado's study showed that students seek information to meet their sexual information needs, many of them seeking information after some sexual incident, initiated by some type of scares, such as pregnancy scare, sexually transmitted disease or HIV scare, etc. They rely on informal information sources rather than on formal sources, and the Internet is the most favored source

[400] Cf. Franklin, Lori L. Op. cit.
[401] Cf. Ibid., p. 138.
[402] Cf. Aillerie, Karine; McNicol, Sarah. Op. cit., p. 112.
[403] Cf. Basic, Josipa; Erdelez, Sanda. Active.; Basic, Josipa; Erdelez, Sanda. The role.
[404] Cf. Basic, Josipa; Erdelez, Sanda. Active.
[405] Cf. Josipa; Erdelez, Sanda. The role.
[406] Cf. Basic, Josipa; Erdelez, Sanda. Active.
[407] Cf. Ibegbulam, Ijeoma J.; Akpom, Chinwendu C.; Enem, Fidelia N.; Onyam, Dora I. Op. cit., p. 298.
[408] Cf. Porsteinsdottir, Guorun; Kane, Bridget. Op. cit., p. 262.

of sexual information due to its convenience and the anonymity it provides[409]. Martinović, Bakota, and Badurina found that high school students show interest in a wide range of health-related topics and report having health information needs. Their first-choice source for health information are mothers, and they often seek health information on the internet. Moreover, the students would like some experts to be available to them for the acquisition of health information[410].

Tackling adolescents' leisure information behavior, Kisilowska and Mierzecka[411] find that emotions, experiences and potential interactivity are what draws adolescent users toward cultural collections (e.g. music or video), more than topic, title, or performer, in interaction with online accessible cultural content. They propose a preliminary model of information behavior in the area of culture.

[409] Cf. Dorado, Dan Anthony D.; Obille, Kathleen Lourdes B.; Garcia, Rhianne Patricia P.; Olgado, Benedict Salazar. Op. cit., p. 287-288.
[410]Cf. Martinović, Ivana; Bakota, Sara; Badurina, Boris. Op. cit., 24-25.
[411] Cf. Kisilowska, Małgorzata; Mierzecka, Anna. Op. cit.

# 3. Research

## 3.1. The purpose and the aim of the research

As stated earlier, adolescent information behavior as a part of the decision-making process is a relatively underexamined area in the library and information science field, both in the international context and in Croatia.[412] Having in mind the crucial role that information plays in the decision-making process, the purpose of this dissertation is to address the gap in the research literature and contribute to a better understanding of adolescents' interaction with information in the context of making decisions in everyday life. Consequently, the aim of the research was to explore emerging adolescents' information needs in everyday life decision-making situations and related information behavior.

## 3.2. The research questions

To reach this aim, the research initially aimed at answering the following set of research questions:

1. What are the adolescents' information needs that arise from everyday life decisions?
2. What information behavior follows the information needs arising from making decisions in everyday life?
    a) What types of information behavior do adolescents show?
    b) How do adolescents select sources?
    c) What barriers do adolescents face?
3. How well do adolescents understand the role of information in making decisions?

However, the first phase of the research showed that the initial research questions cover an area that is too broad to be the subject of a single study. After the first phase of research, the research questions were revised to cover a narrower topic, suitable for research in one dissertation. Therefore, the revised aim of the research is to identify adolescents' information needs which arise when they make decisions in everyday life, to identify related types of information behavior adolescents exhibit, to understand how they select information sources and to explore adolescents' attitude toward the role of information in the decision-making process.

The revised research questions which this study strives to answer are:

1. What are adolescents' information needs that arise from everyday life decisions?

[412] Cf. Kolarić, Alica; Cool, Colleen; Stričević, Ivanka. Op. cit.

2. What types of information behavior do adolescents employ when making decisions in everyday life?
3. How do adolescents select sources when making decisions in everyday life?
4. To what extent does information serve as a basis in adolescent everyday life decision-making process?

## 3.3. Methodology

### 3.3.1. The research approach

This empirical study is dominantly crafted within an interpretative paradigm, seeking to understand the subjective world of human experience. The methodology as the general logic and theoretical perspective for a research project[413] is dominantly interpretative and phenomenological in its orientation, meaning that the researcher seeks to understand how and what meaning people construct around events in their daily lives and activities they engage in.[414] Interpretative research begins from an individual, seeking to understand *the world of human experience*[415] and believing that theory is derived from specific situations: it does not precede but follows research. The interpretative paradigm allows the researcher to view the world through perceptions, experiences, and understandings of study participants and to build a theory around it.[416] The study dominantly draws on the social phenomenological point of view, following the path taken by Savolainen[417] and leads given by T. Wilson[418].

Phenomenology is a discipline in philosophy, developed mainly by Husserl and later philosophers and writers such as Heidegger, Sartre, and Merleau-Ponty, which "studies structures of conscious experience as experienced from the first-person point of view, along with relevant conditions of experience".[419] It explores human consciousness, experience and meanings people attach to their experience, seeking to discover the world as it is experienced by individuals involved in it.[420] The phenomenologists' thesis is that reality consists of objects and events, 'phenomena', as they are perceived or understood by human consciousness, and not of anything independent of human consciousness. Accordingly, phenomenology is the study of *phenomena*- "appearances of things, or things as they appear in our experience, or the ways we

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[413] Cf. Bogdan, Robert C.; Biklen, Sari Knopp. Qualitative research for education: an introduction to theory and methods. 5th ed. Boston; New York; San Francisco; Mexico City; Montreal Toronto; London; Madrid; Munich; Paris: Pearson, 2007. P. 35.
Hong Kong Singapore Tokyo Cape Town Sydney
[414] Cf. Bogdan, Robert C.; Biklen, Sari Knopp. Op. cit., p. 25-27.
[415] Cf. Cohen, Louis; Manion, Lawrence; Morrison, Keith. Research methods in education. 5th edition. London; New York : Routledge Falmer, 2000. P. 22.
[416] Cf. Ibid., p. 22-23.
[417] Cf. Savolainen, Reijo. Everyday Information Practices. P. 4-5.
[418] Cf. Wilson, Tom D. Alfred Schutz, phenomenology and research methodology for information behaviour research. // The new review of information behaviour research 3, 71(2002), 1-15. URL: https://scholar.google.hr/scholar?hl=en&as_sdt=0%2C5&q=Alfred+Schutz%2C+phenomenology+and+research+methodology+for+information+behaviour+research&btnG= (2.2.2019.)
[419] Stanford encyclopedia of philosophy. URL: https://plato.stanford.edu/entries/phenomenology/ (2019-02-05)
[420] Cf. Tkalac Verčič, Ana; Sinčić Ćorić, Dubravka; Pološki Vokić, Nina. Priručnik za metodologiju istraživačkog rada: kako osmisliti, provesti i opisati znanstveno i stručno istraživanje. Zagreb : MEP, 2010. P. 2-3.; Wilson, Tom D. Alfred Schutz.

experience things, thus the meanings things have in our experience"[421], which we conceive through concepts, thoughts, ideas, etc. By conducting phenomenological research, "the researcher identifies the 'essence' of human experiences concerning a phenomenon, as described by participants in a study" and *brackets* his or her own experiences in order to understand those of the participants in the study".[422] The researcher works inductively - beginning with broad questions and narrowing their scope to topics based on an emerging design as the participants disclose information and as observations are made. Therefore, the phenomenological approach does not include hypothesis testing and is not guided by strict theoretical frameworks. A researcher does not impose a structure on the data collection, but rather allows the structure to *emerge* in the process of analysis. The primary method of drawing inferences is the method of induction, the primary method of acquiring knowledge in qualitative research,[423] which allows drawing inferences shifting from specific observations to broader generalizations and theories. Social phenomenology draws on philosophical phenomenology, seeking to apply its principles to qualitative research.[424] Wilson and Savolainen draw attention to the phenomenological sociology of Alfred Schutz.[425] Wilson brings phenomenology into a general discussion on theories of information behavior, arguing for the phenomenological approach in information behavior research. He argues that Schutz's phenomenological sociology provides a useful framework for research into human information behavior and directs the choice of appropriate methods. By taking this approach, the researcher may investigate information behavior from the individual viewpoint and experience of people in their everyday life.[426] Savolainen also argues for the use of social phenomenology in information behavior research, explaining that it provides the methodological perspective appropriate to investigate from an individual's viewpoint "the ways in which the individual posits his or her preferences of seeking, using, and sharing information". At the same time, it allows investigation of "the common features people exhibit when they construct their information practices" which "indicate the shared (social and cultural) characteristics of everyday information practices".[427]

Schütz argues that philosophers have dealt only with the intersubjective character of knowledge, while people's personal knowledge includes the knowledge acquired by others who handed it down to us. The knowledge transferred by others is a valuable heritage - "a preorganized stock of problems, with the means for their solution, procedural rules, and the like".[428] He argues that understanding and meaning, two major means of creating social reality, are socially determined. By doing so, he introduces the cultural and situational relativity of action to the phenomenological approach, taking us *beyond the solipsism of essences* that are

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[421] Cf. Stanford encyclopedia of philosophy.
[422] Cf. Creswell, John W. Research design: qualitative, quantitative and mixed method approaches. 2nd ed. Thousand Oaks ; London ; New Delhi : Sage Publications, 2003. P. 15.
[423] Cf. Halmi, Aleksandar. Strategije kvalitativnih istraživanja u primjenjenim društvenim znanostima. Jastrebarsko : Naklada Slap, 2005. p. 30.
[424] Cf. Ibid., p. 104.
[425] Cf. Wilson, Tom D. Alfred Schutz.; Savolainen, Reijo. Everyday Information Practices.
[426] Cf. Wilson, Tom D. Alfred Schutz.
[427] Cf. Savolainen, Reijo. Everyday Information Practices. P. 5.
[428] Cf. Schütz, Alfred.The well-informed citizen. / Collected papers II: studies in social theory. The Hague : Martinus Nijhoff, 1976. P. 121.

characteristics of the approach.[429] Schütz puts his interest in the research of everyday reality and develops a methodological perspective that allows social science to deal with the understanding of *life-world*, as subjectively experienced by people who are involved in it.[430] The main problem with the social science is the choice of appropriate method for doing objective research of subjective construction of the social world, or in his words, the problem lies in the question how "to develop a method in order to deal in an objective way with the subjective meaning of human action" and remarks that "the thought objects of the social sciences have to remain consistent with the thought objects of common sense, formed by men in everyday life in order to come to terms with social reality".[431] He uses the concepts of 'interaction' and 'subjectivity' to characterize people's experiences in their life-world, and suggests that people adopt concepts of everyday life objects from their very birth by learning from those around them - the concepts already defined and conceptualized by society, and laden with cultural meaning.[432] These concepts allow people to give meaning to their everyday life actions: to set everyday life goals at all levels and to pursue them. People construct social reality but within the limits of their bounded social experience.[433] Basing on the argument that knowledge is socially constructed, Schütz contributes to the sociology of knowledge with his idea of the social distribution of knowledge.[434] In his *Collected Papers I*, Schütz explains his methodological position by elaborating on the common sense and scientific interpretation of human action.[435] People derive knowledge from the practical experience of the world. The understanding of social reality develops by the process of *typification*, which allows the observer to use concepts similar to *ideal types* to make sense out of what other people do. These *ideal types* are derived from everyday life experience and people use them to classify and organize their world. However, the process of typification is not only subjective - it is socially determined as well. It is learned through one's biographical situation and transferred through one's social context. It is driven by social knowledge, rules, and *collective patterns* that define the roles people take within their life-world, relationships, and situations. The process of typification shapes the way people make sense of their lives and of their life-world. It allows an understanding of other people and it allows prediction of their behavior. Since the stock of everyday knowledge that people use to typify other people's behavior varies from situation to situation, our world is the world of multiple realities. For example, as people move from the world of work or school to the world of home and leisure, different typifications and *ground rules* shape people's actions. Typifications provide people with collective patterns and recipes which give typical solutions for typical problems of typical actors. However, since people are characterized not only by the social situation, but also by their own individual biographies and life projects, they have their own individual lifelong goals and specific projects, framed within social structures of life-world. Being individuals, people are simultaneously free and

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[429] Cf. Santiago-Delefosse, Marie; del Río Carral, Maria. The life-world and its multiple realities: Alfred Schütz's contribution to the understanding of the experience of illness. / Psychology 6(2015). P. 1269.
[430] Cf. Santiago-Delefosse, Marie; del Río Carral, Maria. Op. cit.; Schütz, Alfred. Collected papers I: the problem of social reality. Hague ; Boston ; London : Marinus Nijhof, 1962.
[431] Schütz, Alfred. Collected. P. 43.
[432] Cf. Santiago-Delefosse, Marie; del Río Carral, Maria. Op. cit., p. 1267.
[433] Cf. Halmi, Aleksandar. Op. cit., p. 106
[434] Cf. Wilson, Tomas D. Alfred Schutz.
[435] Cf. Schütz, Alfred. Collected. P. 3-47.

conditioned by the network of social rules.[436] Schütz remarks that scientist's acquisition of knowledge on social reality differs from those of ordinary people. Ordinary people live within their biographical situation in the social world of everyday life and are in a constant process of interpreting, understanding, and sense-making, through which they construct their reality and make sense out of their interactions with others. They are determined biographically and guided by their own *systems of relevances*, interpreting their life-world as it suits best their current needs. Scientists, on the other hand, strive to understand people's ways of interpreting, understanding, and sense-making. They construct models of the social world by constructing „typical course-of-action patterns corresponding to the observed events"[437], typical actions of social actors. Scientists use the same methods as ordinary people do, but their process of coming to an understanding of people's understanding of their life-world requires *bracketing* which gives scientists their position of a disinterested observer. Moreover, scientists are guided by *a set of relevances* that are determined by the scientific field and community and choose for their inquiry those aspects of the world which are appropriate for the objectives of the research. They reflect upon behaviors that ordinary people take for granted since they are the object of their scientific interest.[438] Schütz sets the principles which lead the construction of scientific models of human action, i.e. *postulates for scientific model constructs of the social world*. Scientific models ought to be objective presentations of the subjectively created social world if they are formed according to three postulates: the postulate of logical consistency, the postulate of subjective interpretation, and the postulate of adequacy.[439] In his essay "The well-informed citizen", Schütz constructs three ideal types of a man: the expert, the man on the street, and the well-informed citizen, and in fact points to the role of information seeking in the everyday life. He describes how the three types construct knowledge and, depicts the well-informed citizen who moves across fields and zones of relevances and seeks information to make a 'reasonable opinion'. The type of a man denoted as *the expert* creates knowledge that is clear and distinct, based upon warranted assertions and sound judgment, but bounded to a limited field. On the other hand, *the man on the street* has knowledge from many fields. This knowledge is not coherent, but it gives the prescriptions which are sufficient for dealing with practical problems at hand. While the knowledge serves its purpose, it is vague, not accompanied by a clear understanding and not questioned. In matters which are not of primary concern, the man on the street follows sentiments and passions which lead to a set of convictions and unclarified views. The third ideal type of a man is *the well-informed citizen* or, more precisely, the citizen who aims at being well informed. The type is positioned between the expert and the man on the street. The well-informed citizen does not seek for expert knowledge, but also does not accept vague knowledge and the guidance of passions and sentiments, as the man on the street does. He seeks to be well informed to make reasonably founded opinions in fields which are not of his current practical interest, but are of his medium interest: "To be well-informed means to him to arrive at *reasonably founded* opinions in fields which as he knows are at least mediately of concern to him although not bearing upon his purpose at hand".[440] In everyday life, each individual is at any given moment the expert, the well-informed citizen, and the man on the

[436] Cf. Cohen, Louis; Manion, Lawrence; Morrison, Keith. Op, cit., p. 24.; Halmi, p. 107-108.
[437] Cf. Schütz, Alfred. Collected. P. 40.
[438] Cf. Wilson, Tom D. Alfred Schutz.
[439] Cf. Schütz, Alfred. Collected. 43-44.
[440] Cf. Schütz, Alfred. The well-informed. P. 122-123.

street. Schütz distinguishes the well-informed citizen as the one "who considers himself perfectly qualified to decide who *is* a competent expert and even to make up his mind after having listened to opposing expert opinions".[441] In other words, the well-informed citizen considers himself or herself competent for accessing the credibility of information sources and choosing among competing sources. The three described types differ in an individual's readiness to take things for granted. However, what is taken for granted today may become questionable tomorrow, if one is somehow provoked to shift his or her interest and "to make the accepted state of affairs a field of further inquiry"[442]. Moreover, Schütz shows the relationship between one's interest and the distribution of knowledge. Our interests motivate our thinking, planning, and actions.[443] One's interest at hand determines one's system of relevances and therefore determines what is the zone of one's relevance, and what is the required degree of precision of knowledge.[444] The well-informed citizen investigates different zones of relevances and seeks information in order to form a reasonable opinion, within the current field of interest.[445] Moreover, Schütz tackles what is recognized by P. Wilson as the issue of cognitive authority by asking: "What, however, are the sources of this information, and for what reason may the citizen consider them sufficient to enable him to form an opinion of his own?".[446] Socially derived knowledge may originate in four ways: (1) from eyewitness who communicate their own experience of the world within his or her reach and share the system of references with the knowledge recipient; (2) from an insider who does not share the system of relevance with the recipient, but has observed the reported in unique context; (3) from an analyst who shares the system of relevance with the recipient, but reports his opinion based on collected information and (4) from a commentator who also reports his opinion derived from collected information, but whose system of relevance differs from those of the person who receives knowledge.[447] Schütz's general remark is that we can fully understand the phenomenon of social life only by understanding the general structure of social distribution of underlying knowledge.

This dissertation focuses on the phenomenon of adolescent decisions, related information needs, and information behavior. It draws on phenomenology and social phenomenology, and takes the inductive and interpretative methodological approach, thus guiding the choice of research design and of the methods used for data collection. The research seeks to explore the phenomenon of making everyday life decisions as it is perceived and understood by the adolescents who participated in the research. It seeks to understand how adolescents perceive their experiences of making everyday life decisions, and to understand their related information needs and information behavior, as described by the adolescents themselves.

As noted earlier, social phenomenology seeks to apply the principles of philosophical phenomenology to qualitative research. Therefore, this research is dominantly inductive, interpretative and qualitative. Furthermore, the inductive approach is appropriate because of the nature of the research problem. The researcher sets out to tackle one of the areas of youth

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[441] Cf. Ibid., p. 123.
[442] Cf. Ibid., p. 124.
[443] Cf. Ibid.
[444] Cf. Schütz, Alfred. The well-informed. P. 125.
[445] Cf. Ibid., p. 131.
[446] Cf. Ibid., p. 131.
[447] Cf. Ibid., p. 132.

information behavior research that has barely been dealt with, and the inductive approach is considered to be the most suitable for dealing with this rather novel problem that, in addition, is not covered with a significant body of research literature.[448] Moreover, the affinity of the researcher, which is important in the selection of research approach,[449] corresponds with the inductive and interpretative way of research. The researcher has much experience in working with adolescents, gained through years of engagement with the population through teaching, working in the school library and the public library. It was the researcher's opinion that she would be able to elicit rich data directly from the adolescents through group discussions and that the results would give directions for the final research design. Therefore, this research started with the first research phase whose results allowed further development of the research, through the second and the third research phases. According to the selected approach, the research was not guided by a strict theoretical framework. However, it was guided by the set of conceptual and theoretical underpinnings, taking into consideration prominent concepts and theories related to the dissertation topic, as advised by Miles and Huberman.[450]

Moreover, the contemporary methodology is pluralist and allows the use of elements of different philosophies and approaches, as well as different methods of gathering, analyzing and interpreting research data.[451] It is not unusual that researchers consider combining quantitative and qualitative approaches and methods in one research if that is what serves the research goal best. Some authors argue that a qualitative researcher should not withdraw from utilizing data collection methods more typically associated with quantitative research, and vice versa if this would be for the benefit of the research.[452] Starting from their research questions, researchers may embrace one dominant paradigm, suitable for the research they set out to undertake, but still combine quantitative research methods for data collection with qualitative ones, or vice versa, if it serves the research purpose and the goal.[453] The prominent scholar of Human information behavior area T. Wilson argues that "a questionnaire can be used to elicit different things and we can use the data obtained to satisfy our research objectives whether we adopt a positivist or a phenomenological stance".[454] He finds the usual division into qualitative and quantitative methods confusing, giving the example of how results of qualitative interviews may be counted, and showing that the border between quantitative and qualitative methods may be blurry. Savolainen also allows the use of both qualitative and quantitative methods in the research which embraces the social phenomenological perspective, employing both types of data collection in his work himself.[455] Finally, discussing combining quantitative and qualitative methodologies and/or methods, some authors describe the research designs in which quantitative (or qualitative) data collection method is embedded (i.e. nested) within the design

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[448] Cf. Tkalac Verčič, Ana; Sinčić Ćorić, Dubravka; Pološki Vokić, Nina. Op. cit., p. 4.
[449] Cf. Ibid.
[450] Cf. Miles, Matthew B.; Huberman, A. Michael; Saldaña, Johnny. Qualitative data analysis: a methods sourcebook. 3rd ed. Los Angeles; London; New Delhi; Singapore; Washington DC : Sage, 2014. p. 26.
[451] Cf. Tkalac Verčič, Ana; Sinčić Ćorić, Dubravka; Pološki Vokić, Nina. Op. cit., p. 4.
[452] Cf. for example Johnson, Burke R.; Onwuegbuzie, Anthony J. Mixed methods research: a research paradigm whose time has come. // Educational researcher 33, 7(2004), 14-15.
[453] Cf. Sekol, Ivana; Maurović, Ivana. Miješanje kvantitativnog i kvalitativnog istraživačkog pristupa u društvenim znanostima – miješanje metoda ili metodologija?. // Ljetopis Socijalnog Rada 24, 1(2017). P. 7-32. URL: https://hrcak.srce.hr/index.php?id_clanak_jezik=273182&show=clanak (2019-02-20)
[454] Cf. Wilson, Tom D. Alfred Schutz.
[455] Cf. Savolainen, Reijo. Everyday Information Practices. P. 80.

of the research which is dominantly qualitative (or quantitative).[456] All this was taken into consideration while planning the best approach to the dissertation topic.

The methodological approach taken in this research is dominantly interpretative, inductive and qualitative. However, because it serves the research goal and helps answer the set research questions, the quantitative research method of the survey is embedded in the research design.

### 3.3.2. Research strategy

The research employed a three-phase, sequential mixed methods strategy to explore the research phenomena by elaborating on and expanding the findings of one method with another method, as suggested by Creswell.[457] The participants' behaviors and opinions were explored in the first phase of the research, with the intent of using the findings to develop instruments for the second and the third research phase. In the subsequent phases, the phenomena are further investigated by exploring the obtained results in more detail and depth. The mixed-method research is undertaken because it is believed that the collection and analysis of both qualitative and quantitative data would best serve the research purpose. Although this approach poses some challenges for the researcher in form of extensive data collection and time-intensive nature of analyzing both text and numeric data, it is believed that this type of approach is suitable because it allows the researcher to take advantages of both qualitative and quantitative approach and to gather richer and more credible data.[458] Creswell notes that for approaching the studied phenomenon which needs to be understood because little research has been done, a suitable way of research is a qualitative one. When the research topic is new and has not been addressed yet, the qualitative approach is suitable because it is exploratory and useful when important variables to examine are not known. On the other hand, a quantitative approach serves best to test a theory or explanation but also allows quick and easy data collection. Mixed methods design allows the researcher to catch what is best of both quantitative and qualitative approaches.[459]

This research employs a *sequential procedure* strategy characterized by the researcher elaborating or expanding the findings of one method with another method.[460] The research strategy integrates two mixed methods strategies, labeled by Creswell as *Sequential Exploratory Strategy* and *Sequential Explanatory Design*.[461] The sequential exploratory strategy includes qualitative data collection and analysis in an initial phase to explore the studied phenomenon, followed by a quantitative data collection phase to assist the interpretation of qualitative findings and to expand on the qualitative findings. Quantitative data collection follow up is useful for determining the distribution of explored phenomenon within the population, i.e. for generalization qualitative findings, and for the development of the new

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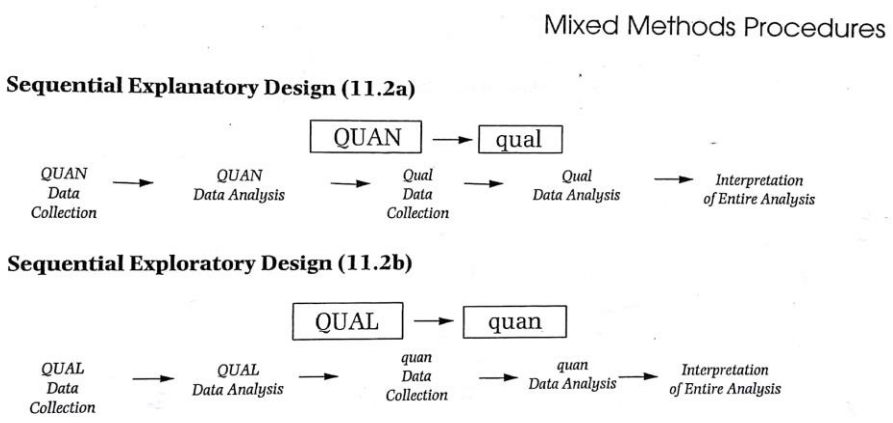
[456] Cf. e.g. Creswell, John W. Op. cit., p. 218.; Plano Clark, Vicki L.; Huddleston-Casas, Catherine; Churchill, Susan; O'Neil Green, Denise; Garrett, Amanda. Mixed methods approaches in family science research. // Journal of Family Issues, 29, 11(2008), 1550-1555. URL: https://digitalcommons.unl.edu/cgi/viewcontent.cgi?article=1080&context=edpsychpapers (2019-02-22); Sekol, Ivana; Maurović, Ivana. Op. cit., p. 17-29.
[457] Cf. Creswell, John W. Op. cit., p. 209 - 225.
[458] Cf. Tkalac Verčič, Ana; Sinčić Ćorić, Dubravka; Pološki Vokić, Nina. Op. cit., p. 23.
[459] Cf. Creswell, John W. Op. cit, p. 22.
[460] Cf. Ibid., p. 15-17.
[461] Cf. Ibid., p. 210-216.

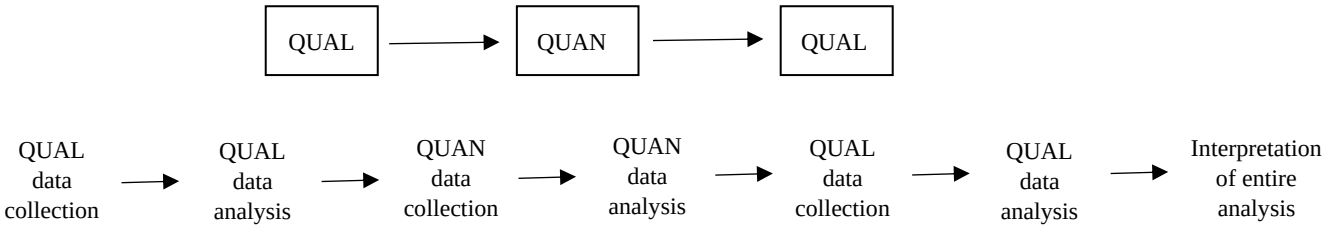
instrument.[462] The sequential explanatory strategy includes the collection and analysis of quantitative data, followed by the collection and analysis of quantitative data. Such a design is typically used when qualitative results help in explaining and interpreting the quantitative results and may be especially useful to further exploration of some unexpected findings.[463] The steps of both strategies are pictured in Figure 8.

**Figure 8 – Visual models of sequential explanatory strategy and sequential exploratory strategy**[464]




In this research, the sequential research strategy is employed by collecting and analyzing the data in three research phases, conducted one after another. The first research phase is exploratory and allows the development of instruments for the second and the third research phase. In the second and the third research phase, the results from the first phase are further explored and expanded. In the second phase, the method usually considered as quantitative one is embedded in primary qualitative research because it was believed that it would contribute to answering some of the research questions by allowing further exploration of the results from the first phase on a larger sample of adolescent population. In the third phase, the qualitative method is used because it was expected that it would contribute to answering the research questions by exploring the first and the second phase findings in more detail and depth. The findings from all three research phases are combined after conducting all the phases, in the final discussion. Figure 9 shows the integrated design used in this research.

**Figure 9 – Visual model of the sequential strategy employed in the research**




[462] Cf. Ibid., p. 215-216.
[463] Cf. Ibid.
[464] Cf. Ibid., p. 210-216.

### 3.3.3. Research design

The design of this mixed-method, sequential research was open to revisions and complements during the research process. The research consists of three phases: in the first and qualitative phase, focus groups method is employed; in the second, quantitative research phase, a survey is employed, and in the third phase, semi-structured interviews are employed.

The research phases followed as listed:

0. phase: research of the existing literature on adolescent information behavior in relation to making decisions within the library and information science field.[465] A pilot study of adolescent intentional information-seeking behavior related to making decisions.[466]
1. phase: focus group discussions
2. phase: a survey
3. phase: interviews

This study design, which starts with focus group discussions on broader everyday life situations from which decision-making situations emerge, and finishes by interviewing adolescents on their information behavior in everyday life decision situations, is supported by opinions and experience of some scholars who dealt with the topic of information needs and information behavior. Shenton and Dixon studied how young people interact with information and argued that information needs and information behavior should be studied together because information behavior needs to be understood in the context of the needs which have inspired it. They take an approach described by Vakkari who notes "Methodically 'information needs' and 'seeking' are only analytical differentiations for the purpose of analysis" and adds that "Methodologically they will be treated as functions of a broader task or problem situation to be coped with".[467] In line with this, Nicholas argues that a researcher who wants to capture people's information needs must get out in the world beyond his or her control and seek cooperation asking questions to which responses will not be stereotypic. Information needs emerge only through interaction, he argues, and reveal in statements that can hardly be presented in tables. Furthermore, there is no prescribed line of questioning for the information needs research since the researcher strives to reveal something that might be happening only in person's head, what is not concrete, something they might have not acted upon, something that a person might have not fully considered yet. Nicholas argues that the data on people's information needs emerge only through interaction and may be captured only through open-ended interviews. Diaries and observations are considered less suitable methods for that purpose. He lists focus group interview among the methods which may be used, but argues for the use of one-to-one, in-depth interview. Nevertheless, he notes that the choice of the method is determined not only by the subject of the study, which is information needs, but also by who is being investigated. Nicholas also points out that information needs do not exist per se but are

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[465] Cf. Kolarić, Alica; Cool, Colleen; Stričević, Ivanka. Op. cit.

[466] Cf. Kolarić, Alica; Stričević, Ivanka. Information seeking behavior for decision making in everyday life: a pilot study on adolescents. // Libellarium: journal for the research of writing, books, and cultural heritage institutions, 9, 2(2016). P. 275-308. URL: http://www.libellarium.org/index.php/libellarium/article/view/272 (2020-1-20)

[467] Cf. Vakkari, Pertti. Information seeking in context: a challenging metatheory. // Information seeking in context / eds P. Vakkari, R. Savolainen and B. Dervin. London: Taylor Graham, 1997. P. 457. Cited according to: Shenton, Andrew K.; Dixon, Pat. Models. P. 7.

embedded in people's routines and problems, just as Vakkari and Shenton Dixon who investigated youth information needs and information behavior.[468] Therefore, this study begins with focus group discussions on adolescents' everyday life decision situations that emerge from their daily routines, problems, concerns and challenging situations. Based on the results, a survey follows by seeking data that would allow expanding on the results. Finally, semi-structured interviews build on the focus group interviews results and explore the results in more detail and depth.

### 3.3.4. Required permissions and ethical considerations

The approval of the University of Zadar Ethics Committee was obtained for conducting research among adolescents. The research was conducted according to the Ethical Code of the University of Zadar. Parents' or guardians' written consent was obtained for conducting the research among underage students and the form of the consent can be found in the Appendix 6 (Appendix 6 – The consent forms). The potential participants were approached by gatekeepers – school librarians, teachers and school expert associates in psychology and pedagogy, who asked for those interested to voluntarily participate in the research. Therefore, the participants contributed to the research by their own will. Significant consideration was given to potential ethical issues that could arise while collecting and analyzing the data. None of the participants were identified by their names or in other ways that would make them recognizable. Moreover, considerable consideration was given to ethical issues related to adolescent participation in focus group discussions, especially to over-disclosure phenomena. Provoked by group discussions, young participants might reveal something they would not want to reveal otherwise and suffer some negative consequences beyond the temporal and social boundaries of the sessions.[469] To prevent that, some sensitive topics were left out of the discussions. Finally, the researcher attempted to achieve some form of *reciprocity* which implies that the researcher engages in a form of exchange with the research participants.[470] The participants offered their assistance in the form of data, and in turn, the researcher acknowledged and valued that assistance by thanking for their participation, asking whether they had any questions or wanted to know something about the research. Only one student expressed interest and provided the researcher with his contact in the form of an e-mail address.

### 3.3.5. Study site

The study was conducted at high schools in the city of Rijeka. Recruitment is one of the most challenging aspects of conducting research among adolescents since parents' consent is required.[471] Since schools are places where the recruitment can be relatively easily organized, providing the consent and cooperation of the school administration, high schools in the city of

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[468] Cf. Nicholas, David. The information needs interview: a long way from library-use statistics. // Education for Information 15, 4(1997), 343–349.; Shenton, Andrew K.; Dixon, Pat. Models. P. 7.
[469] Cf. Bloor, Michael; Frankland, Jane; Thomas, Michelle; Kate Robson, Kate. Focus groups in social research. London, Thousand Oaks, New Delhi: SAGE Publications, 2001. P. 24-25.; Gibson, Faith. Conducting focus groups with children and young people: strategies for success. // Journal of research in nursing 12, 5(2007), p. 481.
[470] Cf. Julien, Heidi. How does information help. P. 77.
[471] Cf. Bassett, Raewyn; Beagan, Brenda L.; Ristovski-Slijepcevic, Svetlana; Chapman, Gwen E. Tough teens: The methodological challenges of interviewing teenagers as research participants. // Journal of Adolescent Research 23, 2(2008), p. 121. URL: https://journals.sagepub.com/doi/pdf/10.1177/0743558407310733 (2020-1-7)

Rijeka were chosen as the study site. The city of Rijeka is a center of Primorsko-goranska county with a population of 128.624 citizens (2011 census), which makes it the third-largest city in Croatia.[472] At the beginning of the school year 2018/2019 there were 28 high schools in Rijeka, with 6329 students attending them.[473] The schools which participated in the study were chosen by availability criteria. The researcher e-mailed the principles of the high schools in the city, but also used her acquaintances i.e., teachers and school librarians to make contacts with the school principals who were willing to allow conduction of the research in the schools. Not all of the principles replied, and not all of those who replied allowed conduction of the research. In the end, the research was conducted in six high schools, due to kindness and willingness of their administration. The focus group discussions and individual interviews were conducted in Prva riječka hrvatska gimnazija (a grammar school), Glazbena škola Ivana Matetića Ronjgova (an art school) and Prirodoslovna i grafička škola Rijeka (a vocational school). The surveys were administrated in two grammar schools, three vocational schools, and one art school – Prva riječka hrvatska gimnazija and Sušačka gimnazija (grammar schools), Prirodoslovna i grafička škola Rijeka, Ekonomska škola Rijeka and Trgovačka i tekstilna škola u Rijeci (vocational schools) and Glazbena škola Ivana Matetića Ronjgova (an art school).

At this point, it should be noted that although conducting the research in high schools was beneficial in terms of access to the participants, the selection of the study site may have some drawbacks. Schools are somehow natural settings for studying adolescents because this is where they are used to being asked questions, giving answers and discuss. At the same time, the perceived student-adult power relations may cause that some students accept participation in the research not completely voluntarily, and give some responses they consider desirable and/or acceptable, leaving some of their opinions and behaviors out of the researcher's reach.

### 3.3.6. Data collection and analysis procedures

This section presents three research phases describing data collection procedures, the actors, the events, and the process.

#### 3.3.6.1. The first research phase: focus group interviews

The topic of adolescent information needs and related information behavior in the context of making a decision has been barely touched so far. Since the topic is rather new and has not been sufficiently explored, a qualitative approach is chosen to begin with. The first phase of the research aims at exploring the research phenomena and identifying emerging themes and concepts which would be used to develop new instruments. In this exploratory stage of the research, the focus group method was used. As already mentioned, the pilot study aiming at developing methodology for large-scale research preceded the research, giving us some valuable insights.[474] First, one of the inferences is that adolescent information behavior related to making decisions should be investigated by discussing real-life decision situations reported by participants, and not hypothetical situations, which was the case in the pilot study. Second, as the study employed a questionnaire with most of the questions close-ended, the results indicate that future research needs to employ a method that would allow participants to

[472] https://www.pgz.hr/Nas_kraj/Stanovnistvo (2020-1-7)
[473] https://www.dzs.hr/ (2020-1-7)
[474] Cf. Kolarić, Alica; Stričević, Ivanka. Op. cit.

elaborate on their answers and allow the researcher to follow new issues and ideas which might emerge during the research. The pilot study suggests using in-depth interviews, but for this research, it was decided to employ focus group discussions. This was done because the focus group method allows the researcher to pursue some arising themes and issues to a greater depth, just as in-depth interviews do, but also allows taking advantage of the group dynamics and intragroup stimulation and eliciting a wider range of thoughts and ideas. Moreover, when discussing some issues among a group of their peers, adolescents may be encouraged to give answers and provoked to comment on the topic. Generally, group dynamics facilitates discussions because adolescents are often more open in offering their opinions and reporting behaviors while placed in a peer group, then in one-on-one, adolescent - adult conversation. There is a possibility that peer pressure may prevent them from giving open and honest answers, as well as prompt them to give answers which are perceived as socially desirable from an adolescent point of view, but it is held that in this case, the advantages of focus group method prevail over the drawbacks. Morgan remarks that one great advantage of focus groups lies in their ability to provide access to a broad span of perspectives in a rather short period of time.[475] Starting research among a group of respondents may be useful in the early stage of research when the researcher is still trying to find his/her way. By offering some broad themes and raising some issues, the researcher may see what turns up and identify themes and issues to pursue in the following research phases.[476] Another advantage of the use of the focus group method is that they can contribute to the development of a new instrument – a survey.[477] Morgan notes that focus groups can contribute to the creation of questionnaire items in several ways. First, they allow identification of all the domains that need to be measured, second, they allow determination of the dimensions that make up each of the domains and third, they provide wordings that effectively communicate the researcher's intentions to study participants.[478] Lastly, a valuable way in which focus groups can help in designing a survey is by generating hypotheses.[479] Therefore, focus group interviews were employed to generally explore the research phenomena of adolescent everyday information needs that arise from decision-making situations and related information behavior, which were not been explored much. The focus group interviews allowed the development of clearer focus by providing concepts and themes on which the researcher should be focusing, as well as the development of new instruments which would be used in the second and the third research phase. Additionally, focus groups were used to help the survey development through insight in question-wording because group discussions provide ideas on how to design questions in ways that suite potential study participants best, thus diminishing the chances for misunderstandings and confusion.

#### 3.3.6.1.1. Sampling

In qualitative research, the participants are chosen deliberately and purposely because of the belief that they can provide information and enable deeper insight into the research phenomena,

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[475] Cf. Morgan, David L. Focus groups as qualitative research. 2nd ed. Thousand Oaks; London; New Delhi: Sage publications, 1997. P. 26.
[476] Cf. Gillham, Bill. The research interview. London; New York: Continuum, cop. 2000. P. 87.
[477] Cf. Morgan, David L. Focus. P. 25-28.
[478] Cf. Ibid., p. 25.
[479] Cf. Ibid., p. 27.

and not an empirical generalization.[480] A qualitative researcher is more interested in a small number of participants who represent the phenomena of interest, and are selected purposefully, believing they represent rich knowledge which would allow answering the research question.[481] Therefore, the sample of focus groups was purposive. A purposive sample is a non-probability sample: it is selected based on characteristics of the population and the objective of the study, relying on the researcher's own judgment when choosing members of the population to participate in the study. Morgan suggests that projects employing the focus group method should consist of three to five groups.[482] In this research, three groups of students were interviewed, and the students were coming from each of the three different types of schools in the Croatian school system (grammar school, vocational school, and art school). Admittance in high school is based on students' elementary school grades and it is usual that students with better school achievement enroll in grammar schools, while students with poorer achievement attend vocational schools. Art schools enroll students with a specific interest in some form of art. All types of schools were included in the focus groups sample to allow a diversity of voices to be heard and to capture multiple views of the examined phenomena, as well as to allow capturing of possible differences among students of different school types. Homogeneity of the groups, which is usual in the focus group method sampling, is ensured due to variables of grade levels (i.e. age) and type of school the participants attend. Students of both genders were represented, and the researcher aimed at having the same number of girls and boys in one group, to hear female and male voices equally. However, it was not in researchers' power to completely control the group composition and equal number of boys and girls was not represented. They were all attending third grade. Third graders were chosen because they are expected to be more mature than first and second graders, which may affect their competence in decision making[483] as well as their abilities to verbalize their behaviors and opinions. At the same time, it was believed that third graders are less occupied with the decision about what to do after graduating high school (i.e. the decision on university or employment) and would be more likely to offer a wider span of decision situations then fourth graders. The respondents' age span was 16 to 17. The focus groups included six to eight members. Morgan suggests that group size should be six to ten participants[484] because that number of participants allows discussion and control maintenance. The researcher's opinion was that the desired group size would be six because six participants would be big enough to offer a wide span of behaviors and opinions and to encourage the group discussion. It was also believed that when placed in larger groups, there is a possibility that not all the participants would have the same opportunity to present their experience, and that the discussions could become difficult for the moderator to control. However, it is also recommended to over recruit to cover for no-shows[485] and for that reason the aimed group size was eight. In the end, the group of students coming from grammar school consisted of eight members, the group of students coming from art school consisted of

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[480] Cf. Tkalac Verčič, Ana; Sinčić Ćorić, Dubravka; Pološki Vokić, Nina. Op. cit., p. 19.; Miles, Matthew B.; Huberman, A. Michael; Saldaña, Johnny. Op. cit., p. 31.
[481] Cf. Beitin, Ben K. Interview and sampling: how many and whom. // The Sage handbook of interview research: the complexity of the craft. Second edition / edited by Jaber F. Gubrium; James A. Holstein; Marvasti, Amir B.; McKinney, Karyn D. Thousand Oaks: SAGE Publications, 2012. P. 248.
[482] Cf. Morgan, David L. Focus., p. 43
[483] Cf. Mann, Leon.; Harmioni, Ross; Power, Colin. Adolescent decision-making: the development of competence. // Journal of Adolescence 12, 3(1989), 265-278.
[484] Cf. Morgan, David L. Focus. P. 43.
[485] Cf. Ibid., p. 42

eight members, and the group of students coming from vocational school consisted of six members. The potential participants were approached by gatekeepers – a school librarian, a teacher, and a school psychologist, who asked for those who were willing to voluntarily participate in the research.

#### 3.3.6.1.2. The focus group interview guide

The focus group interview guide was developed to give guide the discussions and can be found in the Appendix 1 (Appendix 1 – The focus group interview guide). The guide was developed following leads by Shenton and Dixon and Julien who investigated youth everyday life information behavior. Data on the respondents' information needs and related information behavior were collected directly from the respondents using the strategy which is labeled by Shenton and Dixon as *personal disclosure* and "involves the employment of techniques to elicit data directly from either youngsters themselves or adults who have some sort of expert knowledge of young people, usually through their day-to-day work".[486] They argue that individual interviews and focus groups are methods suitable for exploring "personal circumstances that have given rise to information needs"[487]. The line of questioning pursued took the route labeled by Shenton and Dixon as *life centered*. By this approach, the researcher learns about information needs by inquiring into the respondent's problems, worries or concerns. This approach owes much to Dervin and her colleagues who were among the first who addressed people's information needs within the context of life concerns and later was used by some of the researchers who investigated information needs and behavior of the youth, such as Poston-Anderson and Edwards and Markwei and Rasumsen, who ask their young respondents about "any problems, concerns, and worries" which give rise to information needs and may induce information seeking behavior.[488] Moreover, Dervin recognized decades ago that information may appear in the form of advice and that informal ways of informing such as giving advice or guidance by other people have informative value.[489] Julien draws on Dervin's work and conceptualizes information as *help* because people use information to bridge gaps in understanding and to achieve the following: to get pictures, ideas, and understanding, to plan, decide and prepare, to get skills, to get started or motivated to keep going and get control, to feel as though things got calmer or easier, to get out of a bad situation, to reach a goal or accomplish things, to go on to other things, to avoid a bad situation, to take one's mind off things, to get relaxed or rested, to get pleasure to get support, reassurance, or confirmation or to get connected to others.[490] In her work on adolescent information behavior for making a decision on a future career, Julien uses the terms "information seeking" and "help seeking" interchangeably arguing that the research respondents think about their information needs in terms "seeking help or assistance with a particular question or concern".[491] Todd and Kuhlthau also conceptualize information as help while investigating how the school library helps.[492] Furthermore, Shenton and Dixon emphasize the issue of using the word "information" in

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[486] Cf. Shenton, Andrew K.; Dixon, Pat. The nature. P. 302.
[487] Cf. Ibid., p. 307.
[488] Cf. Ibid., p. 303; Poston-Anderson, Barbara; Edwards, Susan. Op. cit., p. 25-30.; Markwei, Evelyn; Rasmussen, Edie. Op. cit.
[489] Cf. Dervin, Brenda. Strategies. P. 326.
[490] Cf. Julien, Heidi. How does information. P. 56.
[491] Cf. Julien, Heidi. Barriers. P. 39.
[492] Cf. Todd, Ross J.; Kuhlthau, Carol C. Op. cit.

collecting data from young people arguing that the term itself may be a barrier. They argue that the term "information" may sound too much scholarly to young people and does not relate to advice or other forms in which information may come, serving as a help.[493] In their work, Shenton and Dixon understand information as "the intellectual material needed by a person to ease, resolve, or otherwise address a situation arising in his or her life", adding that forms of information "include facts, interpretations, advice and opinions" and "may be conveyed via several channels and in a range of formats, pictorial among them".[494] Similarly, Pitts also avoids the word "information" when doing the research among teenagers, believing that students perceive it to be "school word". Therefore, she uses words such as "facts and ideas" and "things you need to know" instead.[495] Having in mind the knowledge and experience of the listed authors, the focus group guide was designed to cover all the questions posed in the first, initial set of the research questions. The guide included four themes: (1) information needs arising from everyday life decisions, (2) information behavior related to the information needs, (3) sources of information the participant's turn to, (4), barriers to information seeking they encounter. The respondents were asked to report decisions they make in everyday life, to report what they do about the decisions, to identify which sources of information they turn to when actively seeking information, and what barriers to information access they face. These four broad topics allowed rich discussions among the adolescents who participated in the focus groups. In the focus group interview questions, the concept of information was followed by the phrase "additional knowledge, advice or help". Adolescent information needs, accompanying information behavior, selection of information sources and barriers which may prevent the respondents from seeking information were investigated as a part of the decision situations the respondents reported. The guide for focus group discussions may be found in the Appendix 1 (Appendix 1 – The focus group interview guide).

#### 3.3.6.1.3. Conducting focus group interviews

Parents' and caregivers' written consent for interviewing underaged students, including permission to record conversations, was obtained prior to interviewing (the consent form is presented in the Appendix 6 – The consent forms). Because of the exploratory nature of the focus group research, moderator involvement was intended to produce relatively unstructured discussions. The topic guide was used in a way described by Morgan: it listed issues that need to be covered during the discussions and was intended to produce less structured and more free-flowing conversations.[496] Moderator followed the basic topic guide in terms of making sure that all the topics/questions included in the guide were covered in the discussions. However, the moderator also followed ideas and issues which emerged in focus group discussions with an intent to reveal the unknown about the respondents' opinions and behaviors related to their interaction with information in the context of making everyday life decisions. Morgan notes that there is no "one right way" to conduct focus groups. Instead, there are many choices the researcher needs to make during the research, to make the research process appropriate for

[493] Cf. Shenton, Andrew K.; Dixon, Pat. The nature. P. 303.
[494] Cf. Ibid., p. 299-300.
[495] Cf. Pitts, J. M. Personal understandings and mental models of information: A qualitative study of factors associated with the information-seeking and use of adolescents. PhD dissertation. Florida State University. 1994. P. 75. According to Shenton, Andrew K.; Dixon, Pat. The nature. P. 303.
[496] Cf. Morgan, David L. Focus. P. 66.

capturing the data he or she is after.[497] Aware that different styles of moderating can produce different results,[498] the researcher has chosen to moderate free-flowing discussions, giving the respondents the opportunity to freely express their opinions and ideas and allowing herself to pursue some issues which were not predicted nor imposed by the moderator. Emergent ideas and issues which were considered important by the researcher were followed in the following sessions. The first topic envisioned in the focus group guide were decisions the respondents make in everyday life. After the introductory part of the session, they were asked to write down the decisions they make in everyday life. They were also asked to try to recall decisions they have been making over the last year, the decisions they are considering at the moment or will need to make in the near future, and to list them on a piece of paper. After each of the respondents wrote the decisions, the decisions were read and discussed. Before the next session, the researcher made a poster with the respondents' decisions which served as a reminder and the basis for the following discussions. The poster was complemented with new decisions that were mentioned during sessions and with sources, the respondent reported turning to. Moreover, while preparing for the following sessions, the researcher complemented the posters with any new topics which seemed important and worthy of discussion. The researcher/moderator conducted as many sessions with each group as needed to tackle each of the topics envisioned in the guide. Eight focus group sessions were conducted: the tree with the grammar school group, three with the musical school group and two with the vocational school group. The first session with the first group of students lasted 45 minutes because it was the researcher's wish to fit into the class schedule as much as possible, and to interfere with the lessons as little as possible. However, since this first session proved to be too short, the following sessions lasted 90 minutes, thanks to the affability of the students and their teachers. The sessions were recorded by audio recorder and transcribed immediately after the sessions or within a day or two.

#### 3.3.6.1.4. Focus group data analysis

The analysis of the data gathered in focus group discussions took an approach of *qualitative content analysis*, often taken by Morgan.[499] The analysis was guided by a bit of advice given by Rausch who suggests the following: to look for common themes; to look for repeatedly voiced opinions and then look for dissenting opinions; to be on alert for the single response which may be worthy to note, even if said only once; to always listen for what you do not hear; to always go back to the problem definition and list of objectives when deciding whether to include something in the report or not.[500] Qualitative data analysis software MAXQDA was used as a powerful indexing and cross-referencing tool. The records of the focus group sessions were transcribed immediately after the sessions or within a day or two. The analysis of the data took two stages. The first and preliminary analysis took place after each focus group session and served as a basis for the following sessions. Because of relatively unstructured discussions, it was necessary to do preliminary data analysis after each session to reveal which topics and questions were discussed and which needed to be tackled in the following session. This allowed

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[497] Ibid., p. 72.
[498] Ibid.
[499] Cf. Morgan, David L. Computerized analysis. // Analyzing & reporting focus group results / Kruger, Richard A. Thousand Oaks; London; New Delhi : Sage, 1998. P. 89.
[500] Cf. Rausch, Marilyn J. Analyzing and reporting focus group results. // Analyzing & reporting focus group results / Kruger, Richard A. Thousand Oaks; London; New Delhi : Sage, 1998. P. 94-95.

the identification of some emerging topics and issues which were worth exploring further, for example, the topics of source credibility and cognitive authority that emerged in one boy's comment in the first session with the PRHG group. Such early findings and insights were incorporated into the following sessions with the purpose of confirmation and amplification, as suggested by Krueger.[501] Conducting preliminary analysis also allowed asking for some clarifications and feedbacks on the researcher's summarizations.[502] After conducting all the sessions, the analysis took the second step which was to read all the transcripts and conduct the first and the second cycle coding. The initial coding was conducted with the help of the set of conceptual and theoretical underpinnings and research questions as suggested by Kruger[503] and Miles and Huberman who argue that "better research happens when you make your framework (and associated choices of research questions, cases, sampling, and instrumentation) explicit, rather than claiming inductive purity".[504] Nevertheless, the coding process was inductive, and the codes emerged during the reading of the transcripts. The codes were revised in the second reading, followed by the development of pattern codes. Miles and Huberman note that "pattern codes are explanatory or inferential codes" which "identify emergent theme, configuration, or explanation" and make "threads that tie together bits of data" and suggest what important variables may be further explored.[505] Pattern codes allow the development of categories and themes, causes and explanations, relationships among people, and theoretical constructs.[506] The researcher strived to identify patterns in form of opinions and behaviors that repeated among the participants, and also considered some of the topics which were expressed only once, but somehow seemed enlightening because sometimes the comments and issues which occur only once in a series of groups and sessions may offer valuable insights and be *a gem*, as noted by Krueger[507] and may identify a critical issue, as noted by Rausch[508]. During the process of category development, it was challenging to concentrate on the meanings as opposed to the words, which was also problematized by Krueger.[509] The respondents vary in the ability to use their words and to express their opinions and describe behaviors precisely. Therefore, the attention was placed not only on words but also on assumed meanings that lay beyond words. That was the case with forming the category entitled *perceived decision significance*. The respondents often used expressions such as *a big decision*, *important decision*, *decision that may influence one's life*. The data chunks containing this content are labeled as *perceived decision significance* because the researcher assumes that they all refer to significance the respondent attaches to these decisions. Morgan points out that counting in data gathered in a focus group is controversial, as it is with other forms of qualitative data, but also argues that some quantitative uses of codes are useful in analyzing focus group transcripts and suggests presentation of simple counts of codes without performing any statistical tests. According to him, such descriptive statistics are used to summarize the content of focus groups.[510] In this

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[501] Cf. Kruger, Richard A. Analyzing & reporting focus group results. Thousand Oaks; London; New Delhi : Sage, 1998. P. 22-24.
[502] Cf. Ibid., p. 15.
[503] Cf. Kruger, Richard A. Op. cit., p. 21.
[504] Cf. Miles, Matthew B.; Huberman, A. Michael; Saldaña, Johnny. Op. cit., p. 26.
[505] Cf. Ibid., p. 86.
[506] Cf. Ibid., p. 87.
[507] Cf. Kruger, Richard A. Op. cit., p. 36.
[508] Cf. Rausch, Marilyn J. Op. cit., p. P. 95.
[509] Cf. Kruger, Richard A. Op. cit., p. 32.
[510] Cf. Morgan, David L. Focus. P. 61.

analysis, some simple counts such as how many participants mentioned a specific topic, i.e. extensiveness of the codes, were used only to describe the content of the focus group conversations and to detect patterns in the data.[511] During analysis, the problem of differentiation between active information seeking from passive monitoring occurred, similar to the one described by Williamson. She points out to the methodological problem in distinguishing *purposeful information seeking* from *incidental information acquisition* and elaborates that gaining information through media was denoted as purposeful information seeking if a *deliberate decision to watch or listen* to programs was made, as well as to use of regular columns and features on specific topics.[512] This clarification is used in this research: when the respondents reported following Facebook page without looking for some buying opportunity, i.e. without the intention of acquiring information that would help purchase some product which, nevertheless, ended up in the decision to purchase an item, e.g. makeup, the behavior is denoted as passive information acquisition. On the other hand, if the respondents monitor newspapers and Facebook pages regularly, keeping an eye on information with the intent of finding some interesting purchase opportunity, then the behavior is denoted as active information seeking.

#### 3.3.6.2. The second research phase: a survey

In the second research phase, a quantitative method is used to expand on the findings and for answering the questions which were held to be best answerable in the form of survey. Since this research strives to answer four research questions that require the collection of significant amounts of data, it was decided to use the advantage of the survey method which allows quick and rather simple data gathering, from a larger number of respondents. Therefore, this method was used for collecting all the data which were possible to collect using a survey. Moreover, the researcher was dedicated to find a way to approach the participants in the way it suits them best, as individuals. It was assumed that among them, there are those who prefer staying anonymous and contribute to the research without direct personal interaction. The survey method was one way to offer involvement that would suit such participants best. The focus group results identified various information needs that may arise from adolescent everyday life decisions. It was decided that a survey would be used to reveal to what extent the adolescent participants perceive having information needs that arise from the reported everyday life decisions, which may also indicate their opinions on the importance of having specific information when making some specific decision. This would contribute to answering the first and the fourth research question (1. What are the adolescents' information needs that arise from everyday life decisions?, 4. To what extent does information serve as a basis in the adolescent everyday life decision-making process?). Furthermore, the results indicate that perceived decision significance, or the level of significance which adolescents attach to some specific decision, influences respondents' inclination towards purposive information seeking. The results also indicate that perceived decision significance influences the selection of information sources: the variety and number of selected sources, and the types of sources they consult. Therefore, it was decided to further explore the relationship between the perceived significance of the specific decision and the selection of information sources consulted to facilitate the decision-making process, as well as the relation between the perceived significance of the

[511] Cf. Morgan, David L. Computerized. P. 92.
[512] Cf. Williamson, Kristy. Op. cit., p. 28.

specific decision and the respondents' opinion about the importance of having appropriate information for making the decision. This would contribute to answering the third and the fourth research question (3. How do adolescents select sources when making decisions in everyday life?; 4. To what extent does information serve as a basis in the adolescent everyday life decision-making process?).

The survey was employed to collect the data on (1) adolescents' opinions about having information needs when making specific decisions, (2) adolescents' opinions on appropriate information sources to be used for obtaining information when making specific decisions they consider the most and the least significant, (3) adolescents' opinions on importance of specific source characteristics when selecting sources for obtaining information when making specific decisions they consider the most and the least significant, (4) adolescents' opinions on basing some specific decisions they consider the most and the least significant on information, and (5) on the participants' demographic characteristics.

#### 3.3.6.2.1. Sampling

The survey sample was purposive, and the data were collected from population members who were available for the participation in the study. This includes the students of high schools in the city of Rijeka whose principles allowed conducting the research. The sample consisted of 270 high school students, 116 of them attend grammar school, 135 students attend vocational schools and 19 of them attend an art school. This number was considered to be statistically significant. Although there were no differences found in reported information needs and information behavior identified among the students from three different types of high schools in the focus group discussions, the survey sample again included participants from three types of high schools to allow the diversity of voices to be heard and captured. A rather small number of participants coming from art schools is caused by the unwillingness of the administration of the second, out of two existing art high schools in Rijeka, to allow the research among its students. The sample includes third and fourth graders whose age span is 16-18. This is because it is believed that they are more mature than first and second graders, which may affect their competence in decision making[513] as well as their abilities to verbalize their behaviors and opinions. Third and fourth graders were included to capture a variety of opinions on decisions: it was held that four graders may be focused on the decision about the choice of university and career to great extent and that many of the answers might be related to this particular decision. On the other hand, third graders may be less focused on this specific decision because it is not so near in the future[514], and they might offer a wider span of decision-related answers. Out of 270 participants, 202 were girls, and 68 of them were boys.

#### 3.3.6.2.2. The survey

The survey was developed from the data gathered in the focus group discussions, which provided concepts and topics that are used in designing survey items. Moreover, one of the questions is based on Šercer's instrument for measuring the importance of characteristics of

[513] Cf. Mann, Leon.; Harmioni, Ross.; C. Power. Op. cit., p. 265-278.
[514] Cf. Edwards, Susan; Poston-Anderson, Barbara. Information, future time perspectives, and young adolescent girls: concerns about education and jobs. // Library & Information Science Research 18, 3(1996), p. 217-218.

information sources which professional managers use in making business decisions[515], and on the results from the pilot study conducted by the researcher and from the studies by Todd and Edwards and by Fergie, Hunt, and Hilton.[516] The written survey included five tasks and was designed to take about 15 to 20 minutes to complete and consisted mostly of questions that required circling an answer, with two questions requiring filling in. The survey is presented in the Appendix 2 (Appendix 2 – The survey).

Task 1 aimed at capturing to what extent the participants perceive having information needs arising from making specific everyday life decisions. This would contribute to answering the first and the fourth research question (1. What are the adolescents' information needs that arise from everyday life decisions?; 4. To what extent does information serve as a basis in the adolescent everyday life decision-making process?). The participants were asked to assess, marking on the five-point linear numeric scale, to what extent the statements listed in the task refer to them. Twelve statements offered twelve decisions, and each claimed that when making one of the decisions, a participant needs additional information i.e. new knowledge, advice or help, for example: *When I make a decision related to selecting a university or future occupation, I need additional information i.e. new knowledge, advice or help*. The scale offered options *1 - doesn't refer to me at all, 2 - mostly doesn't refer to me, 3 - neutral, 4 - mostly refers to me, 5 - completely refers to me*. The task was developed from the results of focus group discussions on adolescent information needs arising from everyday life decisions. Twelve statements asked for assessment of the degree to which the participants believe they have information needs when making decisions related to university or future occupation, studying and homework, relationships to other people, behavior among people, what to do in free time, appearance, finances, illegal and/or harmful activities of alcohol and/or drugs consumption, healthy diet, protection of their own health, purchase of certain items, and decisions related to their own identity. The aim of task 2 was to help answer tasks 3 and 4, by helping participants to identify the decisions they perceive the most and the least significant. They were asked to assess, marking on the five-point linear numeric scale to what extent they consider each of the twelve decisions listed in the question significant for their lives. As in task 1, the twelve decisions offered were those identified in the focus group discussions. The scale offered options *1 - not significant for my life at all, 2 – mostly not significant for my life, 3 – neutral, 4 – mostly significant for my life, 5 – very significant for my life*. Task 3 aimed at answering the question of how respondents select information sources when facing the decision which they perceive most significant for their lives (of all the decisions listed in task 2), and what their opinions about the necessity of basing this significant decision on the information are. This would contribute to answering the third and the fourth research question (3. How do adolescents select sources when making decisions in everyday life?, 4. To what extent does information serve as a basis in the adolescent everyday life decision-making process?). To achieve that, first they were asked to identify which of the decisions listed is in their opinion the most significant for their lives. Then they were asked about appropriate sources of information which should be consulted when making this decision which they selected as most significant (task 3a), about source characteristics which are important in choosing a source of information (task 3b), and

[515] Cf. Šercer, Mario. Poslovno odlučivanje temeljeno na poznavanju informacija iz mrežnog sučelja. Doctoral dissertation. Josip Juraj Strossmayer University of Osijek. Faculty of Economics in Osijek. 2016. P. 232.
[516] Cf. Kolarić, Alica; Stričević, Ivanka. Op. cit., p. 305.; Todd, Ross J.; Edwards, Susan. Op. cit., p. 380-382.; Fergie, Gillian; Hunt, Kate; Hilton, Shona. Op. cit., p. 588.

what should serve as a basis for making that specific, significant decision (task 3c). The question 3a was developed from focus group discussions results by developing statements about specific sources of information that should be consulted when making the selected most significant decision. The sources of information offered in the statements were those identified in the focus group discussions results and in the pilot study conducted previously[517], and include *people with knowledge and experience related to the decision, family members, friends and peers, the internet, social networking sites, and books, newspapers, and magazines*. The statements assert that when making the decision the participant chooses as most significant, *It is best to seek information from* [information source, e.g. *people who have knowledge and experience and others*] *related to the decision I am making*. The five-point linear numeric scale was used for the assessment of the degree to which the participants agree with the statement (*1 - completely disagree, 2 – mostly disagree 3 – neither agree, nor disagree, 4 – mostly agree, 5 – fully agree)*. The question 3b was used to examine which information source characteristics the participants consider important when choosing the source of information for making the decision they perceive most significant. It is based on Šercer's instrument for measuring the importance of characteristics of information sources that professional managers use in making business decisions[518]. Šercer's original instrument may be found in the Appendix 3 (Appendix 3 – Šercer's instrument for measuring the importance of characteristics of information sources that professional managers use in making business decisions). It includes the following twelve characteristics of information sources: accessibility, availability, technical quality, relevance, accuracy, reliability, ease of use, experience with a source, costs of use, professional language, personal mastery, and speed of information acquisition. However, since this instrument was developed to measure the opinions of adult professional managers, it needed to be significantly simplified and adjusted in order to be applicable to adolescents. After thoughtful consideration and piloting of the survey, it was concluded that it is very difficult to express the difference between the concepts of *accessibility* and *availability* in Croatian language using wording which would be easy for adolescents to understand. Therefore, the two characteristics of information sources were replaced with one – *ease of access*. Moreover, the researcher considered the characteristics of *accuracy* and *reliability* quite close in meaning. In terms of information provision, a reliable information source would be the source one can rely on to provide accurate information. Therefore, instead of offering the two quite similar source characteristics, the question offered only one of them – the characteristic of *the accuracy of information*. The characteristics of *experience with source* and *personal mastery* were also replaced with one information source characteristic – *experience with using the source*, because they are rather close – personal mastery includes significant experience with using the source. The characteristics of *ease of use* and *speed of information acquisition* remained unchanged. The characteristics of *technical quality*, *costs of use* and *technical jargon* were left out of the question because of the researcher's belief that they are not applicable to adolescents. Moreover, the characteristic of *relevancy* was omitted because it was considered very difficult to translate in the language suitable for surveying adolescents. According to Saračević, relevance is "the attribute or criterion reflecting the effectiveness of exchange of information between people (i.e., users) and IR systems in communication contacts based on a valuation by

[517] Cf. Kolarić, Alica; Stričević, Ivanka. Op. cit.
[518] Cf. Šercer, Mario. Op. cit., p. 232.

people”[519], or in other words, the measure of the effectiveness of contact among information recipient and information source in the communication process. Investigation of such a complex concept and of adolescents’ opinion on the importance of relevance as a characteristic of information sources would be very challenging and therefore is left for some future research. One characteristic of the information source that was not included in Šercer’s instrument was added to the question – *anonymity of information source*. The characteristic of anonymity of information source was included in the question because the pilot study results suggest it might be of importance to adolescents, just as the results from the study by Todd and Edwards and by Fergie, Hunt and Hilton.[520] The question 3b asked the participants to assess by marking on a five-point linear numeric scale to what extent they consider the listed characteristics of information sources important for choosing information sources for making the most significant decision. The characteristics of information sources included: *it is easy to access to a source, the source is quick so I’ll acquire information fast, I have experience with using a source, the source is easy to use, a source provides accurate information, and source provides anonymity*.

The question 3c examines the respondents’ opinions on what should serve as a basis for making that specific, significant decision (task 3c). It was developed from focus group discussions results by developing statements about adolescents’ opinions on how they base the decision they considered most important. The focus group results revealed that the participants base their decisions on information, thinking, feelings, and instinct. It was also revealed that they often make decisions unconsciously, unaware of the process. Therefore, the question offered the following statements: *when I make this decision, I have to have appropriate information to know as much as possible*; *when I make this decision, I have to think it over really well*; *when I make this decision, I have to follow my feelings and/or mood*; *when I make this decision, I have to follow my intuition and/or instinct*; *when I make this decision, I am often not aware that I am doing it*. The five-point linear numeric scale was used for assessment of the degree to which the participants believe the most significant decision should be based on information, thinking it over, feelings and/or mood, intuition and/or instinct and to what extent they believe they are not aware of making such a decision. Task 4 was identical to task 3, only it asked for the participants' opinions on appropriate sources of information which should be consulted when making this decision which they selected as least significant (task 4a), about source characteristics which are important in choosing a source of information (task 4b), and what should serve as a basis for making that specific, least significant decision (task 4c). Task 5 asked for some demographic and socioeconomic data: gender, year of birth, the place of permanent residence, type of school a participant is attending (offered answers: grammar school, vocational school, art school), average grade at the end of the previous school year, mother’s level of education, father’s level of education. Table 1 lists the research questions addressed in the survey and the survey question numbers.

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[519] Cf. Saracevic, Tefko. Information science. // Journal of the American society for information science 50, 12(1999), p. 1051.

[520] Cf. Kolarić, Alica; Stričević, Ivanka. Op. cit., p. 305.; Todd, Ross J.; Edwards, Susan. Op. cit., p. 380-382.; Fergie, Gillian; Hunt, Kate; Hilton, Shona. Op. cit., p. 588.

| The research questions and the survey tasks which contribute to answering the questions. | |
|---|---|
| Research questions | The question item number |
| RQ 1: What are the adolescents' information needs that arise from everyday life decisions? | Task 1<br>(aims at capturing to what extent the participants perceive having information needs arising from making specific everyday life decisions) |
| RQ 3: How do adolescents select sources when making decisions in everyday life? | Tasks 3a, 3b, 4a, 4b<br>(aim at answering the question of how the participants select information sources when facing the decisions which they perceive the most and the least significant for their lives by asking them about appropriate sources of information which should be consulted when making the decisions, and about source characteristics which are important in choosing a source of information) |
| RQ 4: To what extent does information serve as a basis in the adolescent everyday life decision-making process? | Task 1<br>(aims at capturing to what extent the participants perceive having information needs arising from making specific everyday life decisions)<br>Tasks 3c, 4c<br>(aim at revealing the participants' opinions about the necessity of basing the most and the least significant decision on information) |

**Table 1 - The research questions and the survey questions numbers**

#### 3.3.6.2.3. Administration of the survey

After the high school principals allowed the administration of the survey, the process was facilitated by intermediaries: a school librarian, teachers, and school's psychologists and pedagogists. They distributed the consent forms, collected them in a few days and arranged for the survey to be carried out (the consent form is presented in the Appendix 6 – The consent forms). The researcher personally administered the questionnaire to most of the classes during school hours, (as it was found suitable by the intermediaries) explained the purpose of the research and asked the participants for help. Moreover, she offered help and gave additional explanations and instructions, when the participants asked for them, to clarify what was not completely understood. However, in two classes intermediaries administrated the questionnaire on the researcher's behalf, because they found this was the most practical way to do it. The survey took between 15 and 20 minutes for most of the participants to complete, but for a few of them it took up to 25 minutes (Appendix 2 – The survey). It was carried out in March and April 2019.

#### 3.3.6.2.4. Survey data analysis

The collected data were analyzed by the SPSS program for statistical analysis. Descriptive statistics, namely the analysis of frequency and the calculation of arithmetic mean, is used to describe the data.

### 3.3.6.3. The third research phase: semi structured interviews

The third research phase aims at filling the gaps in the findings from the previous two research phases. The first research phase allowed the identification of information needs that may arise from adolescent everyday life decisions and types of information behavior adolescents employ when making everyday life decisions. The second phase captured to what extent the participants perceive having the information needs arising from specific everyday life decisions. Moreover, the first research phase allowed the identification of the types of information behavior the participants employ when making everyday life decisions. Sources of

information which they use are identified in both, the first and the second research phase, as well as the criteria the participants use for selection of the sources. The phenomena of questioning information credibility and cognitive authority are captured in focus group discussions, in the first research phase. Lastly, the bases on which the participants base their decisions were identified in the first and the second research phase.

The interviews were used to take a step further by confirming or adding to the results on:

- adolescents' information needs arising from everyday life, detected in the focus group discussions and by the questionnaire,
- accompanying information behavior, detected in the focus groups,
- selection of information sources, including issues of information credibility and cognitive authority assessment, detected in focus group discussions, and including information sources used for making specific decisions and characteristics of sources which serve as source preference criteria, determined in focus group discussions and by the questionnaire,
- behaviors and opinions related to basing the decision-making process on the information.

Therefore, interviews focused on the following topics: adolescent information needs arising from everyday life decisions (research question 1), types of accompanying information behavior (research question 2), selection of information sources, including the sources used, characteristics of information sources, criteria for information credibility assessment and cognitive authority, and helpfulness of the information sources used (research question 3), and (4) identifying what adolescents's decisions are based on.

Rieh argues that although people do not always reject information which is in conflict with their prior beliefs and *cognitive positions*, they cannot avoid assessing whether it is believable or not, and accordingly worthy or not of being considered as cognitive authority.[521] This is the reason why the interviews also explored the phenomena of acquiring conflict information from different information sources. Julien found that when making career decisions, adolescents need two types of help: instrumental help, which helps them gain ideas, plan and prepare, and emotional help, which makes the process easier, motivates them, gives support, reassurance or confirmation.[522] Interviews also sought to capture the types of help the participants get from using information sources for making everyday life decisions.

Semi-structured individual interviews were employed because the method includes open-ended questions that allow a deeper examination of decision-making related information needs and information behavior. Since diverse data on the topic were collected in the first and the second research phase, it was possible to build some structure around the results and to focus semi-structured interview questions on what was still left to explore. The interviews are particularly suitable for investigation of the topics by using the *personal disclosure* strategy and *life centered* line of questioning, described by Shenton and Dixon, starting with everyday life decisions that give rise to information needs and asking about information behavior which

[521] Cf. Rieh, Soo Y. Credibility. P. 1341
[522] Cf. Julien, Heidi. How career information. P. 376 – 380.

accompanies the needs.[523] The same strategy was very useful for investigation of how adolescents select information sources, including what sources are used for specific decisions, how they assess information credibility and cognitive authority, and what characteristics of information sources seem important.

#### 3.3.6.3.1. Sampling

The sampling was guided by the aims of the study, just like in the first two research phases. To capture multiple views of the examined phenomena, again the students from three types of high schools (grammar school, vocational school, art school) were interviewed. Suggestions on appropriate sample size for phenomenological research vary in number, but theoretical saturation is becoming the most common approach to sample size[524], suggesting that the point of saturation is reached when no new information or no new theme is recorded.[525] Therefore, the interviews were conducted until there was not any new information found. When topics on the participants' information needs and information behavior started to repeat, the final number of eighteen interviewees was reached. Six of the participants were coming from each type of high school: grammar school, vocational school, and art school. Eleven of them are girls, and seven are boys. Six of the interviewees previously participated in focus group discussions which proved beneficial because the researcher already established a trustful relationship with them which encouraged open and honest conversations. When participating in the survey research, the students were asked to volunteer for individual interviews and were given additional papers to write down their contact. Those who were willing to contribute participated in individual interviews.

#### 3.3.6.3.2. The interview guide

The interview questions were opened and accompanied by prompts and probes. The participants were encouraged to elaborate on their information behavior by supplementary questions – probes and were reminded on points they have not mentioned by prompts. This was done in order to *steer* the direction of the interview and to ensure that the main points and topics are covered. Such actions ensure the degree of standardization which allows comparability among the interviews, which is required in the data analysis process i.e. content analysis.[526] Giving some tips on how to conduct the interview aiming at revealing the respondent's information needs, Nicholas recommends starting with the questions about the respondent's job, work and all the problems he or she experiences when doing it. He explains that asked such questions, the respondent would tell things in a natural way and that their rich narratives would reveal their information needs, information sources, characteristics of information seeking behavior and alike.[527] He also suggests the usage of probing to encourage further communication, to show the researcher's interest in what the respondent is telling and to

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[523] Cf. Shenton, Andrew K.; Dixon, Pat. The nature. P. 302-307.
[524] Cf. Beitin, Ben K. Op. cit., p. 243-244.
[525] Cf. Nascimento, LCN; Souza, TV; Oliveira, ICS; Moraes, JRMM; Aguiar, RCB; Silva, LF. Theoretical saturation in qualitative research: an experience report in interview with schoolchildren. // Rev Bras Enferm 71,1(2018), p. 229. DOI: http://dx.doi.org/10.1590/0034-7167-2016-0616 (2019-11-11)
[526] Cf. Gillham, Bill. Op. cit., p. 45-59.
[527] Cf. Nicholas, David. Op. cit.

directly ask for more information. Probing questions are "particularly important in getting to the depth and detail of information required".[528]

The interview focused on examination of the following topics: (1) adolescent information needs arising from everyday life decisions, (2) types accompanying information behavior: purposeful information seeking behavior, information sharing, passive monitoring of information, passive attention, accidental acquisition of information, (3) information sources used when purposefully seeking information, characteristics of information sources that serve as source selection criteria, and the types of help the used sources provide, (4) criteria for information credibility assessment, (5) cognitive authority and bases of authority and (6) how adolescents assess cognitive authority when acquiring information from competing sources and (7) bases for the decisions, in relation to the role of information in decision-making process. The interview guide was designed using the *personal disclosure* strategy and *life centered* line of questioning, already used in focus group discussions. McKenzie's instrument which was used for interviewing women who are expecting twins and Julien's instrument which was used to interview adolescents on their information behavior for making career decisions were used for the development of some of the interview questions.[529] Prompts and probes were used where necessary.[530]

Question 1 asked about information needs arising from the participants' everyday life decisions: *Can you recall some of the decisions you made during this school year, or have been making, that you are not completely sure about them?* Question 2 asked what the participants base their decisions on by asking: *How did you arrive at this decision?* The set of questions 3 served for eliciting the types of information behavior. The question asked for *concerns* to provoke conversation about information needs and related information behavior, just as the question *What kind of questions have you had in mind?* both borrowed from McKenzie.[531] An alternative question asked for *kind of help* the participants *needed to make the decision* as Julien did in her interview.[532] The questions b, c, d, e, and f were used to probe for information seeking behavior (b), information sharing (c), information monitoring (d), accidental acquisition of information (e), and passive attention (f), earlier identified in focus group discussions. The phrase *have gotten some helpful information out of the blue, without looking or asking for it*, in 3e question is borrowed from McKenzie.[533] Question 3 was: *What were your main concerns about it, in case you had any? What kind of questions have you had in your mind? / Can you remember what kind of help, advice or information you needed to make the decision? What happened? What happened next?*

> *a) How did you get the answers to your questions? / How did you gain some new knowledge, advice, and information you needed?*

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[528] Cf. Nicholas, David. Op. cit.
[529] Cf. McKenzie, Pamela J. Negotiating authoritative knowledge: information practices across a life transition. Doctoral dissertation. The University of Western Ontario London. 2001. P. 265.; Julien, Heidi E. How does information. P. 72-73.
[530] Cf. Gillham, Bill. Op. cit., p. 13-14.
[531] Cf. McKenzie, Pamela J. Negotiating. P. 265.
[532] Cf. Julien, Heidi E. How does information. P. 72.
[533] Cf. McKenzie, Pamela J. Negotiating. P. 265.

*b) What about seeking information or advice which might help, what is your experience? Please, describe it.*

*c) What about sharing information about (the decision topic) with other people, e.g. friends, peers, parents and alike, in a way that you exchange information, give information to each other? What is your experience? Please, describe it.*

*d) I've heard that some of the students follow some media, e.g. social networking sites, the Internet, some magazines or a television program. They reported coming across some useful information by doing that, although they didn't look for it, and that it helped in making the decision. What about you, have you had some similar experience? Please, describe it.*

*e) I've heard from some of the students that they have gotten some helpful information totally out of blue, without looking or asking for it. Can you think of a time recently when you've run into some help or some good advice or information, that you didn't expect to find? / Have you found out something you wanted to know totally out of the blue, without looking or asking for it?*

*f) I've heard that some of the students have some other people, e.g. family and friends, on the lookout for things or information for them. Do you have anyone who does that for you?*

Questions 4 – 8 focused on the sources of information used when purposively seeking information for making the decision, characteristics of information sources that serve as the criteria for selection of information sources and types of help that the information sources used to provide. Questions 6 and 7 about the helpfulness of information sources were inspired by Julien's instrument.[534] The questions are as follows.

*4. Where did you get the help you needed – some advice, information or additional knowledge?*

*5. Can you explain the reason you looked for information and advice from (this specific information source)? / Can you explain why did you seek information from this specific source?*

*a) Have you tried to look for information somewhere else? / Have you tried to look for information from some other sources?*

*6. How did that help with making your decision, what you've found out? / How did this information help you with making your decision?*

*a) Which one of the sources provided the most helpful information (I'm listing the sources the respondent mentioned)? Please, explain it.*

Questions 7 - 9 focused on the assessment of credibility and cognitive authority. The terms *credibility* and *cognitive authority* were never used in the interviews. Instead, operationalized terms were used. Rieh notes that credibility may be defined with concepts such as believability, trustworthiness, fairness, accuracy, trustfulness, factuality completeness, precision, freedom from bias, objectivity, depth, and informativeness.[535] Rieh and Belkin operationalize quality

[534] Cf. Julien, Heidi E. How does information. P. 72.
[535] Cf. Rieh, Soo Y. Credibility. P. 1337.

and authority by using such words as *good papers*, *useful information credible information*.[536] In the interviews, for credibility, the questions included the terms *good*, *accurate*, and *may help with the decision*, because the researcher believes that in the context of seeking information for making a decision, the source which is perceived good and accurate is seen as such that may help. Regarding cognitive authority, the questions included the word *trust*, which Rieh uses in her research,[537] and *influence* because cognitive authority is *a proper influence* taken from a source that is considered worthy of trust.[538] The question *What makes you think so?* was used to ask about the basis for assessing credibility and cognitive authority, as suggested by Rieh.[539] The questions are the following:

*7. Did you think that the information/advice you gained was good, accurate and useful and that it might help you with the decision? What made you think so?*

*8. Do you trust that (information source) can give you useful information/advice, which would help you with your decision? What makes you think so?*

*9. What or who, of (all the sources), influenced your decision the most? Which advice did you take most seriously? Why is that?*

Questions 10 – 12 seek focus on how the respondents assess cognitive authority when acquiring conflict information from competing information sources and what the reasons or basis for assessment are. McKenzies' interview questions were used for this question, changed to some extent. The phenomenon of conflict information was operationalized by terms *disagreed with each other*, following her example.[540]

*10. Have you ever gotten help, advice or information from different places that disagreed with each other? What happened? How did you know what to believe and what to do? Why is that?*

*11. Have you ever gotten help, information or advice which disagreed with your prior knowledge and experience? What happened? What did you believe, new information or your prior knowledge and experience? How did you know what to believe, your prior knowledge or new information? Why is that?*

*12. Have you ever gotten some information or advice you did not like, and which was not in line with your thinking about your decision? Why didn't you like it? / Have you ever gotten some advice which you did not like, and which was not in line with your thinking about your decision? Why didn't you like it? What did you do? Did you take this information into consideration when making your decision or did you ignore it? Why is that?*

*Did you take this information into consideration when making your decision or did you ignore it? Why is that?*

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[536] Cf. Rieh, Soo Y.; Belkin, Nicholas. Interaction on the Web: Scholars' judgement of information quality and cognitive authority. // Proceedings of the 63rd Annual Meeting of the ASIS, 2000, p. 25-38. URL: https://www.researchgate.net/profile/Nicholas_Belkin/publication/242036099_Interaction_on_the_Web_Scholars'_Judgment_of_Information_Quality_and_Cognitive_Authority/links/00b7d5398738b08808000000.pdf
[537] Cf. Rieh, Soo Y. Judgement. P. 148.
[538] Cf. Rieh, Soo Y. Credibility. P.; Wilson, Patrick. Second-Hand. P. 15.
[539] Cf. Rieh, Soo Y. Credibility. P. 1340.
[540] Cf. McKenzie, Pamela J. Negotiating. P. 265-266.

The interview was piloted among students who were representative of the group which was planned to be interviewed. The interview guide is presented in the Appendix 4 (Appendix 4 – The individual interview guide).

#### 3.3.6.3.3. Conducting interviews

Eighteen interviews were conducted during May and June 2019. Parents' and caregivers' written consent for interviewing underaged students, including recording conversations, was obtained prior to interviewing (the consent form is presented in the Appendix 6 – The consent forms). Interviews lasted from 22 to 60 minutes and were recorded by a digital voice recorder. The recordings were transcribed by the researcher herself immediately after the interviews, or within a day or two. The participants were interviewed in high schools they were attending – in one school the interviews took place in the office of the school's psychologist, while at two other schools they took place in classrooms which was organized by school employees. Considering that the overall topic of the interviews emerges from adolescents' everyday life, the intention was to allow undisturbed and spontaneous conversation and a friendly atmosphere. Therefore, the order of prepared interview questions was not strictly followed. The researcher encouraged spontaneous conversation, at the same time taking care that all the topics, listed in the interview guide, would be covered. The conversations ran rather smoothly and naturally and, contrary to the researcher's expectations, the participants did not show any difficulties recalling the decisions they made during the school year. All of them immediately remembered at least one decision they made and were more than willing to talk about them, as the quotes illustrate:

*G5: I decided what I wanted to study in university, I decided I didn't want to eat meat, I decided to stop being friends with a person I was friends with for a long time and, how many should there be?*
*M: As many as you can recall.*
*G5: I don't know, and I decided to take a journey with my friend, the two of us alone.*

At the beginning of each interview, the participants were reminded of the purpose of the study, were thanked for their helpfulness and reminded of guaranteed confidentiality.

#### 3.3.6.3.4. Interview data analysis

The interview records were transcribed immediately after the interviews were conducted or within a few days. The transcripts were subjected to qualitative content analysis of concepts[541], and specifically according to the theoretical foundations supporting the research. The systematic coding was done similarly to the pattern coding described by Miles and Huberman[542], only in this case the patterns that were sought were those identified in the previous research phases and according to the conceptual frameworks of this dissertation, presented earlier in this work. The coding scheme was developed from the topics covered in the interview guide and according to the research questions. The coded data were clustered in categories, analyzed and interpreted. The process of analysis was facilitated by using the qualitative data analysis software MAQDA. During the analysis, not only words but also meanings which lay beyond words were considered[543], just as in the focus groups data analysis. For example, in the following quote, one girl explains why she sought information on the social networking site

[541] Cf. Gillham, Bill. Op. cit., p. 59-72.
[542] Cf. Miles, Matthew B.; Huberman, A. Michael; Saldaña, Johnny. Op. cit., p. 86-93.
[543] Cf. Kruger, Richard A. Op. cit., p. 32.; Gillham, Bill. Op. cit., p. 69-70.

*YouTube*. Her answer was that this was *the social networking site I spend the most time on*, and it was interpreted as a characteristic of information source *convenient to access*.

*I: Tell me, why did you choose YouTube?*
*G5: Because it's, I think it's the social network I spend most time on and so it makes sense that if I find something it's going to be there, and there's lots of material about the topic, so.*

#### 3.3.6.4. Validity

Miles and Huberman emphasize the challenges of the qualitative research which originate from the fact that most of the qualitative researchers work alone in the field as a *one-person research engine*, relying mostly on themselves when defining the problem, doing the sampling, designing the instruments, and collecting, analyzing and interpreting the collected data.[544] One crucial challenge is the one regarding the question of how good the emerging findings are and how reasonable the drawn conclusions are. The *goodness* of a study may have many possible definitions, including whether it is reliable, valid, reasonable, confirmable, credible, trustworthy, useful, compelling, etc.[545]

To increase the confidence in the study findings, Creswell's eight validation strategies were considered, and some of them employed to assure the study validity.[546] First, the triangulation of multiple methods of data collection and analysis was used to strengthen the validity. Methodological triangulation is frequently used to strengthen qualitative research through the combining of multiple methods to study one problem.[547] In this study, multiple methods were used to investigate the phenomenon of interest. The results from different data collection methods allowed triangulation, which is the use of more than one method to assure the validity of information gathered. Two qualitative, and one quantitative method were used to study adolescent information behavior in the context of making everyday life decisions, and triangulation was achieved through comparison of data gathered in focus group interviews, by a survey, and in individual interviews. Second, the researcher provided a detailed report of the focus of the study, the researcher's role, the participants' position and the context of the study. Data collection procedures and methods, and data analysis procedures were reported in detail in order to fully describe the strategies and methods used in this study. In qualitative research, issues of instrument validity and reliability rest largely on the researcher's skills.[548] To strengthen the validity and reliability of this work, the researcher strived to gain theoretical knowledge related to the investigated phenomena and relied on her current skills and experiences, gained through years of working with adolescents. During her two decades of working as a school librarian and a public librarian, leading book clubs and coaching in debate clubs, the researcher developed deep interest and sensitivity towards adolescent population and issues related to this specific life period. This provided her with good familiarity with the population being investigated, good communicative skills appropriate for approaching adolescents, feeling comfortable and being non-judgmental in the discussions.[549]

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[544] Cf. Miles, Matthew B.; Huberman, A. Michael; Saldaña, Johnny. Op. cit. p. 293-294.
[545] Cf. Ibid, p. 310-311.
[546] Cf. Creswell, John W. Op. cit., p. 195-205.
[547] Cf. Beitin, Ben K. Op. cit., p. 248.
[548] Cf. Miles, Matthew B.; Huberman, A. Michael; Saldaña, Johnny. Op. cit., p. 42.
[549] Cf. Creswell, John W. Op. cit., p. 196.

## 3.4. Data analysis and results

### 3.4.1. Research question 1: What are adolescents' information needs that arise from everyday life decisions?

#### 3.4.1.1. Focus group results

The discussions among the participants revealed that they make decisions that originate from a multitude of everyday life situations, and it can be assumed that these situations give rise to diverse and numerous information needs. Information needs arise from some inadequacy in one's knowledge, and specifically in problematic situations, including situations in which one needs to make a decision. Table 2 shows the extensiveness of the decision codes or how many different respondents commented on a specific decision topic. In their comments, they reported making a certain decision or have discussed the decision topic in a way that suggests that they had been considering the decision discussed.

| Decision topics | | Respondents | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hyp. big, important | | G4 | G5 | M2 | M1 | M3 | M8 | M5 | M7 | M4 | P1 | P3 | P4 | | | | | | | | | |
| Hyp. diet pills, steroids | | G5 | G3 | G4 | G7 | G1 | G6 | M6 | M3 | P1 | P3 | P5 | P4 | P2 | | | | | | | | |
| Time and activities | | G1 | G2 | G4 | G3 | G7 | G8 | G5 | M1 | M4 | M2 | M3 | M5 | M7 | M8 | P1 | P2 | P3 | P4 | P5 | | |
| Relations to other people | | G1 | G5 | G6 | G2 | G3 | G7 | G4 | M1 | M3 | M5 | M7 | M4 | M2 | M6 | M8 | P5 | P2 | P3 | P4 | P1 | P6 |
| Identity | | G2 | G5 | G7 | G6 | G8 | G4 | | | | | | | | | | | | | | | |
| Behavior | | G1 | G2 | G3 | G7 | G6 | G5 | | | | | | | | | | | | | | | |
| Appearance | | G2 | G4 | G8 | G1 | G6 | G7 | G5 | M1 | M3 | P1 | P4 | P5 | P2 | | | | | | | | |
| Food and diet | | G4 | G8 | G7 | M1 | M3 | M8 | M7 | P4 | P3 | P5 | | | | | | | | | | | |
| School | | G2 | G4 | G3 | G5 | G6 | G7 | G8 | G6 | G1 | M1 | M4 | M2 | M3 | M7 | M8 | M5 | | | | | |
| Job | | G4 | G5 | M5 | M7 | M8 | M2 | P1 | P5 | P3 | | | | | | | | | | | | |
| Money | | G3 | G7 | G5 | G6 | M1 | M2 | M3 | M5 | M7 | M8 | P3 | | | | | | | | | | |
| Higher education and | | G4 | G3 | G5 | G7 | G1 | G6 | G8 | M2 | M1 | M3 | M7 | M4 | M5 | M8 | P1 | P5 | P3 | P4 | P2 | P6 | |
| Buying | musical instrument | M5 | M2 | M6 | M1 | | | | | | | | | | | | | | | | | |
| | makeup | G4 | G8 | G2 | G7 | P5 | | | | | | | | | | | | | | | | |
| | clothes | G1 | G3 | G5 | G7 | M3 | P1 | P2 | P4 | P5 | | | | | | | | | | | | |
| | mobile phone | G3 | G1 | G8 | G5 | G6 | M1 | M7 | | | | | | | | | | | | | | |
| | pet | G5 | | | | | | | | | | | | | | | | | | | | |
| | present | M1 | | | | | | | | | | | | | | | | | | | | |
| | computer parts | P3 | | | | | | | | | | | | | | | | | | | | |
| | computer game | M7 | | | | | | | | | | | | | | | | | | | | |
| | mattress | M7 | | | | | | | | | | | | | | | | | | | | |
| | sport equipment | M7 | | | | | | | | | | | | | | | | | | | | |
| | furniture | M7 | | | | | | | | | | | | | | | | | | | | |
| Training and sport | | G4 | G1 | G6 | G7 | P1 | P2 | P3 | | | | | | | | | | | | | | |
| Health | | G7 | M6 | | | | | | | | | | | | | | | | | | | |
| Leisure time activities | | G4 | G6 | G7 | M4 | M2 | M3 | M8 | M1 | M6 | P1 | P2 | P3 | P4 | | | | | | | | |
| Smoking | | G8 | G7 | M1 | M3 | | | | | | | | | | | | | | | | | |
| Alcohol | | G8 | M7 | M3 | P1 | | | | | | | | | | | | | | | | | |
| Sexuality | | G6 | G7 | G4 | | | | | | | | | | | | | | | | | | |
| Drugs | | G8 | G7 | P5 | | | | | | | | | | | | | | | | | | |
| Driving school | | M3 | M5 | P2 | P3 | P5 | | | | | | | | | | | | | | | | |

**Table 2 – Extensiveness of decision codes or topics**

| | |
|---|---|
| | respondents from PRHG (grammar school) |
| | respondents from GSIMR (musical school) |
| | respondents from PGSRI (vocational school) |

The focus group interviews revealed that the participants deal with a multitude of everyday life decision situations, which give rise to information needs that gather around the following topics: future and career, school and education, identity and personality development, social life and social behavior, as well as relations to other people including romantic relationships and sexuality, hobbies and interests, appearance, job, and money managing, leisure time activities and entertainment, including alcohol and drugs consumption, purchase-related decisions, decisions related to food, health, daily management of time and activities, and other decision-related topics which occur in the course of everyday life, such as getting braces or getting a driving license. As can be seen from Table 2, the decisions commented by most of the respondents across all the sessions are those about relations to other people, about university and future and managing time and activities during everyday life. It is also visible from Table 2 that these decision topics were discussed in all three groups of the respondents. Decisions related to one's appearance, leisure time activities, food and diet, job, money management, buying clothes, and alcohol consumption were also the topics of the conversation in all of the groups. Some of the decision topics were commented only by members of one or two groups, e. g. a decision which mobile phone to buy, decisions related to identity development or some health issues. Decisions about identity development and behavior were mentioned and commented only in grammar school (PRHG) group of the participants. Likewise, deciding on buying a musical instrument was discussed only in the group of the respondents who attend musical school, which is understandable because a musical instrument is an important tool in their education and future as musicians. The decision topics labeled as "Hyp. a big, important decision" and "Hyp. diet pills, steroids" refer to hypothetical decision situations imposed by the moderator to stir the discussion.

The topic of relations to other people extends across the discussions in all three groups of students. Many of the decisions discussed referred to handling problems or conflict situations among friends. These discussions were very lively, the respondents were commenting on the topic passionately, leaving the impression that the commented situations present very important moments in their lives. The discussions left the impression that the students are quite troubled by problematic and doubtful situations that take place among friends and peer groups. Moreover, decisions related to uncertainties or problematic situations in romantic relationships were less discussed, but also mentioned in the discussions, and some of the respondents reported having doubts and problems regarding their parents. The following quotes illustrate the respondents' comments.

One boy shared the experience of deciding whether to join a group of peers whose behavior he considers problematic.

P3: *Regarding friends, I had to choose whether to join some bad company and perhaps gain more credibility among peers or to stay with my own friends and continue with my normal life. Once, I was with them in the city center, I have a friend in my class who is a member of a really bad company and they are known as being really dangerous. And you mustn't mess with them. So, now I had an opportunity to join them and everyone would be afraid of me because I'm with them, or to continue hanging out with my old friends and live normally. If I joined them that would imply using something more than just alcohol, heavier stuff, overall I would be in a really bad company. And so, these are some of the decisions.*

One girl reported having a doubt:

M1: *Whether to ask the boy I like out without knowing whether he likes me back?*

Two boys reported facing problematic situations in relationships with girls, one of them saying:

M8: *Yes, well, I don't know, when I asked for a piece of advice, which I rarely do, I just sort of let things go, I asked my father and my friends (...) About a girl. It doesn't really matter what it was, we had a sort of a crisis and so I did a lot of thinking and then I asked some people. Finally, I made a decision and it may have been a wrong one or maybe not, however, it all turned out well in the end. Things can't go wrong if you invest enough of your effort and energy. Because then, such decisions that are mature are surely, I mean they will surely be useful in some way. A lot of time was invested while deciding on it, and that pays off.*

One boy who expressed not having a close relationship with his parents in a few occasions during focus group sessions reported facing some decision situations:

G5: *Should I listen to my parents regarding some situations, regarding these problems I'm having or should I just listen to myself and do things on my own? How much help do they need, should I take that into consideration?*

One girl who mentioned having a close relationship with her parents, especially with her mother, during the sessions reported having some doubts:

M3: *Maybe also a decision whether to tell parents about something that has happened or not, something that does not really concern them, but it is nice for them to know (...) like I don't know, something like, I found a boyfriend and should I tell her that, should I be talking about it with her, because it's not one of those things that you would come running and say: ''Mom, mom…''*

Another type of decision that was expressed by many of the respondents, was lively discussed and seemed to trouble them much was a decision related to managing time and activities during the course of everyday life. The respondents reported deciding on a regular basis for example about when to go to sleep and when to wake up, considering on one side the things they need to do or want to do, and on the other side wanting to get enough sleep and good night rest. They also reported choosing among alternative activities due to their limited time and energy, for example choosing between activities related to entertainment and hobby and studying for school, and generally wondering how to organize a day.

For example, they were commenting:

G7: *Should I go to bed earlier and get up in the morning to study and to feel well-rested or should I stay up and watch a TV show?*

(…)

M1: *Go out with my friends in the evening or get enough sleep?*

(…)

P3: *Should I study and practice sports and neglect my social life or should I ignore studying and sports and have a social life in return (...) Well, my weekdays consist of three parts – studying, social life and practicing sports, and then, I have to choose two out of those three because I also have to have some free time because I'm lazy and I like to sleep in the afternoon or watch a video regardless of how many things I have to do for the following day. So, I see how many things I have to do for tomorrow and think whether I have enough time to go to practice that day instead of studying, things like that.*

Many of the focus group discussions were devoted to the topic of university selection and future occupation. The following quotes illustrate their comments on the topic:

G5: *Which school to enroll, which university to go to after high school. The place where I'll have to be living then, shall I stay here or go somewhere else (...) I started thinking about it just now, at the beginning of the semester, until now I had no idea what I was good at, what I might do and then I realized that a lot of people around me started dealing with it, I had nothing, so I began working on it more intensively.*

(…)

P3: *Yes, let's say that for me it is also university, so, everything that I'm interested in is located in Zagreb. I'm not interested in any other place except Rijeka, like you have to choose whether you'll go where you really want, study in the field of interest in which you would like to continue working or stay here with my friends, my family, like these are some things, it's very difficult for me to weigh my options. So, that is one more big decision for me to make. So, I'm looking to find something here in Rijeka to stay with my friends and family.*

The students who attend music school reported thinking about music academy, but also with a varying level of engagement in making decisions. For example, they were commenting:

M2: *I think that the biggest decision that all of us have to make by the time we're 19 is whether to enroll into the academy because going to musical school is not the same as going to grammar school. They have a choice of choosing something in the fourth year. If we want to go to the academy we have to make that decision early on. Because the amount of practice, effort and performances, these are all the decisions that lead to that one decision, to enroll into the academy. Because the person who practices an hour a day probably won't be able to enroll into the academy and it is possible that somebody decides in their fourth year not to enroll the academy immediately, from the first attempt, because it is something you have to practice and prepare for a very long time.*

M3: *I also attended a seminar in Split held by the professor who teaches at the academy, it was quite well, only I don't know, I think about other potential options. I went to open days in Ljubljana and there I learnt not so much about the professors, but rather about the system, how things work there and they explained it quite well, so at the moment I'm still thinking where to go, what to do. I'm still trying to get in touch with some of the people, get contacts, and I don't know, I guess I should start with my private lessons and that's it. First, to Ljubljana because I am still not familiar with the teachers there, and then later I'll see if I want to continue with Split or not.*

Purchase-related decisions which occurred in the focus group discussions involved purchasing items of interest for the respondents: mobile phone, makeup, and clothes, items related to the hobbies such as computer parts, video game, and sports equipment, present for a friend and other items of interest. Their engagement in thinking and deciding may be seen in the following quotes:

M7: *I did a lot of research because I bought a mobile phone, just now, in November. I bought, I mean, there are a lot of these Samsung phones, but I didn't want that one, I bought a Chinese phone, Xiaomi. A friend of mine also bought it, and has had it for quite some time now and he told me that it was an excellent mobile phone, so I checked on the Internet, all the specifications and so on, and then I decided to buy it.*

G4: *It's the same thing like when I want to buy makeup. First, I watch YouTube videos, to see what other people have to say and only then I decide to buy something to see if it fits me.*

In the musical school group discussions, special attention was given to purchase of a musical instrument that the participants play. This is because the instruments are important for their education and their future as musicians and because they are quite expensive. For example, they described the amount of effort required to buy an instrument:

M2: *I believe that for us, the purchase of a new instrument is more important. I have recently bought a new one, I carried out an extensive research on the Internet, I asked a whole bunch of people to advise me because we couldn't test anywhere how it worked so we had to buy it just like that. We ordered it directly from the factory in Japan where it's made (...) the saxophone (...) it was all so very complicated, but we read literally all the reviews, specifications, we asked around, made phone calls, we asked 200 teachers for help, we did everything just to get that instrument as it should be.*

One of the participants reported deciding about "*what I would like to be and how I want the world to see me"*, which was labeled by the researcher as a decision about identity and personality development. The quote illustrates her words:

G2*: Making a decision about what I would like to be and how I want the world to see me.*

Later during the session, the girl adds an explanation about her worries:

G2: *I'm really scared if, for example, I have a fall out with somebody and then I stop trusting other people and then everything else, do you get my point? That some event might change me. I'm happy about being able to trust others, because I believe it is a good quality to have, maybe not always, but I wouldn't want for some event to change me.*

The participants also reported making decision regarding social life and behavior, for example:

G2: *When I find myself among new people, I start thinking about whether I could be myself right away or should I pretend a bit. (...) When I am among new people I always think if it's okay to present myself the way I really am right away or should I act a bit, but just like Mia pointed out, I always act the way I really am because I don't really know how to pretend. I don't know how to behave differently from what I really am, because sometimes you don't want for people to dislike you or hate you because you immediately showed who you are…I don't know, it's difficult to explain. Somebody needs more time to get to know you.*

G6: *Yes, I also always adapt.*

Furthermore, the respondents reported many other various decision situations in which they choose among some alternatives. They reported situations related to their free time entertainment (for example movie selection), hobbies and interests (such as cooking or attending summer dance camp), appearance (such as choosing clothes and hairstyle), money management and job, health, food and other decisions which occur in everyday life. The following quotes illustrate various decision situations they mention:

M1: *It's the same as when we decide on what to watch. If we want to watch some movie, I think we'll first check out on the internet how much everybody else liked it, what other people have to say about it, so that we don't make a mistake.*

M7: *Forum*

M1: *You also have IMDb or Rotten Tomatoes.*

M6: *And Google does it itself, when you enter the movie title it shows you the percentage of people who liked it.*

M2: *If some movie is good, people can say positive things about it and you can find a discussion about it on Moviefone.*

(…)

P4*: I love to cook, I mean please don't (everyone is laughing), so always, late at night, when everyone is asleep, I prepare all sorts of things for myself. Cakes, pancakes.*

P5: *He sends me photos of mac and cheese at 3 am, and I'm dying laughing.*

P4: *Yeah, I don't know, at night I have this urge to cook and then I look up things on Instagram. Because it is full of such videos, I always look those short cooking ones, where they get things done quickly and like, I don't know, sometimes I see something I like, so I follow that recipe or I try to look for something a bit and, mostly in the end, I just eyeball it and do what I prefer. I mean, I don't follow the recipe as I should, because I don't have a lot of those ingredients, so I make up my own stuff. But it turns out okay in the end.*

(…)

G8: *I'll look up on YouTube which color, hairstyle and hair type matches with a certain face shape, so I search on the internet things like that. And I ask girls, my friends for an opinion.*

Moderator: *Last time G4 talked about watching makeup tutorials on YouTube.*

G8: *I love it. Instagram, YouTube, everything, literally everything.*

G1: *I was looking for glasses when I was getting new ones. I had black ones before, so I wanted to see which ones fit my face, but then I realized I don't have any of those faces I looked up, I have something in between, so it didn't help me much.*

G6: *I used to watch tutorials on YouTube for curly hair, and short. That's what I watch on YouTube, tutorials.*

One of the respondents expressed having doubts about whether to accept an opportunity for a job:

P5: *Should I accept a job offer during the entire school year?*

Until the following session the girl had decided whether to accept the job and explained:

P5: *I mean, I went for an interview, but it's just too much. I have a bus at 11:45 so that I could get to school at 13:10, and I was supposed to work form 8 am until 11:45. So I would barely have any time left for any other obligations I can't go on without.*

Moreover, the respondents reported facing some uncertainties and doubts about how to manage their health issues:

G7: *I also have an example, about my scoliosis. So, I have scoliosis and I've seen different doctors and physiotherapists. Some say I have to wear orthosis, others say that it is completely unnecessary. I decided to listen to the one that says I don't have to wear it because I preferred his opinion. And then, after two years I went for another checkup and another doctor started telling me off for not wearing one (...) I don't wear it because I've also grown (...) the inclination improved for 30 something degrees just from exercising, I wasn't wearing orthosis. So, I don't know who to listen to. I mean, it's also an example. They are also experts, but they have different opinions.*

Many of the respondents reported choosing what to eat on a daily basis, and some reported more concern and care, for example, the boy who suffers from lactose intolerance:

M8: *I'm not allowed to eat dairy products so I don't. I mean when I'm at home I don't eat them because I can't but when I'm staying here, in the dorm, it's all so lame, so sometimes I come to lunch, starving, and all I can eat are dairy products, then I eat them.*

His classmate reminds him of what he does about it:

M2: *Okay, you read every label to check whether there is any milk in it.*

M8: *Yeah, okay, I read that.*

Moderator: *On the product?*

M8: *Yeah, always.*

M2: *He takes a box of cookies and reads what's on the label.*

M8: *I always, always read labels that are on some cookie boxes and stuff like that (...) Well, I want to avoid feeling sick, if they contain milk I would be sick, and I don't really like eating that kind of stuff. Since I've stopped consuming milk, I also stopped eating all those things and I haven't eaten any for at least two years, so it's not that much fun for me anymore. I prefer broccoli.*

During two sessions, the topics of drug, alcohol, and sex emerged. The respondents did not openly report making decisions related to these topics, and the moderator did not expect them to talk about the topics that may be considered sensitive but was rather willing to leave these topics private. However, while discussing, some of the respondents mentioned decision situations related to these sensitive topics:

Moderator: *We had two different views on parents last time. Mia, are there any decisions that you prefer discussing with your mom and others that you prefer discussing with your friends?*

G8: *There are. I talk to my girlfriends about things I don't wish to mention to my mom, for example, I don't know, love, alcohol, drugs. I definitely won't ask my mom: "Hey, mom, have you ever tried ecstasy?", I'll always ask my friends things like that, the things that we get. And with my mom, I talk to her about things that I seriously think about, things I can't help myself with and my mom tells me what to do, I don't know, I'll give you a stupid example, but I'll ask her whether I should go to practice or go out with the girls because I let them down several times. I ask my mum for this kind of things.*

Moderator: *Ok, and the things that you've just mentioned, love, alcohol, drugs, do you search for those topics on the internet as well?*

Some girls (it was not possible to recognize the voices on the tape): *Yes*.

G7: *Yes. Pills report.*

Since the span of human decisions is practically endless, the respondents also reported many other decisions that may occur in everyday life, such as choosing which bus to take, which driving school to attend, when to take a driving exam and whether to wear braces.

The results did not reveal any differences among the participants from three different groups regarding reported decision topics and related information needs.

#### 3.4.1.2. Survey results

The survey results about the adolescents' perception of information needs arising from specific everyday life decisions are presented in Table 3.

| decision topic | M | SD | Doesn't refer to me at all. | | Mostly doesn't refer to me. | | Neutral. | | Mostly refers to me. | | Completely refers to me. | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | f | % | f | % | F | % | f | % | f | % | f | % |
| **selecting a university or future occupation** | 4,30 | ,893 | 3 | 1,1 | 14 | 5,2 | 19 | 7,0 | 98 | 36,3 | 136 | 50,4 | 270 | 100,0 |

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **purchase of certain items** | 3,42 | 1,184 | 24 | 8,9 | 39 | 14,5 | 50 | 18,6 | 112 | 41,6 | 44 | 16,4 | 269 | 100,0 |
| **a healthy diet** | 3,29 | 1,272 | 36 | 13,3 | 36 | 13,3 | 58 | 21,5 | 94 | 34,9 | 46 | 17,0 | 270 | 100,0 |
| **health protection** | 3,06 | 1,299 | 44 | 16,4 | 50 | 18,5 | 59 | 21,9 | 79 | 29,4 | 37 | 13,8 | 269 | 100,0 |
| **relationships with other people** | 2,91 | 1,207 | 38 | 14,1 | 69 | 25,6 | 68 | 25,2 | 69 | 25,5 | 26 | 9,6 | 270 | 100,0 |
| **studying and homework** | 2,81 | 1,157 | 40 | 14,9 | 70 | 26,0 | 78 | 29,0 | 62 | 23,0 | 19 | 7,1 | 269 | 100,0 |
| **money management** | 2,78 | 1,296 | 58 | 21,5 | 62 | 23,0 | 57 | 21,1 | 67 | 24,8 | 26 | 9,6 | 270 | 100,0 |
| **my appearance** | 2,68 | 1,227 | 57 | 21,1 | 69 | 25,6 | 68 | 25,2 | 56 | 20,7 | 20 | 7,4 | 270 | 100,0 |
| **my own identity** | 2,43 | 1,361 | 99 | 36,7 | 47 | 17,4 | 57 | 21,1 | 42 | 15,5 | 25 | 9,3 | 270 | 100,0 |
| **how to behave among people** | 2,31 | 1,152 | 77 | 28,6 | 91 | 33,8 | 53 | 19,7 | 36 | 13,4 | 12 | 4,5 | 269 | 100,0 |
| **illegal and/or harmful activities: alcohol and/or drug consumption** | 2,05 | 1,162 | 119 | 44,1 | 65 | 24,1 | 48 | 17,8 | 29 | 10,7 | 9 | 3,3 | 270 | 100,0 |
| **what to do in free time** | 1,95 | 1,135 | 132 | 48,9 | 61 | 22,6 | 41 | 15,2 | 30 | 11,1 | 6 | 2,2 | 270 | 100,0 |

**Table 3 – The adolescents' perception of having information needs arising from specific everyday life decisions**

The results of arithmetic mean for statements that describe the perception of having information needs, arising from specific decision situations, show that the respondents perceive having information needs to the greatest extent for information needs arising from a decision when selecting a university or future occupation (M=4,30; SD=0,893). For a purchase decision (M=3,42; SD=1,184), a decision related to a healthy diet (M=3,29; SD=1,127), a decision related to protection of one's health (M=3,06; SD=1,299), a decision on how to behave and/or what to do in relations to other people (M=2,91; SD=1,207), a decision related to studying and doing homework (M=2,81; SD=1,157), a money management decision (M=2,78; SD=1,296) and a decision related to appearance (M=2,68; SD=1,227), on average, the participants are not sure to what extent they have or do not have information needs, arising from the decisions they have to make. Further analysis of arithmetic mean~~s~~ shows that the respondents do not perceive having information needs which would arise from a decision related to their own identity (M=2,43; SD=1,361), a decision on how to behave among people (M=2,31; SD=1,152), a decision related to illegal and/or harmful activities: alcohol and/or drug~~s~~ consumption (M=2,05; SD=1,162) and a decision on how to spend free time (M=1,95; SD=1,135) (Table 3).

#### 3.4.1.3. Individual interview results

The interviews revealed that the participants had made various decisions originating from a multitude of everyday life situations during the school year, and these decision situations might have given rise to the related information needs. Table 4 shows the occurrence of the decision codes or topics in the interviews. It lists the decision topics on the left and on the right the participants who reported making corresponding decisions.

| **Decision topics** | **Respondents** | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Time and activities | P2 | | | | | | | | | |
| Relations to other people | G5 | M1 | M3 | M4 | M5 | P3 | P4 | P6 | | |
| Appearance | G6 | M5 | P1 | | | | | | | |
| Food and diet | G5 | M6 | | | | | | | | |
| School | G1 | M6 | P2 | P3 | P5 | P6 | | | | |
| Job | G6 | P2 | P4 | P6 | | | | | | |
| Higher education and career | G1 | G2 | G4 | G5 | M1 | M2 | M3 | M5 | M6 | P1 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Buying | M1 | P5 | | | | | | | | |
| Training and sport | G4 | M3 | P1 | P4 | P5 | | | | | |
| Health | G3 | | | | | | | | | |
| Leisure time and activities | G5 | G6 | M2 | M4 | P1 | P4 | | | | |
| Alcohol | M5 | | | | | | | | | |
| Driving school | P3 | P6 | | | | | | | | |

**Table 4 - The occurrence of the decision codes or topics in the interviews**

| | |
|---|---|
| | respondents from PRHG (grammar school) |
| | respondents from GSIMR (musical school) |
| | respondents from PGSRI (vocational school) |

It can be assumed that the participants need information which corresponds to decision situations they face, and which would give them new knowledge, enable a better understanding of the decision situation, and eventually help them make better decisions. Across the interviews, the decisions which the adolescent participants reported they make gather around the following topics: future and career, relations to other people including romantic relationships, school, hobbies and other and activities such as sports, appearance, earning money, food and diet, purchase of some items, health, alcohol consumption, managing time and activities and getting a driving license.

It is not surprising that most of the participants reported deciding about higher education, and generally about future and future career, since the interviews were conducted among third and fourth graders (in the Croatian school system, students graduate from high school after the fourth grade). Ten out of eighteen participants who were interviewed, reported making that decision. Their words may be illustrated by quotes such as:

*G2: Well I have no idea, I mean we're applying to university and all, two important decisions are that I decided to prepare the exam on my own at home, so I didn't need any extra lessons, I mean there were some at school, I barely went to those, so nothing that I would have to pay for, and the second one is that I applied to universities in Zagreb and there was some discussion about that at home, but in the end they said it's your choice and that was that. I think that's the most important thing, and everything else has to do with something, some kind of a private life, these are all little things to me right now, and this was really something, I mean that left a mark and that's what my future will depend on so that's the most important right now.*

*M3: (...) If I would go to university or start working, take a driving instructor course or something and things like that for a job, or if I would go to university and see what to do later because I don't know if it's better for me to start working right away, earn some money, or it's better that, I don't know, I get educated in music for five years and see what to do then.*

*P1: Well, university, I applied to universities, I applied to Denmark which was a really big decision because I'm leaving home and all that, and I'm moving to a different country, which I've been thinking about for quite some time, but since my sister is there, she helped me a lot and I did a lot of research about it and people from an agency in Denmark came so I had enough information, and I applied so whatever happens, happens. If I get in I'm going, if I don't I'm staying here. So that's one of the important decisions but it's like I didn't think about it too much but I knew that I could and that I liked it and that I would get a better education there. I did research as well and all that, but not over the internet as much as with people, because I don't trust the internet all that much because you can find all kinds of things there, but I went to the website as well, looked at the programme, all of that, but mostly I believed people and then I made that decision.*

Half of the participants reported deciding about relations with other people. These decisions include deciding to stop hanging out with friends or quitting some company which is no longer considered desirable and starting dating someone or breaking up with a romantic partner. The following quotes illustrate the participants' words.

*M3: (...) And recently, I mean I didn't have a fight with my friend, but I stopped hanging out with her because she was saying some things about me that weren't true. I didn't feel like we were fighting or something, I just removed*

*myself from her company because I think there's no need to stir up some drama or something, if something's bothering you, just step away. Well that was a decision. To stop hanging out with her.*

---

*M4: This year for example I changed the group of people I'm hanging out with, I mean not entirely, but like some people, I stopped hanging out with for certain reasons, because they weren't good for me and so on. But I made that decision a little bit on my own, and a little bit with my mom because I talk to her about everything and then I decided to do that.*

---

*P3: Here, add that I decided to break up with my ex-girlfriend, that's a pretty big decision. We can go with that.*

One-third of the participants reported making some decision related to school activities, and the same number reported making decisions related to leisure time activities, as illustrated in the following quotes:

*G1: (...) And I decided that I should focus on the subjects that interest me more rather than like divide my knowledge between all the subjects kinda equally, so now I have better grades in subjects that interest me and that I'm good at rather than trying to adapt to everything and that's all, more or less.*

---

*P3: Ha, let's rewind. Hm, here, I decided that I was going to go on a student exchange, I mean it's not a classic student exchange, we worked, in Ireland, in Dublin.*

---

*G5: I don't know, and I decided to go on a trip alone with a friend.*

---

*M2: Well I decided to let's say take a risk and go to a music festival I went to last year as well in Budapest, but this year it's different because I'm taking an entrance exam and if I don't pass in fall admission I have to go to a later exam that's in September. And the festival's in the summer, which means I would lose 10 days of practice time because of that festival, but I still took the risk and decided that I would go to the festival to relax a little bit, and if it happens, although I really hope it doesn't, I'm pretty sure in myself and my instrument playing skills, that it won't happen so one of my friends and I are going to go to Budapest to that festival.*

The participants also reported making decisions related to training and sport, getting a summer job, appearance, attending driving school, food and diet and to purchase certain items, as illustrated in the quotes.

*P1: Yes. And one more thing, volleyball. I trained volleyball for a long time and I stopped this year, I would only come to matches to help out because there's no longer a team because all the girls I used to train with, who were my friends, stopped training and then I wanted to as well, but I felt bad for the coach so I would come to the matches to at least do something. And every time it was like, do I go or not, but in the end I would go to get done with it and not to feel guilty.*

---

*G6: Well now I'm thinking about what summer job I'll do. First I wasn't sure if I was going to work at all, because I want to earn some money, but then again I don't feel like working during the summer, just to get some rest, but then again next year we'll go on our senior trip and all that so I do need some additional help after all, so now I have two options for work, both called me back for an interview, I got those e-mails today so I have to figure out what I want now, which job I want so, like, I have to contact them, arrange everything. I have one interview on Thursday and the other one I'm not sure when so anyway that's what's going on now.*

---

*M5: And then, if I would dye my hair red. If I would stay with my boyfriend or not.*

---

*P6: Well I could mention going to driving school. For example signing up for those classes, then in general taking care of schoolwork, to get all the grades in order before the end of the year, to pass everything so I can work over the summer break, that's also a decision of sorts, a summer job. There was also a decision to stop hanging out with some people, recently there was a case of that because I found out that a friend of mine was doing drugs, and I'm against that so you can call that a decision. Hm, what else?*

---

*G5: I decided what I wanted to study in university, I decided I didn't want to eat meat, I decided to stop being friends with a person I was friends with for a long time and, how many should there be?*

---

*M6: Yeah, that I was going to start eating healthy, that i would (...) drink and that I would eat meat and salad and sometimes maybe some sweets if I feel the need to.*

---

*M1: Well at the beginning of the school year I bought a new laptop which was pretty significant, uh, then I, I don't know if that's relevant but, I decided that I for example wanted to find a girlfriend and I found her let's say, yeah, one of the important decisions was the one about university, which university I wanted to apply to even though I*

*was pretty unsure in the beginning, but I'm pretty sure now. I mean I made a lot of decisions, but these were more like to buy something over the internet, like smaller decisions, and I haven't really made any major decisions.*

The decisions related to alcohol consumption, decision related to health and in the end, decision-related to managing time and daily activities are reported by one participant. The following quotes illustrate them.

*M5: About health, to cut down the amount of alcohol I drink. Now, I don't know if there's anything else. Can you read that?*
---
*P4: Okay that too, yes, I could say how I was going to act towards certain people and who I was going to tell personal things. I think that's that.*
---
*G3: Well for example I had surgery to remove my tonsils in January because I had frequent anginas and I was sick every three weeks with 38 degrees fever and I had surgery, there were some complications because they did something wrong but it helped me very, very much. I haven't been sick at all since January 14th when I had the surgery, even though the recovery was tough because, as I said, there were some complications, but yeah, that decision was to improve my health and it happened.*
*I: And that was your decision?*
*G3: Yes, well the doctor said it wasn't necessary, but that we should decide. That he recommended it, but it was up to us.*
*I: Okay, but did it was you who decided, not your parents?*
*G3: No, no, no. I mean they supported it, but that was my decision.*
---
*P2: (...) for example that I would rather stay at home and study what's more important to me than going out that one day. I don't know, I can't really remember anything else.*

It is visible in the Table 4 that most of the participants reported making decisions related to university selection and future careers and related to relations to other people. Also, a significant number of them reported making some decisions related to school activities. Some future work might further explore whether these decision situations occur most often and whether they occupy adolescents' minds the most.

#### 3.4.1.4. Summary of research question 1

As it is elaborated previously in the dissertation, information needs arise from a gap in one's knowledge which is somehow inadequate to achieve a specific goal and may arise from problematic situations, including decision situations. The focus group discussions results indicate that the participants have information needs arising from decisions related to the topics of future and career, school and education, identity and personality development, social life and behavior, relations to other people, money management, appearance, leisure time activities and entertainment, consumption of illegal and/or harmful substances - drugs and alcohol, purchase, diet, health and others. Across the individual interviews, the decisions which the adolescent participants reported making gather around similar topics: future and career, relations to other people including romantic relationships, school, hobbies and other and activities such as sports, appearance, earning money, food and diet, purchase of some items, health, alcohol consumption, managing time and activities and getting a driving license. Some of the topics are mentioned only by students coming from one type of school: identity and personality development, social life and behavior and sexuality only by the grammar school students in focus group discussions, and health by the grammar school student and alcohol consumption by the art school student in the individual interviews. The researcher did not believe that this anomaly can be considered a pattern related to the type of school the participants attend. Rather,

some topics simply occurred in conversations, and others did not, which is understandable considering the endless number and diversity of human decisions. Although the results of the first two research phases suggest that the participants have information needs originating from various decisions, the survey results show that situations related to selecting the university or future occupation are the ones in which respondents perceive their information needs to the greatest extent. However, on average, they are not sure whether or not they have information needs arising from a purchase decision, a decision related to a healthy diet, a decision related to the protection of one's health, a decision on how to behave and/or what to do in relations to other people, a decision related to studying and homework, money management decision and a decision related to appearance. Moreover, it showed that the respondents do not perceive having information needs which would arise from a decision related to their own identity, a decision on how to behave among people, a decision related to illegal and/or harmful activities: alcohol and/or drug consumption and a decision about how to spend their free time.

### 3.4.2. Research question 2: What types of information behavior do adolescents employ when making decisions in everyday life?

#### 3.4.2.1. Focus group results

While discussing and explaining how they make some of the decisions they mentioned, the adolescents reported sometimes getting into interaction with information, and other times not. It showed that sometimes the decision-making process includes interaction with information and that the types of interaction may be various. The interaction with the information described by the participants reveals that their information behavior takes several forms: intentional information seeking, information sharing, passive monitoring, passive attention and accidental acquisition of information.

After reading and coding the focus group transcripts, it was recognized that various types of information behavior the respondents reported employing may be conceptualized and described by Savolainen's concepts of active information seeking behavior for performing some specific task or for solving problems, passive monitoring of orienting information or *keeping an eye* on current events, which sometimes results in accidental acquisition of information, and information sharing. Passive monitoring behavior, conceptualized by Savolainen, corresponds to the concept of situation awareness which denotes "continuous extraction of environmental information, integration of this information with previous knowledge to form a coherent mental picture in directing further perception and anticipating future events".[550] The analytical framework was developed by using Savolainen's everyday life information seeking concept, as posited in his work from 1995, and the concept of information practices, as posited in his work from 2008. Additionally, the respondents reported a type of behavior by which they acquire

[550] Cf. Vidulich, Michael; Dominguez, Cynthia; Vogel, Eric; McMillan, Grant. Situation awareness: Papers and annotated bibliography. No. AL/CF-TR-1994-0085. ARMSTRONG LAB WRIGHT-PATTERSON AFB OH CREW SYSTEMS DIRECTORATE, 1994. P. 11. URL: https://apps.dtic.mil/dtic/tr/fulltext/u2/a284752.pdf (2020-1-17)

information in a passive and undirected manner. This type of behavior differentiates from Savolainen's concept of passive monitoring because while describing the situations of information acquisition, the respondents reported being even more passive and acquiring information from other people without asking for it. Wilson's concept of *passive attention* behavior was used to denote this type of information behavior, referring to behavior when information is acquired without intentional seeking. This corresponds to Bates's dichotomies of active-passive and directed-undirected behaviors and her concept of information behavior denoted as *being aware* are used to conceptualize and describe such behavior. Among Bates's modes of information behavior, *being aware* refers to passive and undirected behavior by which people acquire information, while *monitoring* refers to directed and passive behavior in which people maintain back-of-the-mind alertness for things that interest them. In the comments reporting such behavior, the respondents were gaining information by simply being aware and listening to what other people tell them – they were *being told*. This type of behavior also corresponds to McKenzie's concept of information behavior denoted as *by proxy*. During the analysis, we considered Savolainen's remark that in practice passive monitoring or seeking orienting information and active information seeking for problem-specific information often intertwine and that the boundary between the two types of behavior is not necessarily clear. However, also in line with Savolainen's remarks, the distinction enabled a more specified analysis of the respondents' reported behaviors.[551] The two main types of behavior that emerged from the respondents' descriptions of making the decisions discussed are active and passive behavior. Active behavior includes intentional information seeking behavior and information sharing. Passive behavior includes passive monitoring of information and passive attention, which both sometimes result in an accidental acquisition of information.

#### 3.4.2.1.1. Active information behavior for making decisions

##### a) Intentional information seeking for making decisions

Intentional information seeking behavior refers to active information seeking with the purpose of acquisition of information to facilitate the decision-making process. When talking about making some of the decisions, some of the respondents reported this specific type of information behavior: intentional and active seeking for information aimed at getting some information that would help them make a better choice.

Table 5 shows reported intentional information seeking behavior conducted with the aim of facilitating the process of making the decisions listed. It lists the specific decisions and the participants who reported seeking information that would help them in making the decisions, or whose comments in the discussions revealed that they do so. It also lists the participants who stated that they would intentionally seek information if faced with the hypothetical decisions which were shown in the videos to introduce the topic and provoke the discussion.

[551] Cf. Savolainen, Reijo. Everyday information practices. P. 5-6, 83.

| Decision topics | | Respondents | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hyp., diet pills or steroids | | G1 | G7 | P1 | P3 | P4 | | | | | | | | |
| Hyp., big or important dec. | | G4 | M2 | M1 | M3 | M5 | M8 | M7 | P1 | P4 | P3 | | | |
| Time and activities | | M4 | M2 | P2 | P3 | | | | | | | | | |
| Relations with other people | | G8 | G7 | G4 | M2 | M4 | M3 | M1 | M8 | P2 | P5 | P3 | P1 | P6 |
| Identity | | G4 | | | | | | | | | | | | |
| Appearance | | G8 | G1 | G6 | G7 | G4 | P5 | | | | | | | |
| Food and diet | | G7 | M8 | M7 | P3 | | | | | | | | | |
| School | | G5 | G7 | G8 | G4 | M5 | M3 | M2 | M4 | | | | | |
| Job | | M2 | M7 | P5 | P1 | | | | | | | | | |
| Higher education and career | | G4 | G7 | G6 | G5 | G8 | M1 | M2 | M3 | M7 | P3 | P6 | P1 | |
| Buying | a musical instrument | M2 | M6 | M5 | | | | | | | | | | |
| | sports equipment | M7 | | | | | | | | | | | | |
| | clothes | G3 | G5 | G7 | P1 | P2 | P4 | | | | | | | |
| | a mattress | M7 | | | | | | | | | | | | |
| | a present | M1 | | | | | | | | | | | | |
| | a mobile phone | G3 | G1 | G8 | G5 | G6 | M1 | M7 | | | | | | |
| | a computer game | M7 | | | | | | | | | | | | |
| | computer parts | P3 | | | | | | | | | | | | |
| | makeup | G8 | G2 | G7 | | | | | | | | | | |
| | getting a pet | G5 | | | | | | | | | | | | |
| Alcohol | | G8 | | | | | | | | | | | | |
| Drugs | | G8 | G7 | P5 | | | | | | | | | | |
| Sexuality | | G6 | | | | | | | | | | | | |
| Training and sport | | G6 | G7 | | | | | | | | | | | |
| Leisure time activities | | M1 | M7 | M6 | M2 | P2 | P2 | P6 | P4 | | | | | |
| Occur in everyday life | | G7 | M3 | | | | | | | | | | | |

**Table 5 – The respondents who reported some intentional information seeking activity they conduct or would conduct when facing the decision listed**

As it is visible from Table 5, for some decision topics more respondents commented that they seek or would seek information, then for other decisions. Most of the respondents reported seeking information for making decisions related to relations to other people and to higher education and career. A significant number of respondents reported they would seek information if faced with some decision they would consider big or important. Moreover, the respondents reported seeking information for management school-related activities and making related decisions. They also reported seeking information for making decisions on leisure time activities and purchases, especially mobile phone purchases and clothes. Appearance, food and diet, finding a job, consuming drugs and alcohol and other decisions that occur in everyday life are also among decision topics that provoke or would provoke the respondents' information seeking, aiming at facilitating the decision-making process. The respondents did not report seeking information when deciding about their own behavior, and on smoking and health, although these decisions are among the decisions they mentioned making. Several quotes, out of many, are selected to illustrate the behavior of active information seeking.

When talking about how they make decisions in general, one of the respondents said:

M2: *If that decision is of utmost importance, then I believe that the most important thing is to be well-informed. Because, it will have an effect on our life afterwards. While making some important decisions, it is best to seek information because it is a decision that will have an effect on the rest of our lives. I think that people like us, who study music, who have to decide which academy to go to, how to get there, how much it costs, what kind of programme does it have and things like that, it's really important to find that kind of information. Ask teachers, search the internet, ask students that went there and so on.*

Later during the session, she further explained how she was thinking and deciding about which musical academy to enter after graduation:

M2: *I went to a seminar and consulted the teachers that were there, then I found out how the lessons are scheduled, I attended one of the lessons and now I'm preparing for the entrance exam. I have a programme that the teacher gave me and I know what the teacher will ask for, so that's one way to go (...) music academy in Graz (...) After I pretty much decided where I wanted to go, I discussed it with my parents, about my possibilities, whether I can go there in the first place, will they be able to finance all that. So we talked to some people about student housing, flats, price ranges and so on. Then we sought out thoroughly information about scholarships that the EU offers to students and then we finally got in touch with the professor.*

One of the boys reported seeking information when buying sports equipment:

Moderator: *Purchase. M7 mentioned buying sports equipment.*

M7: *Yes. I wanted advice on that. I was buying a punching bag. And my sister's boyfriend was a professional boxer so he recommended me what to get, how, where. (...) My sister is 7 years older than I am.*

Moderator: *Anywhere else except him?*

M7: *My coach and him.*

Moderator: *And not on the internet?*

M7: *No, no.*

One of the girls shared how she asks for help to decide when buying clothes:

P2: *For me, it's important to call my mom when I go shopping for clothes. And then I take photos and she tells me what she thinks. Truthfully, I know that she will always tell me how things are. Because, I don't know, sometimes I take a friend with me, and she tells me like, it's ok, it suits you, when I know that I look terrible in it.*

P5: *Yeah.*

P2: *I'm not going to buy that.*

### b) Information sharing for making decisions

During the focus group discussions, the participants revealed sharing information when it comes to decisions related to managing school activities. They collect information on the types of questions that appear in tests they are taking and share them with friends, classmates and students from other classes. This type of behavior includes reciprocity and forms the way students help each other with school tasks. Various information is given and received in the context of dealing with schoolwork. Their conversations showed that they use mobile digital devices to collect, give and receive information. This helps them decide whether to study, what to study, and to what extent. The following quote illustrates this type of behavior:

G8: *Well, we are writing Croatian today and we have an old exam.*

G5: *We have a photo of it.*

G2: *Yes, and I think half of the class has it, because I sent that exam. Now it might happen that the half of the class hasn't studied just because they rely on that test that I sent, and they learnt only those questions and then others sent some questions as well because they talked to some people from another class and they told us some questions so.*

Moderator: *And how does it work when you ask for questions? I know what it was like when I took my entrance exam.*

G2: *Can I be completely honest? My friend, she needed the mobile phone because she hasn't learned so she took photos of the book and then, when she finished writing the test, she had some time left so she took the photo of the test with my phone.*

G7: *That was a criminal offense. (murmur)*

G7: *Don't you know how many people take photos of the exams, yeah, so she took a photo of the exam and sent it to me and I sent it to the class.*

Moderator: *Sometimes you ask students from another class?*

G2: *Yes, we ask them and we send questions we were told by different people. (mutual agreement)*

#### 3.4.2.1.2. Passive information behavior for making decisions

##### a) Passive monitoring of information for making decisions

Another type of information behavior that the participants revealed in their discussions on making decisions is passive monitoring of information or *keeping an eye* on current events through various media. This type of behavior showed to sometimes result in an accidental acquisition of information. Table 6 shows the reported passive monitoring of information related to making decisions. In columns, we can see decision topics and the respondents whose comments revealed that they acquired some information related to the decision listed which did or may influence or result in making a decision.

| **Decision topics** | | **Respondents** | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Appearance | | G1 | G4 | G7 | | | | | | | | | | |
| Food and diet | | G8 | G7 | | | | | | | | | | | |
| Buying | clothes | G4 | | | | | | | | | | | | |
| | makeup | P5 | | | | | | | | | | | | |

**Table 6 - Reported passive monitoring for making decisions**

As Table 6 reveals, the respondents acquired information by passive monitoring of information related to decisions about appearance, food, and diet as well as decisions on clothes, makeup and computer parts purchase.

The respondents reported passive monitoring of information social networking sites such as *YouTube*, *Facebook*, and *Instagram*, and in newspapers, as illustrated in their comments. The following quote depicts monitoring social networking site, *YouTube*.

Moderator: *You mentioned YouTubers, are there such?*
G8: *Yeah, loads.*
Moderator: *Is anyone following?*
G7: *I watched it yesterday.*
G8: *You watch what people eat.*
G7*: It's like videos of what somebody eats during the day and they film what they cook all day.*
Moderator: *Is it like a bit of advice or like a documentary?*
G8: *Advice. On everything, how many calories, how much to consume.*
G7: *Vegan.*

Another quote illustrates how one boy monitors the information related to his hobby – computers. He describes monitoring the newspapers *Burza*, a *Facebook* page, and some *Facebook* groups and *AliExpress* portal to be informed about computer parts available on the market.

Moderator: *Apart from Njuškalo, anywhere else?*
P3: *Burza of Facebook. This is an advantage for me because I'm into it, Burza is a place where like older people put posts, so sometimes I can catch a deal.*

Moderator: *Wait, Burza, that's a newspaper?*
P3: *Burza is.*
P6: *Newspapers.*
P3: *Newspapers, yes. Older people who don't know about Njuškalo and similar websites post there. So you can find some things you need at a better price. That's why I look there also. I just kind of rummage and see what I can find.*
Moderator: *Where else, I'm really interested. Wait, Facebook, what about it, how does that work?*
P3: *Facebook, local adverts or generally groups created for such purposes. Like, a little bit of everything, it depends, when my dad buys Burza, I read that, look for stuff, Aliexpress.*
Moderator: *What is that?*
P3: *It's a foreign website, it offers a million of things for a dollar, they promise a lot, and you get nothing. And eBay, some general websites, I just kind of rummage and see what I can find (others laugh), hoping to stumble on something.*

One girl reports monitoring information on social networking sites and the internet in general.

P5: *I follow some Facebook pages, I also saw makeup once.*
Moderator: *Like what, for example?*
P5: *Well, I don't know. Moda.hr or Parfumerija online Croatia free shipping something, so anyway, I saw once a beautiful eyeshadow palette and it said it was a big one, 40 shades of like nude colors and it also offered some brushes with it. It cost 300 kuna, I paid and I got a really small box, like this big (she laughs) and there were like 40 tiny colors in it. I wanted to shoot myself, I don't know.*

When it comes to passive information monitoring by following some pages or channels on social networking sites such as *Instagram*, *Youtube*, and *Facebook*, the respondents comments revealed that such a behavior includes their initial purposeful intention to start following a page or a channel which covers the topic of interest and that the behavior later transforms into passive attention where information *comes to* a person while he or she follows what is new on the page or at the channel. This information behavior serves for amusement and the respondents report they usually follow that type of information for fun. Nevertheless, in the end, the page or the channel may become an information source, as explained by one of the respondents who pointed out:

G5: *Once you start following it, it becomes your source of information.*

### b) Passive attention for making decisions

Some of the respondents reported acquiring information in a passive and undirected manner by simply being aware. The respondents reported they were *being told* and being provided with information from other people without asking for it. In described situations, information is provided by other people who are active agents in the process, usually their parents and teachers. These agents either turn to some source for information on behalf of a decision-maker or give information themselves in the form of advice or instruction, with the purpose of facilitating or influencing the decision-making process.

Table 7 shows the respondents who reported passive attention behavior for making the listed decisions.

| **Decision topics** | **Respondents** | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Time and activities | M5 | | | | | | | | | | | | |
| School | G6 | G8 | G5 | G1 | | | | | | | | | |
| University and career | M3 | M5 | G4 | | | | | | | | | | |
| Buying a musical instrument | M1 | | | | | | | | | | | | |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Alcohol | G4 | G7 | | | | | | | | | | | |
| Drugs | G4 | G7 | | | | | | | | | | | |
| Sexuality | G4 | | | | | | | | | | | | |
| Smoking | G4 | G7 | | | | | | | | | | | |

**Table 7 - Reported passive attention behavior for making decisions**

Several respondents report being given information about school activities. In their comments, they describe that this information about the activities related to school are given by their parents who advise them to work hard and get good grades in order to enter university and generally get better chances in life. Information on school, university, and career, alcohol and drug consumption and smoking, along with information on sexuality and sexual behavior are given in form of advice by parents and by teachers during workshops which are held at school. For example, when talking about seeking information about the musical academy, to make a choice which academy to enroll in after high school, one of the respondents described how her parents seek information from people who know more about the topic and trying to help her make a decision by doing so.

M3: *My parents are not musicians, in spite of that, they encourage me to consult other people and they help me as much as they can. So, they ask other people who know more, people who went through the same situations or attended the academy or people who have children at the academy, so they help as much as they can. But sometimes they give some bad advice and you have to choose what helps, and what does not help.*

Furthermore, the respondents were describing how their parents put a great deal of pressure on them and instruct them to study more, as one of them describes:

G8: *My parents make me, always. I ask my girlfriends if they want to study, so I find some kind of comfort in it because, deep down I don't want to study either, but my parents are so tiresome, they keep telling me to study over and over again. ''You'll need it in order to enroll in university, you'll have to go here and there'', but honestly, it's all the same to me when it comes to school, I don't really care about the grades, but my parents are so difficult about it because my sister managed to leave, so they would like me to leave as well. She's in Denmark. You know her XY, she always attended those literary*
Moderator: *Book club.*
G8: *Yeah, that, so I remember you because of that. So they really want me to follow in her footsteps, so they are all about grades, and grades are not all that important, but still, the type of school I go to, I should get at least 4.*

One of the boys adds:

G2: *But it helps sometimes. Sometimes they say something, they have already accepted that I have 2 in Maths just because it is considered not be my strong side. But the truth is, if I practiced every day, I would probably have 3 or maybe even 4, but I just don't feel like doing that because I 'm not interested in it. Sometimes that helps me with some other subjects, when they tell me to study, so I do and I get a better grade than I normally would because I don't care. So I'll always have 2 in Maths because they let me.*

G5: *Okay, but who knows, if they really had never said it, you might not be here today. If they had never ever said it.*

Explaining her decision not to smoke, G8 says:

G8: *First, my parents always told me that it's awful, and then when I came to high school, I mean I tried it, but I don't see the point of buying, spending money on something that is poisonous. It's so stupid. I don't know, that's how I feel anyway.*

Furthermore, the respondents talked about the workshops on various topics considered to be important for the young, in which they participated in school. These are workshops aimed at helping students make wise choices related to higher education and career, life in general, sexual behavior, drugs and alike. It showed that the respondents do not think much of the

workshops, do not find them useful and find them quite boring. It is visible in the following quote:

G4: *We always have workshops on sex education or university. We never do anything that has to with becoming, I don't know, becoming what you want to be.*
G7: *How to be a good person.*
G4: *Drugs, alcohol and smoking, we've had it probably since the first grade until now.*
G7: *The more you talk about it, the more will kids do it, because they think it's cool, honestly.*
Moderator: *So you listen about that a lot at school then?*
G7, G4, G1: *Yes.*
G5: *It became boring.*
G4: *Every year. (laughter, agreement)*
G1: *Well, yeah.*
G5: *Not just about that, ok, they tend to overdo it, the school staff, with career choice, all that nonsense. I mean I've had it up to here, we have 10 workshops during our class master's lessons and none of them make any sense. Why do you have to share with everyone else what you are thinking about. Really, I don't get it.*
Moderator: *What kind of workshops have you had?*
G4: *Choosing a college, risky behavior and what we want to do later in life.*
G5: *Life dream.*
G7: *Sexual violence.*

### c) Accidental acquisition of information for making decisions

Savolainen noted that passive monitoring may result in accidental information acquisition of orienting information because it consists of *keeping an eye* on environment and may result in registering information mediated through various media such as television and radio. In the case of the study participants, the media included social networking sites: *YouTube*, *Instagram*, *Facebook*, and others. The focus group discussions revealed that both passive monitoring and passive attention behavior may result in an accidental acquisition of information for making decisions. Table 8 shows which of the respondents reported accidental acquisition of information on the decision topics listed.

| **Decision topics** | | **Respondents** | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hyp., diet pills or steroids | | P5 | P3 | P4 | | | | | | | | | | |
| Appearance | | G5 | | | | | | | | | | | | |
| Food and diet | | P5 | | | | | | | | | | | | |
| Job | | P3 | P1 | | | | | | | | | | | |
| University and career | | P5 | P3 | | | | | | | | | | | |
| Buying | a musical instrument | M6 | | | | | | | | | | | | |
| | a mattress | M7 | | | | | | | | | | | | |

**Table 8 - Reported accidental acquisition of information for making decisions**

In their comments, the respondents reported making decisions based on the information they found accidentally, during conversations with other people or while being engaged in some other activities. As can be seen, they accidentally found information on diet pills and steroids, physical appearance, food and diet, job, university and future career, buying a musical instrument and buying a mattress. The respondents reported that the information found either influences or results in making a specific decision.

The following quote illustrates how passive monitoring of television may result in an accidental acquisition of information:

M7: *Regarding commercials, so I kept watching those commercials for Dormeo mattresses. I've seen it, it looked cool, like it really works, then I asked my friend about it, he had it. I went to his house, tried it, it was cool, so I bought it in the end. I don't know, I haven't regretted my decision. But I asked for a bit of advice about buying it and I tested it of course, because you can't know, just from watching the commercial.*

Other examples illustrate how passive attention results in an accidental acquisition of information. They depict how information can be *bumped into*, within the respondent's environment.

M6: *So, I year ago I was buying a new instrument, a piano. I used to have an electric one, now I bought a real piano, and first I checked out those leaflets about new instruments that we get at school. At the beginning of every school year, when we get first graders, there are those leaflets all around school if someone wants to practice music, so they get information where to buy, for example, a synthesizer. I took one of those leaflets and because my old instrument was dying, so to say, we decided to buy me a new one.*

(…)

P3: *Yes. So, I went to that, what's it called, the thing where you have to register in the army. Everyone who was born in 2000 had to go, so I went there and I found out that you can get into the army really fast, like you can go and work for them right after high school. So, I have a dilemma now. Should I go and join the army right after high school and work for 4000 kuna or should I go to university and when I graduate, I would get a better position there in the army and a bigger salary, so there.*

Moderator: *How did you come across that information?*

P3: *So I went there, to register and they showed us a presentation, they showed us a two-month training programme and then we can decide whether we would like to join the army and get minimum wage, so now I'm wondering whether to enroll into university i.e., military academy or should I start working for them immediately.*

As pointed out by Savolainen, modes of information behavior in practice intertwine and it is sometimes difficult or even impossible to draw the line between the modes of behavior. Focus group discussions revealed many cases when one type of behavior transforms into another. For example, one boy reported asking his brother for a piece of advice on new glasses purchase. In his case, active information seeking resulted in future passive monitoring. Brother directed him to *YouTube* channel in which one young man offers some advice on many different topics, and the boy follows this *YouTuber*'s videos from that occasion on. For illustration, these are his words:

G1: *So there's this guy xy, I've been watching his posts for quite some time, he talks about how to be confident, but it's always the same (…), because my brother told me about the glasses. I asked him which glasses are ok and then he sent me that guy's link about the type of glasses for each face shape and then I subscribed and now I watch it all the time. I don't know the guy's name exactly, Alpha male something*

G6: *I know that, the Alpha man.*

#### 3.4.2.1.3. Factors which influence active information seeking behavior

Moreover, the respondents' comments allowed the development of some categories which may altogether be denoted by Ford's term of *factors influencing information behavior*.[552] For the purpose of the analysis, these factors are described by using Wilson's concept of intervening variables which may be personal (including demographic, physiological, cognitive and affective), role-related or interpersonal, environmental and source characteristics. The respondents' comments allow us to identify personal, role-related or interpersonal, environmental and source characteristics variables or factors that influence information seeking behavior.

**a) Personal factors**

**a. Perceived decision significance**

During the focus group discussions, in two out of three groups of students, it was noticed that respondents showed a greater tendency toward intentional information seeking and turning

[552] Cf. Ford, Nigel. Introduction to information behaviour. London: Facet, 2015. p. 99-140.

to a greater variety of sources when it comes to some specific decisions. Also, they commented on some of the decision situations with more enthusiasm and passion. In the PRHG group, the respondents talked more about choosing a higher education and reported actively seeking information from a greater variety of sources. Also, some of the respondents talked more about decisions related to appearance, such as choosing makeup, hairstyle, and glasses. The decision of buying a new mobile phone also got significant attention and some of the respondents reported significant active information seeking activity from diverse information sources. The GSIMR group members talked more about enrollment into a musical academy. Some of them reported a high level of systematic active information seeking and turning to a great variety of sources. The decision on buying a musical instrument also got a lot of attention and was described as a decision that requires a lot of effort. Following the differences in descriptions of the processes of arriving at the decision, of engagement in intentional information seeking, and the diversity of different information sources consulted, the moderator asked the participants in these two groups for the reasons which lay behind such a behavior. In both groups, the respondents hypothesized that perhaps it is because these decisions relate to things that are important to them. The following text segment illustrates the discussion on that issue.

Moderator: *Look at the decisions, it seems to me that some of them include a lot of activity, looking things up, searching. Can you think about the difference between those decisions and why there are more questions and research regarding some of them and not the others?*
G4: *Maybe because these are the issues we have to deal with now.*
G7: *They matter more to us.*
G4: *Yes, they're more important.*
Moderator: *Could you tell me which ones are more important?*
G4: *Studying and school, also perhaps university, for girls maybe money, I mean money for everyone at this age.*
G2: *This, clothes and such.*
Moderator: *We discussed shopping more.*
G7: *Well, yeah, it's important now how you come off to others.*
G4: *Looks, yeah.*
Moderator: *If I understood well what G1 said, that refers to mobile phones as well.*
G7: *To him.*
G2: *It depends.*
Moderator: *What else is important to you?*
G7: *Relationship with others.*
Moderator: *But I didn't hear you say that you, for example, go to the library to learn about that topic.*
G7: *Look for a book.*
Moderator: *And do you search for that topic online?*
G7: *Well, not really, I mean I've read this book, it's called ''The Secret'', it's really good, about positive thinking.*
G4: *I've read ''The Female Brain'', it's a cool book. My mom gave it to me.*

It is visible that although the respondents hypothesize that they engage more in intentional information seeking about topics that are important to them, there are also some topics that are important, but do not induce a lot of information seeking. The respondents from another group of students were asked the same question. They also hypothesize that they engage in intentional information seeking when making decisions that are of importance to them and whose consequences last for a certain period of time, as it is visible from the following quote:

Moderator: *It seems to me that there are some decisions in which you put a lot of effort whereas for others, not so much. My impression is that that's the decision about the academy and shopping, so why then the academy and buying an instrument?*
M1: *Because it's our life. It's as simple as that.*
M2: *I mean, when you buy an instrument, it's not something temporary. It's not like a T-shirt you wear off soon. If you service it properly, it's something that'll last you for 10-15 years.*
M1: *And it's something we pay a great deal of money.*
M2: *Really, we are talking about huge sums of money. It's not like buying a shirt for 20 kuna.*
Moderator: *Apart from that, you hardly showed any interest in clothes.*
M2: *We're not really slaves of the modern society.*

M6: *I just want to know whether an item of clothing is warm enough.*
M2: *Yes, literally, if it's warm enough, it's mine.*

The moderator asked for further elaboration of differences among decisions and how they impact their activities in the decision-making process. The answers include thoughts about the long-lasting consequences of some decisions, such as the selection of a university. The following quote illustrates the reflection on this issue:

Moderator: *When it comes to decisions such as choosing a college or forgiving a friend for talking behind our backs, are these decisions different and how do you deal with them, how do you approach them?*

G1: *Yes, this is much more serious. Because this (college) is basically your whole life, and this what if some idiot, (college) is a decision that could affect your whole life, I mean this can too, but just in terms of friendship, and not so much on the rest. If a person does something bad, it's much easier for me to say, fine, I don't need you anymore, than having to choose which college to go to.*

Moreover, apart from being asked, the respondents were mentioning *bigger, smaller* and *important* decisions spontaneously through all the sessions and groups. Some of them were relating information seeking behavior to decisions they were talking about. The following quotes illustrate their comments:

Moderator: *What do you do when you make decisions?*
P1: *If it's a small decision, then I'll make it myself, and if it's about something bigger than I'll talk to my friends or parents to help me make it.*
(…)
Moderator: *You've mentioned smaller-bigger decisions. Can you elaborate on that?*
P1: *Well, smaller ones would be whether to eat Domaćica (biscuit) now or what to wear in the morning, and bigger ones would be college, sports or studying. Ok, not really studying but something that will have consequences. Afterwards.*
P3: *Yeah, for me it's like whether to give five kuna for a chocolate bar at the wending machine or save it for later, because I always need it later. This would be a small decision. And a bigger one would be also about college or when to take driving lessons, where to work during the summer, what to do after graduating from high school, perhaps find a job while studying, something like that.*
P4: *I would describe a bigger decision as something that might seriously affect your life if it goes wrong, or the other way around as well, if it goes well then it might be something quite good for you.*
P5: *I agree with them, I don't know what to say.*
P2: *Me too.*

One of the respondents directly connects seeking information or getting informed with the importance of a decision from the perspective of a person's entire life.

M2: *If that decision is of utmost importance, then I believe that the most important thing is to be well-informed. Because, it will have an effect on our life afterwards. While making some important decisions, it is best to seek information because it is a decision that will have an effect on the rest of our lives. I think that people like us, who study music, who have to decide which academy to go to, how to get there, how much it costs, what kind of programme does it have and things like that, it's really important to find that kind of information. Ask teachers, search the internet, ask students that went there and so on.*

Moderator: *For you, this is some pretty important decision that lies in front of you at the moment?*

M2: *Yes, quite.*

As it can be seen from their words, the respondents described some decisions as big, important, and having a lifelong consequence. To encompass these attributes in one category, we developed a category *perceived decision significance*, since it was recognized that by using these various expressions the participants attempt to describe a decision which they perceive as significant. Following their explanations about why they tend to engage more in intentional information seeking when it comes to some decisions, and less when it comes to others, we may hypothesize that the perceived significance of a decision is related to the participants' tendency to engage in intentional information seeking. This finding aligns with Savolainen's claim which he posits following P. Wilson's tripartite conception of interest, concern, and caring, to explain the intensity and focus of everyday life information seeking in solving

everyday life problems. Savolainen argues that people's inclination towards engagement in active information seeking depends on their level of interest regarding the topic.[553] However, the participants classified some of the decisions as important and yet did not report much intentional information seeking for these decisions. For example, that is the case with the decision related to identity. This suggests that there are also other factors which influence the respondents' tendency toward engagement in intentional information seeking activity.

### b. Information source characteristics

#### i. Information availability

Another category important for understanding the participants' behavior emerged from their comments. It was mentioned only once but seemed to come from their deep and reflective thinking. Although said only in one group, it is an important insight. When asked whether an identity-related decision is considered important and how come they did not report much intentional information seeking related to this topic, most of the group members tried to give an answer. From their endeavors and answers arose the idea that there is a lot of information in the environment on some other topics, such as higher education and appearance. This information is available – it is there, in the environment, offered and imposed, unlike information on identity development. The following segment illustrates the discussion:

Moderator: *And identity is considered to be an important decision?*
G7: *Yes, we did not say a lot about that.*
Moderator: *It seems as if you don't surf the internet that much regarding that topic.*
G1, G2: *No, not that.*
Moderator: *Why?*
G4: *Maybe because these things regarding college and studying, we're given options, we just have to choose, but identity, that's something you need to work out on your own.*
G7: *And they don't teach us that at school.*
G4: *Yes*
G1: *And it depends how people perceive you, you might think that somebody thinks something, and maybe that person doesn't think that about you, and you go and search on how to behave, I don't know.*
G4*: And so, there are so many identities, everyone has their own, and I don't know, mobile phones, and here at school, you have a certain choice.*
G7: *To be honest, they don't teach us that at school.*
G2: *How to be yourself.*
G7: *Yes*
G2: *But to be all alike.*
G4: *Yes*
G5: *When it comes to looks, it comes to us just like that, so, we don't have to look for it.*
G7: *Yes*
G5: *Because there are other people, you can't avoid it, especially at our age, you go to school, you have friends, they have an influence on you. And friends with their families, with brothers and sisters, you have to bond with them in a certain way, and then there's the internet and that's something that we are surrounded with every day, every moment. It's the same like when we discussed subscriptions, those things just show up, pop up on their own.*
Moderator: *Aha, so you are surrounded a lot by some of these topics.*
G4: *Yes, it's kind of imposed on us.*
G2: *Yeah*
G5: *Yes, but when I say imposed, I don't mean it in a negative way.*
Moderator: *I understand, it's just there, around you.*
G4: *Yeah, it's just here.*

Moreover, the members of the music school group also elaborated on how the availability of information facilitates an acquisition of information explaining how parents' involvement in

[553] Cf. Savolainen, Reijo. Everyday information practices. P. 113

music influences the way they manage their musical education because they have all of the information at their disposal. These discussions give us the reason to hypothesize that the respondents' information seeking behavior is influenced by the availability of information. This also aligns with the position Savolainen gives to the characteristics of information availability and accessibility among source preference criteria in the map of information source horizons and source preferences in the context of seeking orienting information.[554]

#### ii. Information accessibility

During the focus group discussions, the respondents were asked if there is something that hinders their information seeking activity and prevents them from seeking information they need. They reported some factors or barriers which impede their activity when seeking information about the universities they consider enrolling into. The students reported not having enough information on musical academies they consider enrolling into because of the academies' websites deficiency. They reported that information on the websites was not easily accessible to them because it was in German, which the respondents do not understand, and it is poorly organized. The following quote illustrates the difficulties they reported facing:

Moderator: *My next topic refers to a situation when you have to make a decision and you want to find out more about it, you want some kind of advice or information, is there anything that prevents you from searching or makes things more difficult? (…) If we apply this situation in the context of the academy, maybe it'll make things clearer.*
M2: *Maybe a lack of information. At least to me. I type in the name of the college and then choose an English version but half of the information is in German anyway. But I was lucky enough to have a friend who lives in Austria so I asked her to translate it for me. And then, at one point, the professor hasn't answered any of my e-mails, I suppose there was some kind of glitch or something, so I panicked a bit so we had to find phone numbers of the student's office and ask if the professor is still working there or is there another one. There was this one complication, but afterwards everything went smoothly. There shouldn't be any kind of obstacles when it comes to things like that. If you are persistent enough, you will overcome all obstacles. And that's all there is to it.*

### b) Environmental factors

The belief that they still have much time for making the decision about higher education showed to be the reason for postponing decision-making process and related information seeking activity for some of the respondents. Therefore, time is recognized as one environmental factor influencing active information seeking behavior. This can be seen in the following comment:

Moderator: *So, how are you going to decide? Is it going to take a long time or? What are you going to do? Do you have some kind of a plan on how to deal with it?*
P3: *Well, yeah. I don't have a plan yet. I have a year and a half to think about it, so I'll think about it slowly on the way. I won't burden myself too much with it.*

### c) Role-related or interpersonal factors

Furthermore, the respondents' comments reveal some role-related or interpersonal factors which influence and perhaps impede active information seeking behavior. These factors revealed mainly in discussions about solving problematic situations with other people. The participants reported the following factors which intervene in their information seeking process which would help in solving the situation at hand: not wanting to burden others with their problems and being afraid that others would take an advantage of their trust. Specifically, in the

[554] Cf. Savolainen, Reijo. Everyday information practices. P. 91

case of romantic relationships, they reported having bad experiences with confiding their romantic feelings to others, not wanting to involve others in their relationships, doubting other people's intention, and in case of parents, wanting to avoid parents making fun of them, overreacting or reacting badly. They also reported the child-parent relationship as an intervening variable in the subjects of alcohol consumption, smoking, drugs (marijuana) and love, but also in the subject of a higher education. The respondents passionately commented on how conversations with their parents about smoking, alcohol consumption and drugs end up in parents overreacting and *giving a life lesson*. That is something they do not find useful and are not willing to listen to, and therefore prefer not turning to parents for conversation on these topics. The following quotes illustrate the conversation:

Moderator: *Let's discuss love situations a bit more – so, he did something, what should I do?*
G7: *Yeah, a friend.*
Moderator: *And guys?*
G6: *No, on my own*
G3: *No way.*
G1: *Yeah, not really.*
G6: *I've had some bad experience about confiding to people about things like that, so I don't do it anymore.*
G7: *Why are guys so, it's so annoying, guys don't talk about anything and girls really do. Are you ashamed to discuss your feelings? Guys don't talk with each other about some of those basic issues.*
(vigorous discussion)
G1: *Yeah, because it's ridiculous, why should I talk about it?*
G6: *The others will make fun of you.*
G7: *Because they are taught to hide their feelings, right?*
G1: *Well, yeah*
(…)
G8: *I really find it annoying when I ask my mom, I don't know, we were talking about cigarettes, so when I ask her something like should I try weed, it always turns into a life lesson like ''So, I've just seen one of my friends…'' and she goes on and on.*

#### d) Decision making performed without interaction with information

The participants' comments revealed that they make many decisions without considering or interacting with any information outside of their own knowledge. Some of the respondents did not report any interaction with information when deciding on managing school activities, such as whether to study or not, decisions related to relations to other people such as solving problematic situation with parents, friends or a girlfriend/boyfriend, to social behavior, such as how to behave in certain situations, decisions related to daily management of time and activities such as whether to go to sleep or to watch television series, decisions related to identity development, sexuality, health condition such as what to do about scoliosis, decisions related to appearance such as buying and selecting items of clothing, food and diet, smoking cigarettes, alcohol consumption, going out, hypothetical big or important decision and decision on taking diet pills or steroids. It is interesting to note that the decisions regarding money management were always commented without reporting any interaction with information.

### 3.4.2.2. Interview results

At this point, it is important to emphasize that the participants did not elaborate on each of the decisions they recalled. Instead, they picked up one or two decisions to talk about. Nine participants talked about decision related to university and career, four participants talked about decision related to relations to other people, and four of them talked about decision related to training and sport. Three participants talked about decision related to getting a summer job. The decisions related to health, food and diet, purchase of certain items, appearance, school-related

activities, and leisure time activities were further elaborated by one of the participants. On the other hand, the decisions related to alcohol consumption, managing time and activities and getting a driving license were not further elaborated and therefore related to the information behavior, that might accompany these decisions, was not explored in the interviews.

The interviewed participants described interactions with information which may be classified into types of information behavior. They reported employing active and passive information behavior, those which were sought by interview questions, and one type which was not predicted but is known in information behavior theory. Active behaviors, identified in the interviews, include intentional information seeking, information sharing, and also information avoidance, which is one that had not been identified in the first research phase (the focus group discussions). Passive behavior includes passive monitoring of information, passive attention, and accidental information acquisition. Both passive behaviors, passive monitoring, and passive attention proved to sometimes result in an accidental acquisition of information. It also showed that sometimes some types of information behavior intertwine – one type of behavior results in another.

#### 3.4.2.2.1. Active information behavior for making decisions

##### a) Intentional information seeking for making decisions

Intentional information seeking behavior refers to active information seeking with the purpose of acquisition of information to facilitate the decision-making process. Among the decisions which were further elaborated in the interviews, most of the participants reported engaging in intentional information seeking for decisions related to university and career. Several participants reported that they intentionally sought information for a decision related to relations to other people, getting a summer job, and to training and sport, while intentional information seeking for making a decision related to appearance, food and diet, school, purchase, and health was reported by one participant, as it is presented in Table 9.

| Decision topics | Participants | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Relations with other people | M4 | M5 | P6 | | | | | | |
| Appearance | P1 | | | | | | | | |
| Food and diet | G5 | | | | | | | | |
| School | P3 | | | | | | | | |
| Job | G6 | P2 | P4 | | | | | | |
| Higher education and career | G1 | G2 | G4 | G5 | M2 | M3 | M5 | M6 | P1 |
| Buying | M1 | | | | | | | | |
| Training and sport | M3 | P4 | P5 | | | | | | |
| Health | G3 | | | | | | | | |

**Table 9 - Reported intentional information seeking for making decisions**

The fact that most of the participants reported engaging in intentional information seeking activity for decisions related to higher education and career does not come as a surprise since nine out of eighteen participants decided to continue the interviews by telling more about this specific decision. The following quotes illustrate the participants' words about engaging in intentional information seeking.

When talking about deciding about having cosmetic ear surgery, one girl reported going to a physician who might do the surgery for more information:

*I: Did you try to get information or help somewhere else?P1: Yes, I asked, we went to the doctor's so he took a look at my ears and said it wasn't that bad, but we can do it if it's causing you problems, he told me exactly what he would do, he showed me exactly what would happen when they were normal on an ear model, how long the surgery takes, he told me I would only get local anesthesia so I would be awake which made it easier for me because I didn't want to be completely under anesthesia, and that the surgery would take an hour and a half, that it was a routine surgery so that finalised my decision. After talking to him I was 100% sure.*

When talking about intentionally seeking information for the decision about laptop purchase, one boy was telling about seeking some reviews on *YouTube*:

*I: You mentioned the internet as well. What did you look for on the internet?*
*M1: I looked for other customers' reviews. I looked for reviews on Youtube as well, essentially I was looking for the same thing, but one was in a written format and the other in an audiovisual.*

A girl who decided to improve her health condition by having a tonsils surgery reported turning to a physician and her friend who had the same surgery.

*I: Okay, who did you ask?*
*G3: My doctor.*
*I: Other than the doctor, did you maybe ask someone else for some (G3 interrupts)*
*G3: I asked a friend who had tonsils removal surgery last year and she said she had no problems, that you can't talk for a couple of days, but that everything's fine eventually.*

A girl who was deciding about a possible summer job reported seeking information on social networking sites, *Facebook* and *Instagram*:

*I: Good, okay. So, you told me that you looked on social networking sites, on Facebook, Instagram?*
*P4: Yeah.*
*I: Can you tell me something about that?*
*P4: On Face I looked at groups, at some ads on Facebook as well, and on Instagram I did most of the looking people would even post that they were looking (for employees), for example I found a job in Novalja, young girls who would work in a souvenir shop, that's what I meant when I mentioned Instagram.*

One boy who was deciding among two possible university choices reported searching the internet for the university website:

*I: Where else did you look for that information, you haven't told me?*
*G1: On the internet, yes, on a website but I don't know which one it is, it's something my brother showed me for reading what I need to apply and on the university itself, I looked on the Faculty of Maritime Studies, the university.*
*I: You mean on the university's website itself?*
*G1: Yeah, yeah. And that's all, actually.*

A girl who was deciding about breaking up with her boyfriend reported seeking advice from people who might help:

*I: Okay, I understand. And did you have some question you needed answers to, for example information, advice, opinions or ideas?*
*M5: Absolutely, yes.*
*I: And how did you find these answers?*
*M5: Absolutely, uh, others, hearing new perspectives. Talking about my emotions and my feelings with people I know can, or even if I don't know they can help me, but I simply think they could help me and people I trust.*

### b) Information sharing for making decisions

Information sharing is a two-way activity of giving and receiving information in the same context.[555] In this dissertation, information sharing is considered as a two-way activity of giving and receiving information in the context of one particular decision with the mutual intention of getting informed. Although many of the participants described some activities when answering the interview question which aimed at eliciting the data on information sharing behavior, ten of the descriptions correspond to information sharing, as defined by Savolainen. Other answers described some other behaviors, such as chatting with classmates and alike.

The analysis showed that the participants share information with their peers who are themselves dealing with the same decision, such as decision related to university and career, getting a summer job, diet-related decisions such as whether to stop eating meat, and decisions related to sport such as training harder or to stop training some sport. Again, the majority of the participants reported sharing information about university and career, as presented in Table 10.

| **Decisions** | **Participants** | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Food and diet | G5 | | | | | | | | |
| Job | G6 | P4 | | | | | | | |
| Higher education and career | G1 | G2 | G4 | M2 | M5 | | | | |
| Training and sport | M3 | P4 | P5 | | | | | | |

**Table 10 - Reported information sharing behaviour for making decisions**

The following quotes illustrate the descriptions of information sharing behavior for making some specific decisions. One girl who plans to attend a music academy describes how she and her friends collect and share information about potential academies:

*I: Okay, thank you. And tell me what about exchanging information with others, for example, friends, peers or parents, in a way in which you give each other information regarding the decision to go to university and the decision to take an entrance exam?*
*M2: Yes, that's very important for us that study music, because I'm not the only person who's had this problem of course. Because we have all spread information about the Academy because there was no information on the website so we found out what we could and shared what we found out with others because, Petra for example, she's going to come in next, she was supposed to take the entrance exam today, the same thing happened to her, Nicol, and Bella arranged to take the exam in the fall so she's okay. But we*
*I: But we're talking about Ljubljana, right?*
*M2: Yes. And we'll put Bella aside because she's taking the entrance exam in the fall, Petra, Nicol and I, the three of us exchanged information and we would share what we found out with the others and all of us ended up having the same problem because there was no information on the website. When I went to the Slovenian part of the website I saw the piece of information that ended up being crucial for my decision, the website said that you needed to submit your papers until the 1st of May, we haven't done that so we can't take the entrance exam.*
*I: Tell me, why is it your friends that you exchange this information with?*
*M2: Because they're up to date, I mean they're in this situation at the same time as me and they know what it's like because we're essentially in the same situation. It's best to share that information with them because they're not some outsiders who don't understand it, because I can't just walk up to a random person on the street and be like hey I'm going to an entrance exam in Ljubljana, I need this and that, they wouldn't know what I'm talking about. But friends I'm close to, who are in my class, who are in the same situation as I am, they will understand and will have additional information I may not have found myself.*

Another girl, the one who decided to stop eating meat, describes sharing information with others, who were considering this decision as well:

*I: And what about exchanging information about that with others, going two ways?*

[555] Cf. Savolainen, Reijo. Everyday information practices. P. 183.

*G5: Well I talked to some people who were thinking about it as well or had stopped eating meat recently and, like, I came into contact with them.*

One of the participants described sharing information among friends about getting a job:

*I: Okay, so. What about sharing information with others, for example friends or peers or parents about that topic in a way in which you give each other information, so it's not one-sided sharing of information?*
*G6: You mean in general?*
*I: No, about that topic.*
*G6: Well yeah, of course we share information. there's always somebody saying what it was like for them, how they were treated, if anything happened, things like that, tourists and so on. We always share information.*
*I: Did you find out anything useful that way?*
*G6: Well yeah, I mean, there's always something useful, you find out what it's like, what the tourists are like, some like types of bosses, if they pay you on time, what the conditions are like, if they have any colleagues, if they work with other people, what they're like, things like that.*
*I: In what way did what you found out in these conversations affect your decision?*
*G6: Well I don't know, there's always someone with a negative experience, of course, but it hasn't made me not work so far, the wish to earn some money is still bigger.*

### c) Information avoidance for making decisions

One interview elicited a type of behavior which was not found in earlier stages of the research, and that is information avoidance. According to Case, information avoidance is a purposive behavior that does not involve seeking information.[556] Some earlier research already found that in dealing with daily-life concerns and decisions, children and adolescents sometimes do not want to seek and/or use information at all, for a variety of reasons.[557] The girl who reported making the decision to continue education in another city explained that the motivation for her decision is some tragic event that happened to her family. She wanted to move on with her life in new surroundings where no one knows her, and she did not want to talk about it with her friends. She explained that she did so because she did not want them to talk her out of her plans by giving the information that might make her decide not to move and to stay in the city she currently lives in. Her words illustrate her behavior:

*I: I understand. And what's with, for example, exchanging information with other people, for example friends or peers, about that topic in a way in which you give each other information regarding moving somewhere and so on. Do you have any experiences like that?*
*M6: Well for example this Zagreb thing, I got everything in order first, arranged everything and paid, and then I told them because nothing could stop me anymore. And I really want to.*
*I: So, you're talking about friends you have here in Rijeka?*
*M6: Yes.*
*I: So, if I understood correctly you did everything first, made your decision and got everything half-way done*
*M6: Yes.*
*I: And then you told them.*
*M6: Yes.*
*I: Okay, why?*
*M6: Because, I mean, they're sad that I'm leaving.*
*I: Okay.*
*M6: But for example if I told them that as an idea, then, I mean of course they don't want me to go and then they would start talking and maybe even giving me false information just so that I wouldn't go. So then I, and I know that, I know that what they would say maybe wouldn't be the truth or they would say it just because they are sad that I'm leaving, and I know that I'm right when making my decisions so if I told them and they tried to get me to stay and I still left, that would hurt more than if I just said I was going and left.*

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[556] Cf. Case, Donald O. Op. cit., p. P. 5.
[557] Cf. Lu, Ya-Ling. Everyday.; Hultgren, Frances. Approaching. P. 186

#### 3.4.2.2.2. Passive information behaviors which result in accidental information acquisition

##### a) Passive monitoring of information for making decisions

One type of passive information behavior which the participants revealed in interviews is passive monitoring of information or *keeping an eye* on current events through various media. The interviews proved that this type of behavior sometimes results in an accidental acquisition of information. The participants reported passive monitoring of some media, and they also reported some accidental acquisition of information which resulted from these activities. The results show that the participants sometimes come across useful information when monitoring social media such as *Facebook, Instagram, YouTube* and vlogs, and also the internet in general, television and magazines (e.g. *BUG*, a Croatian monthly computer, and information technology magazine). Majority of the participants reported passive monitoring of information which resulted in the accidental acquisition of information when making decisions related to university and career, which does not come as surprise since majority of the participatnts decided to elaborate on this specific decision. They also reported this behavior when making decisions related to relations to other people, decisions related to getting a summer job, decisions related to training and sport and leisure time and activities. Table 11 shows decision topics and the participants who reported such behavior.

| **Decision topics** | **Participants** | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Relations with other people | P6 | | | | | | | | | |
| Job | P4 | | | | | | | | | |
| Higher education and career | G2 | G4 | G5 | M3 | P1 | | | | | |
| Training and sport | P5 | | | | | | | | | |
| Leisure time activities | M2 | | | | | | | | | |

**Table 11- Reported passive monitoring behavior which resulted in accidental information acquisition for making decisions**

The following quotes are exampes of some of their comments. Talking about her decision to work in a coffee shop during summer, one girl explains how she came accross a piece of useful information on *Instagram* and how she sought more information after that:

*I: I have a question, did you look for that on Instagram or did you stumble upon it when browsing Instagram?*
*P4: I wasn't searching for that in particular, but I went on Instagram with the goal of finding it.*
*I: Okay, finding what?*
*P4: That someone would post it because someone posting an ad looking for an employee came up a couple of times, and then I didn't go on Instagram to search for it, but I stumbled across something similar a couple of times and I expected that something of the sort might interest me. One girl I know wrote an ad looking for girls to work in a souvenir shop in Novalja and uh, since that girl is a family friend of my parents it was safe and it checked out. And I talked to her a week later about that job.*
*I: And how did you talk to her?*
*P4: Orally.*
*I: Orally, as in person?*
*P4: Yes, yes in person.*

In another quote, a boy explains how he acquired useful information for the decision of what university to enrol into by passively monitoring social networking site *Facebook*, which directed him to read more about it on a website.

*I: Okay, and when we're talking accidental, can you remember some piece of information that you found by accident, without looking for it?*
*G2: One that I found by accident. Well I think that I accidentally found out that a department was to be opened here in Rijeka. I don't know if you saw, they're accepting around 30 students and I think it came up on Face. Then I went in and, I don't know, read a bunch of stuff but then again, it didn't encourage me to apply, I think that you*

*can't even apply for fall admission, that you have to wait for a later one. I think it wouldn't pay off because I would lose a year if I didn't get in.*
*I: You found out all of that from a post on Facebook or?*
*G2: Yes, yes, yes I mean, the post redirected me to a website, I don't remember which one, and then I read about it.*

Thinking about her plans for future, a girl describes how she started to follow some *YouTubers* to learn about the lifestyle she admires.

*I: Okay, how did you find these Youtubers?*
*M3: I think that the way you use phones, social media, any type of website, they are always there and, I don't know, I started following them after getting interested for that topic and then searching "how to work and travel" on YouTube.*
*I: Okay, and now you have some that you follow?*
*M3: Yeah, I have a couple.*
*I: And to what extent do you believe that what they're saying is good and correct?*
*M3: Well, for example, these things called vlogs, and they film most of their lives and then you somehow see what it's all like. And then they, for example, have different things. Some don't upload bad things, I already said that, but the ones I follow upload pretty private stuff as well, I mean they're pretty open. I mean, I can't be 100 percent sure, but I don't think you can trust everyone that the information they're giving you is 100% correct.*

### b) Passive attention for making decisions

Another type of passive information behavior identified in the interviews is passive attention. This type of behavior denotes acquiring information in a passive and undirected manner by simply being aware of the environment and unexpectedly coming across useful information. The participants were simply aware of their environment which in some cases, as they recalled, resulted in the accidental acquisition of information. They acquired useful information for the decisions they were making in (1) conversation with people around them when unexpected information showed up, and (2) generally from their environment. The problem similar to the one described by Williamson[558] was identified at this point of analysis, only she had difficulties in differentiation between the types of behavior of active information seeking from passive monitoring, while the problem encountered by the researcher was how to differentiate intentional information seeking from incidental information acquisition which results from passive attention. In this study, when the participants described active and intentional seeking information from other people, their behavior was classified as intentional information seeking. On the other hand, when they described acquiring information during the course of conversation, without explicitly reporting they were asking the other person for information, and using the words such as *I've heard from some students*, *It happened that one girl told me that someone is offering a job*, and *I commented that I have a problem with my ears and she said, hey, I used to have the same problem so I had a surgery, and it's much better now*, the behavior was classified as accidental information acquisition that results from passive monitoring, because the participants who reported such acquisition of information did not seek for information actively.

Most of the participants reported acquiring information by passive attention behavior for the decision on higher education and future career. They also reported acquiring information for a decision about appearance, food and diet, getting a job, purchase decision and health-related decision, as presented in Table 12.

| **Decision topics** | **Participants** | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Appearance | P1 | | | | | | | | |
| Food and diet | G5 | | | | | | | | |

[558] Cf. Williamson, Kristy. Op. cit., p. 28.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Job | G6 | P4 | | | | | | | |
| Higher education and career | G2 | G4 | G5 | M6 | P1 | | | | |
| Buying | M1 | | | | | | | | |
| Health | G3 | | | | | | | | |

**Table 12 - Reported passive attention behavior which resulted in accidental information acquisition for making decisions**

The following quotes illustrate how the participants acquired information by passive attention behavior from conversations with other people, such as parents, siblings, friends, and peers. Speaking about looking for a job, one girl reported her mother seeking information on her behalf and sharing it with her.

*I: Some other students said they have other people who keep an eye out or look for information for them in order to help them make a decision. Do you have anyone who did that for you regarding this decision?*
*G6: Usually my mom would help me, she would look for advertisements when she had time and once she saw one so she asked them instead of me and so on. So, mom.*

One student describes getting information from his mother who seeks information and sends it via *Facebook* messenger, and his girlfriend doing a similar thing.

*I: No, but do you have someone who looks for information to help you, in addition to what you research on your own.*
*G2: You mean as in, looking for information for me?*
*I: Yes, as in someone else that looks for information that could help you make your decision.*
*G2: Well I don't know, my dad didn't really get involved, my mom always, I don't know, sends me attachments she found on the internet over Messenger, it can be kind of annoying sometimes, but it actually helps a lot because she reads some interesting things, and my girlfriend would ask around as well, we went to do that together, and I think that's all. I stumble upon other things by accident, more or less. (...)*
*I: Where did you find that calculator?*
*G2: He presented it here in my school and mom sent it to me, and he showed it to me personally as well before releasing it. I think that he even presented it when the president was here. That, and I don't know, my girlfriend sent me info about dormitories, she sent me some conversations, some screenshots, she talked to a friend, I mean he's not a friend but a guy who's in his second or third year of uni now so he sent us information on dormitories we could apply for, he described everyone but I mean, I didn't pay much attention to it because if I would live in a dormitory, it would be Radić. That's all about dormitories, and I don't know what else you meant. (...)*
*I: I understand. And these websites with job descriptions, how did you find them?*
*G2: That, I think my girlfriend told me that, that we looked at those together two years ago.*
*I: And she found that*
*G2: She, I don't know how she found it, she probably researched it when she was applying to university, so she told me as well, and we even looked at it together.*
*I: So if I understood correctly, your girlfriend is the one that notices information that interests you, she shares it with you?*
*G2: Yes, she shares it with me, yes.*
*I: And she tells you everything that could be important?*
*G2: Yes.*

The girl who decided to have her tonsils surgically removed describes how her mother sought information from her friend.

*I: Ok, I understand. I also heard that students have some other people, for example, friends, parents or someone else, who seek information on their behalf, to help them in making a decision. Have you had such an experience?*

*G3: Well, I mean, of course, my parents asked around, mom also asked her friend whose child had the surgery and we got the same opinions and the same stories, so, those were all positive things.*

The girl who decided to have a cosmetic ear surgery explains how she found valuable information in conversation with a friend who already did the surgery.

*I: Right. Let's talk about your friend. Tell me about the first friend, in what way did you find out about the surgery from her, did you ask her or*

*P1: I didn't know her before the surgery, we only met afterwards, and I talked to her about how my ears were bothering me, and she said hey mine were bothering me too, but I had surgery and now it's a lot better, go, research, you'll feel better, I feel great, she showed me she didn't have any scars, or anything so that's what convinced me. That's the first time I found out about the surgery, that it even existed. (...)*
*I: I didn't ask you, the first friend, the one who told you the surgery existed, by accident in a way, in what way did what she tell you that helped you make a decision?*
*P1: Well it helped a lot, because I found out that others have that problem too, herself included, and that the problem can be solved, and that she has no issues with talking about the fact that she had surgery, that nobody looks at her differently and that she's happier with herself, her ears, so she helped me, but then again not entirely. (...)*

### c) Information behaviour types intertwining

Apart from the described transformation of passive information behaviors into accidental information acquisition, the interviews captured intertwinings of other types of information behavior. It showed that acquiring information by one type of information behaviour may initiate further engagement in another type of information behaviour. Useful information that is found may foster awareness of information need or encourage curiosity and initiate engagement in intentional information seeking. In the interviews, several information behavior intertwinings of such type occurred: passive monitoring initiates and is followed by intentional information seeking, passive attention is followed by intentional information seeking, and information sharing is followed by intentional information seeking. Moreover, it showed that information which is found by intentional information seeking within activities imposed by some task, such as exploring some topic when preparing for a debate tournament, may induce the information need and eventually initiate further intentional information seeking activities that are not related to some school task, but is one own's free will and arises from one's curiosity. These types of information behavior intertwining, detected in the interviews, are presented in Table 13.

| **Behavior types** | **Participants** | | | | | |
|---|---|---|---|---|---|---|
| PMI - IIS | G4 | G5 | M3 | P4 | P6 | |
| PAT - IIS | G6 | M1 | | | | |
| PAT - IIS imposed - IIS -self generated | G4 | | | | | |
| IIS imposed - IIS self-generated | G5 | | | | | |
| ISH - IIS | G1 | | | | | |

**Table 13 - The reported intertwining of the types of information behavior**

| |
|---|
| PMI – passive monitoring of information |
| IIS – intentional information seeking |
| PAT – passive attention |
| ISH – information sharing |

The following quote illustrates such intertwining of the types of information behavior, as reported by the participants. One of the girls describes how she accidentally found some information on social networking sites and wanted to check them by seeking information from sources that she considers more reliable.

*I: Some students told me they follow media such as social media, the internet, magazines, television, newspaper, and that they found out some information by accident by following them, information that proved useful when making their decision. Do you have similar experience when talking about this decision?*
*G5: About this one specifically, maybe through the media when they're talking about tuition prices and things like that, probably not, not for this decision, but it allowed me to eliminate some choices as in okay, I'm not going to the US, okay I'm not going to England because of all the costs, so in the end, maybe it didn't help me make this choice, but it eliminated some others.*
*I: Okay, did you believe that what you found out through social media was correct, true, good and that it could help you make a decision? Useful?*
*G5: I always checked that information, information I find over social media isn't information I'd believe in an instant, such as information on university websites.*
*I: And how do you decide if the information is correct or not?*
*G5: Well I go look at some, so some more reliable sources and websites that I know to be legitimate. For example, to check up on tuition prices, I would go look at the websites of universities in that country just to get a general idea of how much studying there would cost.*

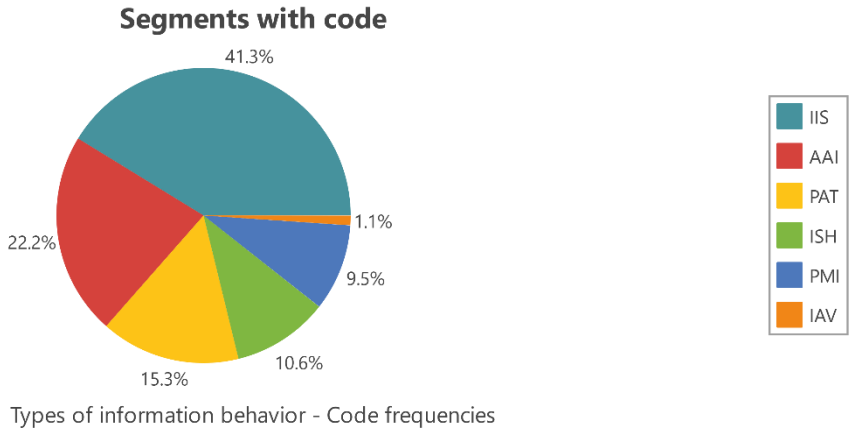
One boy explains how he accidentally found information about some laptops on a flyer, which made him think about purchasing new laptop and sought more information about purchase possibilities.

*I: How did you reach that decision?*
*M1: Right. Well, so I used to have a laptop that would always break down and we would always send that laptop to get fixed and all that, and once it wouldn't turn on at all, and once we went to the beach, my mom, my brother and I, while it was still warm in September or October, and uh and then I literally stumbled upon a leaflet for Instar informatika and I saw like I went to take a look and saw a laptop that I really liked and then uh after seeing that laptop I remembered the name because it was somewhere in the city, it wasn't a leaflet I could take home so I remembered it, so I went to the internet and searched all sorts of things, comparisons, what are the advantages, what are the disadvantages and so on, and later I stumbled upon a few other laptops that are good too for the same price, more or less, and then I chose that one because it seemed like the best choice. And I must say I didn't make the wrong choice.*
*I: Did you know you were going to buy a new laptop before you saw that leaflet?*
*M1: No. No, but I was like let's take a look, I wanted to buy it as a reward of a sort because I never asked my parents to buy me something for successfully finishing a grade, I thought okay once in nine years, eleven years of my schooling, I could have my parents buy me a present. And then my mom said okay and all that. (...)*
*I: And you said you did more research after that.*
*M1: Yes, I compared if buying the laptop would pay off considering the price, and if maybe there was a better alternative that would cost less. (...)*

Overall, we may notice that the participants showed a wide range of information behaviors, both active and passive. The usage of the functionality of MAXQDA software *code frequencies – segments with codes* allows creating a figure which presents the code frequencies of the types of information behaviors, detected in the interviews. As can be seen from Figure 10, the largest part of the conversations was about intentional information seeking behaviour – 42,3%. The smaller part was devoted to accidental information acquisition – 22,2%, passive attention was commented in 13,5% of the conversations, information sharing in 10,6%, passive monitoring in 9,5%, and information avoidance in 1,1%. Together, active information behaviors took up 54% of the conversations, while passive behaviors took up 45.2% of the conversations. We may assume that the participants are mostly aware of their intentional behaviors and that these are the behaviors they recall and are able to talk about. On the other hand, unintentional behaviors might have stayed out of the participants' reports and captured by the researcher only to a limited

extent. Perhaps some future studies should focus on adolescents' unintentional behaviors and explore this type of behavior more deeply.

**Figure 10 - The code frequencies of the types of information behaviors detected in the interviews**




| Types of information behavior - Legend |
|---|
| IIS – intentional information seeking |
| AAI – accidental acquisition of information |
| PAT – passive attention |
| ISH – information sharing |
| PMI – passive monitoring of information |
| IAV – information avoidance |

#### 3.4.2.3. Summary of research question 2

The results of the focus group interviews reveal that the participants acquire useful information by passive and active types of information behavior when making decisions in everyday life. The active behaviors which the participants employ include intentional information seeking and information sharing, while the passive behaviors include passive monitoring of information and passive attention, which sometimes result in an accidental acquisition of information. The results of the individual semi-structured interviews show that the participants employ all these behaviors and one new, active type of behavior - information avoidance. The reported active information behaviors of information seeking and information sharing are employed to acquire information, to increase the state of knowledge and develop a better understanding of a decision situation, contributing to making a better decision. Most of the intentional information seeking activities, reported in focus group interviews and individual semi-structured interviews, were conducted to facilitate making the decisions related to higher education and career, and to relations with other people and social life. The participants also intentionally sought information for managing school-related activities, for making decisions about leisure time activities, purchase decisions, decisions about one's appearance, food and diet, a part-time job, consumption of drugs and alcohol, and other decisions that occur in everyday life. The participants reported sharing information to help each other manage school tasks, and to make decisions related to higher education, to training and sport, getting a part-time job and decision related to diet. The individual interviews revealed one type of active and

intentional information behavior that is not directed towards the acquisition of helpful information - information avoidance which is conducted to avoid a possible threat to the preferred decision option. The results of focus group and individual interviews also show that the participants sometimes acquire some information by employing passive information behaviors: passive monitoring behavior and passive attention, which result in the incidental acquisition of information that is useful for making decisions. The participants incidentally acquire useful information employing passive monitoring behavior by monitoring social networking sites such as *Facebook, YouTube, Instagram,* and magazines. The acquired information was useful for making decisions about relations to other people, for making a decision about higher education and career, for a decision related to appearance and diet, for getting a part-time job, purchase decisions, training and sport, and leisure time activities. The participants also incidentally acquire useful information by simply being aware. When acquiring information in such passive and undirected manner they acquire information (1) from other people, who assumed it would be useful to them, although they did not ask for it, (2) from other people who seek information on their behalf in order to help, (3) in the course of conversation with others when useful information simply comes up, and (4) from their environment. They were *being told* and acquired the information they did not seek from other people who assumed they might need information about higher education and career, school, harmful and risky behaviors such as smoking and consumption of alcohol and drugs, sexual behavior, school and education, and managing time and activities. Such information is usually provided in schools by teachers, psychologists, pedagogues, and parents. The students also passively acquired information from people who sought information on their behalf, by encountering useful information in a conversation and from their environment, which was helpful for decisions related to appearance, diet, getting a job, purchase of some item, health, and higher education and career. Many of the participants reported acquiring higher education and career-related information through passive attention behavior. Moreover, the focus group results indicated, and the interview results confirmed that the types of information behavior sometimes intertwine – one type of behavior results in another. The results show that the sequences of intentional information seeking come after the behaviors that are not necessarily intentional, self-initiated and directed toward the acquisition of information (e.g. passive monitoring, passive attention and imposed information seeking behavior) if a person feels a need or a wish to learn more about the topic. The survey did not address the second research question.

### 3.4.3. Research question 3: How do adolescents select sources when making decisions in everyday life?

#### 3.4.3.1. Focus group results

While having focus group conversations, the participants talked much about how they select information sources and why they choose some specific source. From their conversations, the categories of *information sources used for making decisions* and *source credibility* and *cognitive authority* emerged.

##### 3.4.3.1.1. Information sources used for making decisions

The analysis of the transcripts shows that the respondents use plenty of information sources. In some cases, these sources were quite difficult to classify unambiguously. For example, when talking about mobile phone purchases, one boy said that he asked a friend who already had this

model of mobile phone. In another example, a girl asks a friend for advice about buying and putting on makeup because the friend is *a makeup guru*, as she says. In these cases, although they turn to a friend, the sources were classified as *a person with experience* because they turned to friends because of their experience with the mobile phone model and makeup. There are many other cases when it is difficult to classify the information sources unambiguously. In such cases, if the respondents added the reason which qualifies the source (such as experience with a product or a decision, knowledge and alike), this qualification was taken as crucial in the classification of sources. However, for that reason, we hold that the information sources the respondents reported turning to were classified only conditionally and for the purposes of analysis.

In Table 14 we can see which sources the respondents reported turning to for information when making the decisions listed.

| **Decisions** | | **Sources** |
|---|---|---|
| A hypothetical, big or important decision | | people with experience; teachers; parents; friends; other people; the internet in general |
| A hypothetical decision, diet pills or steroids | | expert; mother; sister; friends; the internet in general; *Google* |
| Time and activities | | parents, friends |
| Relations with other people | | parents; sister; friends |
| Identity | | Mother |
| Appearance | | other people; friends; brother; the internet in general; *Instagram*; *YouTube* |
| Food | | expert; applications; *YouTube*; internet in general; product declaration |
| School | | parents; other students; friends; electronic students' report book |
| Job | | people with experience; other people; mother; friends |
| University and career | | people with experience; experts; other people; teachers (high school and university); parents; siblings; friends; websites; the internet in general |
| Buying | a musical instrument | people with experience; expert; other people; teachers; mother; websites; the Internet in general; product experience |
| | sports equipment | an expert |
| | clothes | mother; sister; friends; websites |
| | a mattress | product experience |
| | a present | *Pinterest* |
| | a mobile phone | people with experience; friends; websites; *YouTube*; forums; the internet in general |
| | a computer game | Websites |
| | computer parts | newspapers; *Facebook;* websites |
| | Makeup | people with experience; *Facebook*; *Instagram; YouTube*; the internet in general |
| | getting a pet | people with experience; the internet in general |
| Alcohol | | Friends |
| Drugs | | people with experience in taking drugs; friends; *Google*; websites |
| Sexuality | | the internet in general; sister; friends |
| Training and sport | | applications; expert |
| Leisure time activities | | people with experience; *Google*; internet forums; *Instagram*; websites |
| Occur in everyday life (choosing a driving school) | | other people; friends; the internet in general |

**Table 14 – The sources the respondents reported turning to for information when making the decisions listed**

Two of the listed decisions are hypothetical and were imposed by the moderator to stir the focus group conversations. As it can be seen, to get help with making some decision which can be considered big or important for their lives, the participant answered they would turn to people with experience, teachers, parents, friends, other people and to the internet (in general). Most of the participants, who reported sources they would turn to mentioned parents, people with experience and simply other people. People with experience are mentioned in conversation in phrases such as *people with experience* or in the quotes like this one:

M5: *It's not bad to consult people older than you, especially those who might have had to make similar decisions, so that's a good idea.*

In the following comment, a girl answers that she would seek drug-related information from people with experience in taking drugs.

*M: Is there anyone you would ask about this topic?*
*P5: Well, those who do drugs. There are a lot of people who are doing it. At least they are easy to find nowadays.*

Teachers were mentioned as an information source in the group of musical school students and regarding decisions related to getting into a musical academy, which is very important to some of them.

For making a decision whether to take diet pills or steroids to achieve the desired look and strength (also imposed by the moderator to stir the discussion by showing the videos), the respondents would seek information from an expert, mother, sister, friends, Google and the internet in general. Asking an expert for information is explained by words such as the following:

G7: *Well, in this situation you know that it's a better idea to go and practice something, it's healthier than using some kind of pills, and also talk to an expert and not your peers who don't really know anything about it.*

Not many of the respondents commented seeking information for help in making decisions about managing time and activities during a day. Those who did report turning to mother, father, and friends.

When it comes to decisions related to relationships with other people, such as how to solve a problematic situation with parents, friends or romantic partners, the respondents mentioned turning to mother, father, or both parents, sister and friends. It is worth noting that most participants reported asking friends for advice or information. However, some of the quotes illustrate different responses. One of the boys explains that for help with the problematic situation in a romantic relationship he rather turns to his dad then to his friends:

P3: *Yeah, me too. I've had a lot of critical situations within a year and three months, a lot of arguments, but I've never asked my friends for advice. Once, I asked my dad something, but never my friends, because I don't want to bring anyone into my, into our relationship. It's just my opinion. If I want to break up, if I don't feel ok in a relationship anymore, then I'll break up.*

On the other hand, some of the girls have the opposite opinion:

M4: *When it comes to this, it's more my friends than my parents, because it's a bit embarrassing to discuss that with them.*
M3: *I mean, it's not that it's uncomfortable, l know when I talk to my mom and then she says "Why would you ask him out when he can ask you?", so that's like a bit*
M1: *Yeah, old-fashioned.*

M2: *Or when my dad starts making fun of me asking: "So, who's that guy, huh, huh?"*

As for decisions related to identity development, only one girl reported turning to her mother for advice and information. When the moderator asked what they do about the decisions related to this topic, as it was mentioned earlier and listed in the poster, she answered:

G4: *For example, I talk to my mom about it a lot. I don't know, she knows me the best and whenever I'm in doubt I always ask her, what she thinks about it. And then she gives me an answer from her point of view, as a mom.*
Moderator: *When you are in doubt about what, for example?*
G4: *I don't know, for example, what kind of person she thinks I am. And then she tells me her opinion.*

Decisions about appearance which the respondents discussed include choosing clothes, e.g. how to dress for prom, choosing a hairstyle or nail polish color. For help, they turn to friends or simply other people, *Instagram*, *YouTube* and the internet in general. *YouTube* is mentioned the most among the answers. The following quote illustrates the answers:

G7: *On Friday I went to a prom party and I didn't know what to wear so checked those inspo websites.*
Moderator: *Inspo, what does that mean?*
G7: *Inspirational, but it hasn't helped because I can't buy here half of the things those bloggers wear, so I had to choose myself what to wear.*

Information sources which the adolescent respondents consult for deciding about food and diet are experts, in this case, a nutritionist and a coach, free diet and weight loss applications which they download from the internet and which track their daily calorie intake, *YouTube* videos on what other people eat followed by some advice, the internet in general, and reading product labels. The boy who reported reading product labels suffers from lactose intolerance. Among the decisions which the participants mention making daily are those related to school activities: whether to study or not, what to study, how much and to what extent, whether to skip classes and alike. For these decisions, they mostly turn to their classmates and friends. They also seek information and advice from other students and parents and check their grades in electronic students' report book. For that purpose, some of them create groups on *Facebook* messenger and talk to each other online. Some of the respondents expressed worry about how to get a job and earn some money. For decisions related to this topic, they reported turning to people with experience, mother, friends and other people, for example to the boss who informed the girl about work conditions. This is illustrated in one of the participants' comment that describes how he got his summer job:

M7: *I also worked for the first time last year, but this year I found a better job, through a friend, he works for this company and he told me to go there, and I said great and that's how I found this job. And in addition, I'll be playing, so I asked my friend about the conditions, he told me everything, then he called his boss, gave me his number and that's how I got there.*

When it comes to the decision about what university to enter after high school, and about future career, the participants reported seeking information from the largest number of different information sources. Most of their comments referred to university websites, high school teachers and university teachers, people with experience and parents. They also reported seeking information from friends, father, sister, brother, simply other people and the internet in general. The following quotes illustrate their answers:

P6: *Well, a friend showed me a website called Studiraj.hr so I looked for design programs and I found two colleges.* (…)

G4: *I don't know, I thought about it even last year because I'm interested in more things, it can be something integrated with science, but not necessarily, so I looked for colleges in I don't know, Bologna, with my mom, anyway, we looked for colleges abroad.*
Moderator: *Where did you look for it?*
G4: *On a website.*
Moderator: *Oh, on the internet.*
G4: *Yeah, universities in Bologna, Berlin, London and so on.*
(…)
M3: *I also attended a seminar in Split held by the professor who teaches at the academy, it went quite well, only I don't know, I think about other potential options. I went to open days in Ljubljana and there I learnt not so much about the professors, but rather about the system, how things work there and they explained it quite well, so at the moment I'm still thinking where to go, what to do. I'm still trying to get in touch with some of the people, get contacts, and I don't know, I guess I should start with my private lessons and that's it. First, to Ljubljana because I am still not familiar with the teachers there, and then later I'll see if I want to continue with Split or not.*

Many of the decisions the adolescent respondent reported making are decisions on purchasing items of their interest. The conversations on each of the mentioned purchase decisions revealed that for buying different products they consult different information sources, as can be seen in Table 14. For sports equipment purchase (a boxing bag), one respondent reported turning to a former boxer player and a coach. When buying clothes, the respondents report consulting specialized websites, friends, a sister, and a mother. When buying a present for a friend, one respondent recommended seeking information on *Pinterest* social networking site. The boy who is interested in a favorable purchase of computer parts reported monitoring information on a regular basis and seeking for information in newspapers, on Facebook pages, and specialized websites. Another respondent looks at specialized websites to learn about computer games when buying one. Some of the girls reported buying some makeup and looking for information on social networking sites such as YouTube and Instagram and on the Internet in general, but also asking a knowledgeable friend with experience, and reading a product label. When deciding on buying a dog, one of the boys reported seeking information on the Internet and from an experienced man. The following quote illustrates their comments on purchase and information sources they turn to:

P2: *For me, it's important to call my mom, when I go shopping for clothes. And then I take photos and she tells me what she thinks. Truthfully, I know that she will always tell me how things are. Because, I don't know, sometimes I take a friend with me, and she tells me like, it's ok, it suits you, when I now that I look terrible in it.*
P5: *Yes*
P2: *I'm not going to buy that.*

The respondents from musical school commented on buying musical instruments, the item which is related to their future occupation and is quite expensive. For that reason, this purchase seems to get a great deal of attention. They are quite active in seeking information to support making the purchase decisions, seeking information from music teachers, people with experience and simply other people, a mother who is a musician, experts who play a specific type of instrument, specialized websites and the internet in general. They also reported they try out the instrument to experience how it feels playing it. Words of a girl who is quite ambitious about her career as a saxophone player and a teacher illustrate best the seriousness of this purchase decision and active information seeking including turning to various sources:

*M2: I believe that for us, the purchase of a new instrument is more important. I have recently bought a new one, I carried out extensive research on the internet, I asked a whole bunch of people to advise me because we couldn't test anywhere how it worked so we had to buy it just like that, we ordered it directly from the factory in Japan where it's made (...) the saxophone (...) it was all so very complicated but we read literally all the reviews,*

*specifications, we asked around, made phone calls, we asked 200 teachers for help, we did everything just to get that instrument as it should be.*
Moderator: *Who is everyone you asked, teachers?*
M2: *We searched the internet a lot.*
Moderator: *Which websites?*
M2: *I don't know, I read on Toman, mostly music shops so you can find out what features an instrument has or doesn't have.*

Furthermore, mobile phone purchase got quite a lot of attention from the respondents. Their comments reveal that some of them put significant effort into seeking information and evaluation of possible choices. They reported seeking information on specialized websites and on the internet in general, on YouTube (for example watching *unboxings*), from friends and from people with experience with mobile phones. Furthermore, the respondents reported that when they want to learn more about drugs, they search Google, specialized websites, ask friends and would ask people with some experience. Here is an example:

Moderator: *We had two different views on parents last time. Mia, are there any decisions that you prefer discussing with your mom and others that you prefer discussing with your friends?*
G8: *There are. I talk to my girlfriends about things I don't wish mentioning to my mom, for example, I don't know, love, alcohol, drugs. I definitely won't ask my mom: ''Hey, mom, have you ever tried ecstasy?'', I'll always ask my friends things like that, the things that we get. And with my mom, I talk to her about things that I seriously think about, things I can't help myself with and my mom tells me what to do, I don't know, I'll give you a stupid example, but I'll ask her whether I should go to practice or go out with the girls because I let them down several times. I ask my mum for this kind of things.*
Moderator: *Ok, and the things that you've just mentioned, love, alcohol, drugs, do you search for those topics on the internet as well?*
Some girls (it was not possible to recognize the voices on the tape): *Yes.*
G7: *Yes. Pills report.*

The topic of sexuality was mentioned only once and in a very indirect way. One of the boys was explaining that he would not talk to his friends about some important decisions but would rather keep his thoughts and actions to himself and look for information on the internet. When asked what these important decisions would be, he added that one of these decisions is the first sexual experience. In the same conversation, the girls reported talking to friends and a sister on that topic. The following quote brings the part of the conversation.

G6: *But some more important decisions I make, I might not want to share those with my friends.*
G8: *Yeah, that.*
G6: *I would like to do my own research, look up on the internet.*
G5: *Those more serious decisions that Mia talked about, that we should discuss with our parents, I make them on my own because I have a feeling that they would overreact if I told them and then none of it would happen and they would just ruin it for me, make it more difficult.*
G6: *I have a feeling they would make fun of me, wouldn't take me seriously.*
Moderator: *Could you give me an example of one such decision?*
G8: *Love or what?*
G5: *Ne, I can't think of anything at the moment.*
G8: *Sex?*
G6: *For example, people like to brag about having sex for the first time. I wouldn't like to share that with everyone else.*

The participants explained they would not discuss some topics, such as love, alcohol, and drugs, with parents, but rather with their friends. Later in the discussion, they explained getting *life lessons* when talking with parents about such topics. The following quote illustrates their words.

*G8: Yes, there are. Friends for some topics which I wouldn't discuss with my mom, for example, I don't know, love, alcohol drugs, I surely would't ask mom „mom, have you tried ecstasy", I'd always ask friends, it's somehow more*

*normal, things which we understand. (...) I get really annoyed when I like ask my mom, I don't know, like we talked about cigarettes and it's like if I ask her if I should try weed, just off the top of my head, it always turns to a life lesson of a sort, like „no, there was a friend of mine that once...“ and then she starts nagging.*

For decisions related to training and sport, some of the participants mentioned using specialized applications such as running apps and consulting with an expert. When making decisions related to leisure time activities such as choosing a movie or attending summer camp, the respondents reported turning to people with experience, Google, forums, Instagram, and specialized websites. For other decisions that occur in everyday life, such as choosing a driving school to get a driving license, they reported seeking information and advice from friends and other people and on the internet in general. It can be seen in Table 14 that the participants reported consulting a variety of information sources when making the reported decisions. Also, it is noticeable that they choose different information sources for considering different decisions. They mainly turn to other people in face to face communication and to the internet. They consult family members: parents and siblings, friends, experts on the topics, people with experience on decision topics, teachers. They also seek information on the internet, more specifically, by searching Google search engine, on social networking sites such as YouTube, Instagram, Facebook and forums, and on specialized websites. It is worth noting that the information sought on the internet often also includes other people: Youtubers, people who write reviews and alike. Books and magazines were never mentioned as a source of information, and newspapers were mentioned only once. The respondents mentioned turning to the most diverse information sources when commenting on the decisions on university selection and career and on buying a musical instrument. It can be argued that these two decisions are related to their future. A musical instrument is related to the music students' future as musicians, but what is also mentioned in the conversation is that it is quite expensive. Taking that into consideration, we may hypothesize that the respondents seek information actively and from diverse information sources when they perceive that some decision is significant in terms of having an impact on their future. Other purchases also induce seeking information from the respondents. They showed to be active when a purchase is related to topics of their interests: mobile phone, makeup, and clothes for a special event, items related to hobbies such as computer parts. Based on the interest and enthusiasm they showed while talking about these buying decisions, we may hypothesize that the respondents put some effort into seeking information from more sources when it is within the area of their interest. Moreover, different participants reported turning to different information sources for information on the same topic. For example, G7 had a conversation with her father about trying out marijuana, and other members of the group were surprised when they heard about that. These are her words:

G7: *I was discussing something about marijuana with my dad and he told me to come to him when I decide to try it, that he would get me the best kind.*
More respondents *(laughter, surprise).*
Moderator: *Does that mean he thinks it's ok for you to try?*
G7: *Well, yeah, but he would rather I tried it with him and not somebody else.*

In another group, a girl was commenting:

P5: *Well, I don't know, for example, if somebody mentions some kind of drug or something at school and I want to know what it is and if, for example, I ask my dad he is going to be all like: '' Why? Are you doing drugs?''*
Moderator: *So what do you do when you want to find out about something?*
P5: *I google it and then*

Such examples suggest that there are some factors that influence their information source selection, such as the nature of their relationship with an interpersonal source of information, in the mentioned cases, a father. That shows that in order to better understand the adolescent selection of information sources, we need to look for these factors which serve as criteria or a basis for source selection.

#### 3.4.3.1.2. Criteria for source selection

Many of the respondents' comments problematize the issue of sources that should be consulted for helpful information when making decisions. In the transcripts of the focus group discussions, it was possible to identify two main topics around which the respondents' comments gathered: the issue of perceived source credibility and cognitive authority and the topic of characteristics of sources that serve as a basis for source selection.

**a) Perceived credibility and cognitive authority of information source**

As it is elaborated earlier in this dissertation, in the world rich with information sources people need to choose which source to turn to. Even more, we may say that in today's information society people are constantly forced to choose between competing information sources to meet their own information needs. The issue of believability to diverse sources of information, and the question of whom to give their trust for providing information, arose in the first focus group session, without the intention of the moderator. Since this issue seemed quite important and valuable to the researcher, the issue of credibility and cognitive authority was followed through all focus group sessions, sometimes imposed by the moderator, and sometimes arising from the respondents' comments by itself. In many of their comments across every focus group discussion, the participants showed that they question credibility and cognitive authority of information sources. The comments reveal the participants' critical stance toward information sources and to information they provide, as well as showing awareness that not all information sources are appropriate and useful for all the decisions. Some of the participants reflect upon the usefulness of some specific information sources for making specific decisions. Also, their comments revealed that they are very aware that they cannot trust every information they found on the internet and that this is the consequence of what they have been told in school and at home over the years. One example which illustrates the questioning of cognitive authority is the comment of a boy who attends musical school and explains that his parents are not a suitable source for information related to a decision which musical academy to enroll into. He explains that they are not musicians and do not know enough about the topic. Therefore, he considers his parents as not being competent – to him, they do not represent a cognitive authority in this specific area.

M7: *Yes, for example, the academy. I also discussed it with my parents, but they know a lot less than students who go there, so I try to explain how it really works, but then they start telling me their own thing. And this is the case where it is not a good idea to ask parents for advice because they are not into it, they just tell me how they imagine things to be.*
M1: *Well, it depends, if your parents are into music, then they could give you better advice.*
M7: *Yes, but they're not, so*

As already stated, the question of trustworthiness and source credibility emerged in the first focus group session, without the moderator's intention and intervention. The group members were discussing the hypothetical decision on taking diet pills and steroids which had been seen on the video played with an aim to provoke the discussion. One of the boys questioned the motive of experts who have knowledge, but may not be worthy of trust. He explains that an

expert may promote some drug and his/her intention may be to deceive in order to get some profit. Such a comment shows that he realizes that not only knowledge and competence, but also trustworthiness is what makes a credible information source. His opinion is expressed in the following quote:

G1: *It depends on the expert, who that expert is, he can promote some kind of medicine, because in the end, it's all the same to them, especially if you don't train there, then he doesn't know who you are, he just needs to sell his product and he is going to do it, in spite of everything. He is going to give it to you and say, you're going to get better, and if you feel bad later, it's not his fault.*
Moderator: *But can we somehow do the background check of the expert?*
G1: *Well, yeah, I would always choose a person who knows better, but when we get to someone who should know about it and they trick us anyway, then we question why we took it in the first place, should we trust anyone, and who to trust in the end so*
Moderator: *Would anyone like to add anything else?*
G7: *I think we should trust the most those people who want the best for us, like our parents because they know best and they definitely don't want anything bad for us.*

The respondents also questioned the credibility of the internet as an information source. Their critical stance is illustrated by the following quote:

M8: *I looked it up often, to get advice about physical contact, how to kiss for example, but I did that when I was a kid, not anymore. So, I believe it depends on how experienced we are and how much we're going to follow, listen to, take as advice. I think that our common sense can be the judge of what is ok and what's not. I mean, if it tells you that the best way to kiss is when you haven't brushed your teeth, then you'll think, I mean it's stupid because I'll have a foul breath and it probably won't go so well. So, everything should be considered carefully. You just need to think.*

### b) Bases of authority

In the comments about information sources they would turn to for some specific decisions, the respondents revealed why they consider the certain others deserving of cognitive authority. For the purpose of analysis, the mentioned reasons for the selection of specific sources are conceptualized by P. Wilson's concept of *bases of authority*. The characteristics the participants attach to a specific source of information they use for specific decisions represent the reasons why they turn to the specific source or the basis of authority they attach to the source. Most of the respondents mention experience and knowledge, including professional qualification and expertise as characteristics that qualify some source to be believable or worthy of trust. They used sentences such as *the one who knows best*, *this is her job* and *she has some college degree*; *she is a makeup guru* and *she knows everything about makeup*; *they are into that and can give specific advice, they have been through it*; *my sister's husband graduated from KIF (Faculty of Kinesiology, author's comment) and knows a lot about it, I would ask him, someone who knows, who has experience*; *it is good to consult older people, especially those who were maybe in position to make similar decisions*. Many of the respondents mentioned the closeness of relationship as important for turning to someone for information, saying they turn, for example, to *someone who is really close to you*, to the teacher who is *more of a friend than a teacher*, and to *people who are close to us*, such as *friend*, *older cousin*, *older sister* and alike. Trustworthiness and wanting the best for the one who is making a decision are also among the reasons, as illustrated in the words: *someone who you're like really really close with, like you know they'll never leave you hanging* (…) and *I always ask my parents cause I'm terribly open with my mom; I'd rather ask my mom, what she thinks about it because I know that out of all poeope, she wants the best for me; people who want what's good for me.* Furthermore, the participants reported they turn to those with whom they get along and are in good relationship with, who knows them well, are the same age and similar to them, meaning they have a lot in

common. They also reported turning for information to those who are able to listen and to give a piece of advice, who are characterized by honesty, authority, and wisdom. The following quotes illustrate their comments:

M8: *I don't know, I think it's a good idea to think things through. I mean, you need to ask. You should ask someone close to you for advice, and maybe ask someone more experienced, so someone older than you. People who went through the same thing or experienced life in general so they know more. But I believe it's important to really think things through because if you think about it, then you'll come up with the conclusion whether something is right or not.*
(...)
P3: *To my dad.*
Moderator: *Why?*
P3: *Because I see him as an authority, he's the oldest one in the house, he radiates wisdom (all laughing), so I have a feeling I can take his advice on anything.*
(…)
M2: *For me, it helps the most when I talk to my parents.*
More respondents: *Yes, that's true*
M5: *Caretakers, parents*
M2: *It doesn't necessarily have to be with your parents, but with someone who will listen to us, who will give us intelligent or specific advice of what to do or what not to do*.

The focus group discussions revealed that the adolescents who participated in the study make various decisions and that for some of them they seek information to facilitate the decision-making process. For that, they use a variety of information sources. Selection of the information sources to which they would turn to depends on some characteristics of information sources, perceived by adolescents, in this dissertation named bases of authority. Bases of authority that were identified from the conversations include experience and knowledge in the decision domain. Quality of relationship, closeness, trustworthiness, wanting the best for a person are also important bases of authority as well as similarity with a person and the possibility of being in the same situation. Honesty, authority, and wisdom are also identified as the reasons for turning to some information sources. Also, information sources are chosen because of the ability to listen and to give a piece of advice.

#### 3.4.3.2. Survey results

##### 3.4.3.2.1. Information sources which should be consulted for making decisions

**a) Information sources that should be consulted for making the most significant decision**

The analysis of arithmetic mean for the statements which assessed to what extent the participants believe the listed information sources should be used for making the decision they consider the most significant for their lives (among the decisions listed in task 2) shows that on average, the highest ranked are the statements with personal information sources: people who have knowledge and experience related to the decision (M=4,57; SD=0,634), family members (M=4,25; SD=0,958), and friends and peers (M=3,64; SD=0,961). The participants agreed that it is good to seek information from these sources of information. On the other hand, the statements with impersonal information sources are ranked lower: the internet (M=3,44; SD=1,046), books, newspapers and/or magazines (M=3,43; SD=1,028), and forums and social networking sites (M=2,91; SD=1,079). On average, the participants are not completely sure whether it is good to seek information from the mentioned media when making a decision that is perceived as the most significant for their lives. The results are presented in Table 15 – Information sources that should be used for making the most significant decision.

| It is best to seek information from/on/in | M | SD | Completely disagree | | Mostly disagree | | Neither agree nor disagree | | Mostly agree | | Completely agree | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | f | % | f | % | f | % | f | % | f | % | f | % |
| **people who have knowledge and experience** related to the decision. | 4,57 | ,634 | 1 | 0,4 | 0 | 0,0 | 15 | 5,5 | 81 | 30,0 | 173 | 64,1 | 270 | 100,0 |
| **the members of my own family**. | 4,25 | ,958 | 8 | 3,0 | 7 | 2,6 | 29 | 10,7 | 91 | 33,7 | 135 | 50,0 | 270 | 100,0 |
| **friends and peers**. | 3,64 | ,961 | 6 | 2,2 | 27 | 10,1 | 72 | 26,8 | 116 | 43,1 | 48 | 17,8 | 269 | 100,0 |
| **the internet** | 3,44 | 1,046 | 18 | 6,7 | 23 | 8,5 | 89 | 33,0 | 103 | 38,1 | 37 | 13,7 | 270 | 100,0 |
| **books, newspapers and/or magazines**. | 3,43 | 1,028 | 16 | 5,9 | 24 | 8,9 | 94 | 34,8 | 99 | 36,7 | 37 | 13,7 | 270 | 100,0 |
| **forums and social networking sites.** | 2,91 | 1,079 | 35 | 13,0 | 48 | 17,9 | 108 | 40,3 | 61 | 22,8 | 16 | 6,0 | 268 | 100,0 |

**Table 15 – Information sources which should be consulted for making the most significant decision**

### b) Information sources that should be consulted for making the least significant decision

The analysis of arithmetic means for the statements which assessed to what extent the participants believe the listed information sources should be used for making the decision they consider the least significant for their lives (among the decisions listed in task 2) shows that again, and in the same order as was the case with the most significant decision, on average, the statements with personal information sources scored the highest: people who have knowledge and experience related to the decision (M=3,62; SD=1,214), family members (M=3,57; SD=1,202), and friends and peers (M=3,53; SD=0,991). The participants agreed that it is good to seek information from these personal sources of information. On the other hand, the statements with impersonal information sources which include various media scored less: the internet (M=3,24; SD=1,158), books, newspapers and/or magazines (M=3,01; SD=1,177), and forums and social networking sites (M=2,90; SD=1,202). On average, the same as with the most significant decision, the participants are not completely sure whether it is good to seek information from the mentioned media when making the decision which is perceived as the least significant for their lives. The results are presented in Table 16 – Information sources which should be used for making the least significant decision.

| It is best to seek information from/on/in | M | SD | Completely disagree | | Mostly disagree | | Neither agree nor disagree | | Mostly agree | | Completely agree | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | f | % | f | % | f | % | f | % | f | % | f | % |
| **people who have knowledge and experience** related to the decision. | 3,62 | 1,214 | 18 | 6,7 | 34 | 12,6 | 57 | 21,2 | 82 | 30,5 | 78 | 29,0 | 269 | 100,0 |
| **the members of my own family**. | 3,57 | 1,202 | 22 | 8,2 | 25 | 9,3 | 69 | 25,7 | 83 | 31,0 | 69 | 25,7 | 268 | 100,0 |
| **friends and peers**. | 3,53 | ,991 | 11 | 4,1 | 25 | 9,3 | 83 | 30,9 | 110 | 40,9 | 40 | 14,9 | 269 | 100,0 |

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **the internet**. | 3,24 | 1,158 | 28 | 10,5 | 36 | 13,5 | 81 | 30,3 | 88 | 33,0 | 34 | 12,7 | 267 | 100,0 |
| **books, newspapers and/or magazines**. | 3,01 | 1,177 | 36 | 13,4 | 50 | 18,6 | 84 | 31,2 | 73 | 27,1 | 26 | 9,7 | 269 | 100,0 |
| **forums and social networking sites**. | 2,90 | 1,202 | 41 | 15,3 | 59 | 22,0 | 78 | 29,1 | 65 | 24,3 | 25 | 9,3 | 268 | 100,0 |

**Table 16 – Information sources which should be consulted for making the least significant decision**

Comparing the results of arithmetic mean on different information sources which, in the participants' opinion, should be used in making the most and the least significant decisions, we can see that the results are somehow higher for the most significant decisions, from those for the least significant decisions, but still have the same meaning. For both decisions, the participants show a higher opinion of personal sources of information, as it is visible in Table 17.

| | **M** | **SD** |
|---|---|---|
| **Personal information sources** (people who have knowledge and experience, family members, friends and peers) for **the most significant decision**. | 4,16 | ,615 |
| **Impersonal information sources** (the internet, social networking sites, books and magazines) for **the most significant decision**. | 3,26 | ,854 |
| **Personal information sources** (people who have knowledge and experience, family members, friends and peers) for **the least significant decision**. | 3,57 | ,868 |
| **Impersonal information sources** (the internet, social networking sites, books and magazines) for **the least significant decision**. | 3,05 | ,987 |

**Table 17 – The participants' opinions on information sources for the decisions they perceive as the most significant, and the least significant for their lives.**

#### 3.4.3.2.2. Importance of specific information source characteristics when seeking information for making decisions

##### a) Importance of specific information source characteristics when seeking information for making the most significant decision

The analysis of arithmetic mean for the statements which assessed to what extent the listed characteristics of information sources are important to participants when choosing information sources for making the decision perceived as the most significant for their lives (among the decisions listed in task 2) show that on average, it is very important to the participants that a source is accurate (M=4,68; SD=0,697). To a lesser extent, but still important, is that the source of information is easily accessible (M=4,01; SD=0,864), that the source of information is easy to use (M=3,88; SD=0,960), that they have experience with using a source (M=3,85; SD=0,873), and that a source is *fast* so they can acquire information quickly (M=3,74; SD=0,966). The only characteristic of information source that is not perceived as neither important nor unimportant is anonymity (M=3,41; SD=1,232). The results are presented in Table 18 - Importance of information source characteristics when seeking information for making the most significant decision.

| Characteristics of an information source. | M | SD | Completely unimportant | | Mostly not important | | Neutral | | Mostly important | | Completely important | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | f | % | f | % | f | % | f | % | f | % | f | % |
| Source is **accurate**. | 4,68 | ,697 | 2 | 0,7 | 1 | 0,4 | 21 | 7,8 | 32 | 11,9 | 213 | 79,2 | 269 | 100,0 |
| Source is **easily accessible**. | 4,01 | ,864 | 3 | 1,1 | 12 | 4,5 | 44 | 16,3 | 129 | 48,0 | 81 | 30,1 | 269 | 100,0 |
| Source is **easy to use**. | 3,88 | ,960 | 5 | 1,9 | 19 | 7,0 | 55 | 20,4 | 115 | 42,8 | 75 | 27,9 | 269 | 100,0 |

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| I have **experience in using** the source. | 3,85 | ,873 | 4 | 1,5 | 12 | 4,4 | 65 | 24,2 | 127 | 47,2 | 61 | 22,7 | 269 | 100,0 |
| Source is ***fast,*** acquisition of information is **quick**. | 3,74 | ,966 | 4 | 1,5 | 26 | 9,7 | 68 | 25,2 | 110 | 40,9 | 61 | 22,7 | 269 | 100,0 |
| Source can be used **anonymously.** | 3,41 | 1,232 | 26 | 9,7 | 31 | 11,6 | 78 | 29,1 | 72 | 26,8 | 61 | 22,8 | 268 | 100,0 |

**Table 18 - Importance of information source characteristics when seeking information for making the most significant decisions**

### b) Importance of specific information source characteristics when seeking information for making the least significant decisions

The analysis of arithmetic mean for the statements which assessed to what extent the listed characteristics of information sources are important to participants when choosing information sources for making the decision perceived as the least significant for their lives (among the decisions listed in task 2) show that on average, it is important to the participants that a source is accurate (M=4,15; SD=1,080), that a source is *fast* so they would acquire information quickly (M=3,61; SD=1,139), that a source of information is easy to use (M=3,60; SD=1,114), and that a source of information is easily accessible (M=3,51; SD=1,167). The characteristics of information sources which the participants do not perceive as neither important, nor unimportant are experience with using a source (M=3,43; SD=1,146), and anonymity the source provides (M=2,94; SD=1,330). The results are presented in Table 19 - Importance of information source characteristics when seeking information for making the least significant decisions.

| Characteristics of an information source. | M | SD | Completely unimportant | | Mostly not important | | Neutral | | Mostly important | | Completely important | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | F | % | f | % | f | % | f | % | f | % | f | % |
| Source is **accurate**. | 4,15 | 1,080 | 10 | 3,7 | 13 | 4,9 | 39 | 14,6 | 70 | 26,2 | 135 | 50,6 | 267 | 100,0 |
| Source is ***fast,*** acquisition of information is **quick**. | 3,61 | 1,139 | 15 | 5,6 | 31 | 11,5 | 63 | 23,4 | 94 | 34,9 | 66 | 24,5 | 269 | 100,0 |
| Source is **easy to use**. | 3,60 | 1,144 | 18 | 6,7 | 28 | 10,4 | 59 | 21,9 | 103 | 38,3 | 61 | 22,7 | 269 | 100,0 |
| Source is **easily accessible**. | 3,51 | 1,167 | 20 | 7,4 | 29 | 10,8 | 74 | 27,5 | 86 | 32,0 | 60 | 22,3 | 269 | 100,0 |
| I have **experience** in using the source. | 3,43 | 1,146 | 24 | 8,9 | 25 | 9,3 | 78 | 29,0 | 96 | 35,7 | 46 | 17,1 | 269 | 100,0 |
| Source can be used **anonymously**. | 2,94 | 1,330 | 58 | 21,6 | 36 | 13,4 | 76 | 28,3 | 63 | 23,4 | 36 | 13,4 | 269 | 100,0 |

**Table 19 - Importance of information source characteristics when seeking information for making the least significant decisions**

Upon reviewing the results, we may conclude that for making both, the most and the least significant decision, the participants believe it is important to turn to information sources that provide accurate information. In the case of the most significant decision, on average they believe that it is very important and in the case of the least significant decision that it is mostly important that information source provides accurate information. The participants also show that when making both decisions, it is important to them, only to a lesser extent, that information

source is easy to access, easy to use and that it allows them to acquire information quickly. Experience with a source seems mostly important when they seek information for making the most significant decisions, but in the case of the least significant decision, the participants were not sure whether this characteristic is important or not. Likewise, they were not sure whether it is important to them that the information source provides anonymity, for both the most and the least significant decision. This is presented in Table 20.

| | **The most significant decision** | **The least significant decision** |
|---|---|---|
| Source characteristics | a source is **accurate** (M=4,68; SD=0,697) | a source is **accurate** (M=4,15; SD=1,080) |
| | a source is **easily accessible** (M=4,01; SD=0,864) | a source is ***quick*** (M=3,61; SD=1,139) |
| | a source is **easy to use** (M=3,88; SD=0,960) | a source is **easy to use** (M=3,60; SD=1,114) |
| | **experience** with a source (M=3,85; SD=0,873) | a source is **easily accessible** (M=3,51; SD=1,167) |
| | a source is ***quick*** (M=3,74; SD=0,966) | **experience** with a source (M=3,43; SD=1,146) |
| | a source provides **anonymity** (M=3,41; SD=1,232 | a source provides **anonymity** (M=2,94; SD=1,330) |

**Table 20 – Importance of source characteristics when seeking information for making the most significant decision and the least significant decision**

#### 3.4.3.3. Interview results

##### 3.4.3.3.1. Information sources consulted for making decisions

The analysis shows that when employing two types of active information behavior detected in this study, intentional information seeking and information sharing, to acquire information that would help them make the everyday life decisions, the participants use plenty of information sources. In Table 21 we can see which sources the participants reported turning to for information when making the decisions listed.

| **Decisions** | **Sources** |
|---|---|
| Relations with other people | mother; romantic partner; friend |
| Appearance | mother; physician; friend |
| Food and diet | people with experience; a library book; *YouTube*; documentary movies |
| School | teachers; peers; parents |
| Job | friends; parents; websites; student agency; family member; peers; a teacher; the internet; *Facebook; Instagram*; forums |
| Higher education and career | university students; parents (often a mother); sister; family member; friends; romantic partner; teacher (university, high school); other people; magazine; the Internet (in general); *Google*; university website; *YouTube*; blog; vlog; *Facebook* |
| Buying (a computer) | the internet; *YouTube*; forum |
| Training and sport | mother; friend; physician |
| Health | physician; friend; parents; the internet (in general); *Google* |

**Table 21 - The sources the respondents reported turning to for information when making the listed decisions**

When it comes to decisions related to relationships with other people, such as whether to break up with a boyfriend or whether to end a friendship, the respondents mentioned turning to a mother, a friend, and a romantic partner, as illustrated in the quote.

*I: Okay, good. You mentioned Petra. Why was it Petra you talked to, Petra specifically?*
*M5: She knows me the best in that sense I think, because she's with me the most in both business and personal things, she was with me through most of the things I went through over the last four years just as I was with her, uh, she knows me, she knows, she can look at the situation more realistically, so no "cover-ups", it's simply that relationship in which we tell each other what we think, everything, but the other person knows we mean no harm. And I value that relationship very highly because it's real, there's no sugarcoating and then it can really open my eyes sometimes.*

Explaining how she decided to stop eating meat, the girl described seeking some information from the books borrowed in the library, people with experience including one that could be found on *YouTube* channel, and documentary movies. Her quote illustrates how she consulted library books, social networking sites and documentary movies.

*I: Okay, you said you watched, listened and read. Where?*
*G5: I read some books from the library, it just so happened that the debate motion had to do with ecology so I read about that, I searched social networks and the media in general, there's a lot to find there, it's a pretty popular topic at the moment so there's a lot of sources and people sharing their personal experiences and documentaries were a big part of it as well.*

Talking about his decision to take part in a school students' exchange program, one boy described seeking information from parents, peers, and teachers, as illustrated in the quote.

*I: Good, okay, I understand. Did you maybe need, did you have some doubts, some questions that you needed information, an opinion or advice for?*
*P3: Well definitely, for example what I'll be doing there, I asked teachers who are working on the project with us, so teachers who will be travelling with us, to tell me more. But they didn't have much information, they, they were supposed to get information from a school in Zagreb cause they're the ones talking directly to the company in Ireland. And they were, they didn't have much information themselves, so they couldn't tell us either.*

The participants who described seeking information when making a decision related to getting a summer job reported turning to friends, peers, parents, family members, teachers, and a student agency, and also the internet in general, websites, internet forums and social networking sites such as *Facebook* and *Instagram*. The following quotes illustrate their words.

*I: I understand. You said you got informed. How did you do that?*
*G6: Well, I asked friends who had worked before, I asked, I don't know, my parents, if they had worked before, where they had worked, and asked, I went to Dom mladih and then I asked them how to do it, what I had to do, where I had to go.*
*…*
*I: When you talked about it, you said you looked for information. Could you tell me where you looked, who did you talk to?*

*P4: Friends, mostly if somebody had acquaintances that are looking for somebody, on social networks, Facebook, Instagram, on the internet, on forums, Dom mladih website and that's all.*

Those who further elaborated on making the decision which university to enroll into reported seeking information from people with experience, such as university students and high school and university teachers, parents, especially mothers, siblings and other family members, friends and romantic partners and generally other people, the internet in general, university websites, *Google* search and social networking sites such as *Facebook*, *YouTube*, vlog and magazines.

One boy describes asking his cousin for a piece of advice during the family gathering:

*I: Please explain, so you were looking for your cousin?*
*G1: Yes, we were in Gorski kotar at a family gathering, sometimes they gather for lunch, sometimes on the weekends, and I know that he earned a doctorate and he works at the Faculty of Economics, I know he's in the business, I asked him a bit about it and that's all.*
*I: Okay, tell me what did you want to find out?*
*G1: Well that's like when you ask a professional for a professional opinion, informed advice and I thought that he would provide me with that which he did in a way, but he didn't do it subjectively but told me about the Faculty objectively. He didn't say subjectively like it's great for me, what do I know, I see a chance for you to make it blah blah, but he told me objectively that it's a good thing to specialize in, that it's proven to be good and praised and that people make it.*

Thinking about whether to pursue higher education or to work and travel, which is her true wish, one respondent seeks advice and inspiration from vloggers who work and travel and report about it on *YouTube* channel.

*I: I understand. So, you mentioned the internet and a blog, where exactly did you find out more?*
*M3: Like on the internet?*
*I: Yes, on what website?*
*M3: Right, I mean, there are lots of these websites, but I mostly watch YouTubers, and blogs, I don't know what they're called, but there are lots of websites for blogs only. You just type in travel blog and get a lot of results so then you can…*
*I: How come that's where you look for information?*
*M3: Because you can choose locations they went to as well, for example I don't know Spain, work and travel, and then you see how they travel, how they earn money and how they...*

A respondent who described how he decided to buy a laptop reported seeking information on the internet in general and from other people who share their experience on *YouTube* channel and internet forums, as illustrated in the following quote:

*I: Okay, I understand. You said you researched it, could you explain this a bit more, so after you found that leaflet, you looked for more information on purpose. Where was it that you looked?*

*M1: Yes, on YouTube, especially on YouTube and the internet. On YouTube I would for example, I would write the name of my laptop better alternatives or comparison or review in the search bar, so I found videos in both English and Croatian, and then people would, for example, take that laptop and explain what's good and what's not good, sound, touchpad sensitivity, which operative system it is equipped with, how well you can play games on it, how fast it is etc.*

The participants who described making a decision related to training and sport, including a decision to stop training some sport or to train harder, reported turning to a physician for information and advice, as well as seeking information in conversation with parents and friends. A girl who was considering the decision to train harder in the following quote describes turning to her physician for advice, having in mind her current health state.

*I: Okay, good. And you said you asked your doctor about how much you can train?*
*P5: Yes, because my immune system is weak and there is general fatigue as a result of these trainings, so it can affect my health that's why.*
*I: Why did you ask your doctor about it?*
*P5: Well, because she probably knows best when it comes to these things, what I can and can't do so that's why.*

The girl who described how she made a health-related decision to have her tonsils removed reported seeking information from a physician, a friend who recently had such surgery, her parents, and she browsed for information using *Google*. In the quote, she describes how she sought information using *Google* search engine.

*I: Okay, you said you looked for something on the internet. What did you look for and where exactly?*
*G3: I think I just typed in tonsils surgery and results came up.*
*I: Where did you type that in?*
*G3: On the internet, Google. So some websites came up, I really don't remember which, but they just said that it was a routine surgery, that it lasts around half an hour and not much else.*
*I: Tell me why was it the internet, or Google, that you used to look up information?*
*G3: Well simply to get more information, I thought there might be some new information, but there really wasn't.*
*I: I understand, but why exactly the internet and Google? Why do you "ask" them for information?*
*G3: Whenever I'm looking something up I go on Google, be it for school or about health.*
*I: But can you think about why you always go on Google? Why Google?*
*G3: Well it's the fastest, it's on my phone and it has an answer to everything.*

The results show that the participants turn to diverse sources of information for help with the decisions they are making. The information sources that the participants reported turning to for help with the decisions they were making may be classified into two main groups:

interpersonal information sources and information sources available online. Interpersonal information sources include parents and other family members, friends and peers, people with experience and knowledge in the domain of a decision, such as physicians, teachers, and university students. The sources available on the internet include the internet in general, usually approached from *Google* search engine, websites and social networking sites such as forums, *YouTube*, *Instagram*, and *Facebook*.

#### 3.4.3.3.2. Information source characteristics

While describing how they sought helpful information when dealing with their decisions, the participants were asked to give and explain the reasons why they had turned to the specific information sources, or to give the criteria for the source selection. The given reasons were extracted from the transcripts and coded as characteristics of information sources. Moreover, in some other parts of the interviews, the participants also gave some descriptions of information sources which explained what makes them appropriate information sources to turn to (e.g. when speaking about credibility and cognitive authority). These text segments were also included in the analysis of information source characteristics. Further analysis allowed grouping of the sources characteristics in several categories: characteristics that relate to the perceived credibility and cognitive authority of the information sources, other characteristics of interpersonal information sources that the participants emphasized as important to them when seeking information, characteristics that relate to access to information and/or information sources, and characteristics that relate to the form of information that a source provides. As elaborated earlier in this dissertation, credibility and cognitive authority are closely related, but different concepts difficult to define unambiguously.[559] Since the concepts intertwine on the practical level just as same as on the theoretical level, the category which encompasses the related source characteristics includes both dimensions, credibility and cognitive authority of information sources. Credibility includes two main components – competence or expertise and trustworthiness[560] but it is also defined with concepts such as believability[561], trustworthiness, fairness, accuracy, trustfulness, factuality, completeness, precision, freedom from bias, objectivity, depth, and informativeness.[562] While trustworthiness refers to the perceived goodness and morality of the information source, and the perception that the source is fair, unbiased, and truthful, expertise refers to the perceived knowledge, skill, experience and the ability of the information source to provide of the information accurate and valid information.[563] On the other hand, cognitive authority refers to the kind of influence on one's thinking and decision making, and to trust given to an information source that is perceived as knowledgeable in some specific domain.[564] It is also described as the source which is an expert, trustworthy, competent and successful, who has experience and reputation and is worthy of belief, who gives information which carries some weight, and is a person one thinks highly of. Moreover, perceived cognitive authority often guides the judgment of the quality of information, where quality refers to characteristics such as good, accurate, current, useful and important.[565] The

[559] Cf. Savolainen, Reijo. Everyday information practices. P. 150.; Rieh, Soo Y. Credibility. P. 1337.
[560] Cf. Wilson, Patrick. Second-Hand. P. 15; Credibility and Cognitive Authority of Information. P. 1337.
[561] Cf. Savolainen, R. Everyday Information Practices. P. 156.; Rieh, Soo Y. Credibility. P. 1337.
[562] Cf. Rieh, Soo Y. Credibility. P. 1337- 1338.
[563] Ibid., p. 1338.
[564] Cf. Wilson, Patrick. Second-Hand. P. 13-15.; Savolainen, R. Everyday Information Practices. P. 164.
[565] Ibid., p. 152.

source characteristics, identified in the participants' answers, that refer to these and similar concepts were grouped in the type of information sources characteristics related to perceived credibility and cognitive authority of information sources. The identified information source characteristics which relate to perceived credibility and cognitive authority are: knowledgeable, competent, provides good quality information, provides accurate information, provides verified information, provides current information, provides precise information, trustworthy, authority, experienced, honest, objective, professional, official, reputable, verifiable, credible. They are presented in Table 22 and marked with the letter C in the brackets: (C). When it comes to interpersonal information sources, the participants also emphasized other characteristics that characterize sources as persons and are important reasons for asking them to help. They reported turning to people who are helpful, understanding, supportive, confidential, in close relationship to a decision-maker, and well-meaning, i.e. want what is the best for a decision-maker. Moreover, they turn to people, usually friends, who are similar to them and in the same situation, in terms of making the same or similar decision themselves. In Table 22 these source characteristics are marked with the letter P in the brackets: (P). The information source characteristics that relate to accessibility of information sources also proved as important reasons for the source selection. The participants reported turning to the information sources because they were easy, fast and simply accessible, convenient to access, and familiar, which means that the participants have some experience in accessing information from a source. Two participants explained turning to *Google* search engine because *it has an answer to everything* and to *YouTube* because and *it offers a lot of content on the subject*. These answers are interpreted as source characteristic *informative* and are categorized as a source characteristic related to accessibility because the reason why they are consulted is that they offer access to a lot of information, and of wide range. In Table 22 these source characteristics are marked with the letter A in the brackets: (A). Finally, the answers provided some source characteristics that were categorized as those related to the form of information that an information source provides. The participants explained turning to these sources because they are visual, auditive and textual, explaining that information provided in such various forms is easier to understand, and also because the sources are interactive. In Table 22 these source characteristics are marked with the letter F in the brackets: (F). It is important to stress that the formed categories are not mutually exclusive and that there is a certain overlapping in some of the examples. The researcher followed what she believed was the dominant meaning of the participants' words and classified the text segments in the dominant categories, aware of some occasional overlapping.

Table 22 presents the sources that the participants reported turning to when seeking information for help with the decisions they were making, summarized answers on the question about the reasons they turned to these sources and the source characteristics, extracted from the answers. Most of the sources are grouped in several categories: family members, friends and peers, experts, the internet, social networking sites and traditional information sources. Family members include a mother, a father, parents, a sister and a family member. The sources that are gathered in the experts category include physicians, university students, and teachers. They are labelled as experts because they all have some knowledge and experience in the domain of the decisions which make the context for reporting them as information sources the participants turn to. Physicians are mentioned as information sources in conversations about the decisions on cosmetic ear surgery (appearance), tonsils surgery (health) and health condition (training and sport); university students are mentioned as information sources in the context of deciding

what university to enrol into (university and career); teachers are mentioned as information sources in the context of school-related decisions, university, and career-related decisions and one job-related decision. In the case of a job-related decision, the summer job was a part of obligatory practical student work, required by the school curriculum. The internet and websites or internet portals are gathered in one category of internet-based sources, while social networking sites are singled out because of the distinguished social component that characterizes the sources. Traditional information sources include a book and a magazine.

| **Source** | | **Paraphrased and summarized answers** | **Source characteristics** | **Example No.** |
|---|---|---|---|---|
| **family members** | mother | The decision related to relations to other people | | |
| | | - she will help me the most, she knows me best, she will not tell anyone, I feel comfortable and relaxed around her (M4) | - helpful (P)<br>- knowledgeable (C)<br>- confidential (P)<br>- in a close relationship (P) | |
| | | - we are really close, I trust she knows what she talks about, she can understand me (M5) | - in a close relationship (P)<br>- competent (C)<br>- understanding (P) | |
| | | - she always gives the best advice, we have a strong connection, she understands me, she has some experience, she wants the best for me (P6) | - provides good quality information (C)<br>- in a close relationship (P)<br>- understanding (P)<br>- experienced (C)<br>- well-meaning (P) | |
| | | The decision related to the appearance | | |
| | | - she knows best, she is honest, she knows more than I do, she will always work for my benefit (P1) | - knowledgeable (C)<br>- honest (C)<br>- well-meaning (P) | |
| | | The decision related to university and career | | |
| | | - I trust her the most, she has always supported me, "but my mother is the basis of everything" - close relationship, she has always given me a second opinion, she has a realistic view on things (G1) | - trustworthy (C)<br>- supportive (P)<br>- in a close relationship (P)<br>- objective (C) | |
| | | - she knows what is best for me, parents are the most important (M2) | - knowledgeable (C) | |
| | | - to me she is an authority, is older and I live with her (M2) | - authority (C)<br>- experienced (C) | |
| | | The decision related to training and sport | | |
| | | - we have a good relationship, we get along, her opinion is important to me, she is honest, she will help (M3) | - in a close relationship (P)<br>- authority (C)<br>- honest (C)<br>- helpful (P) | |
| | | - she is my supporter (M3) | - supportive (P) | |
| | | - I always go to my mum (P4) | - in a close relationship (P) | |
| | father | The decision related to university and career | | |
| | | - gives accurate and verified information (P1) | - provides accurate information (C)<br>- provides verified information (C) | |
| | parents | The decision related to school activities | | |
| | | - they know me best, they have the experience, I trust them, we have a good connection (P3) | - knowledgeable (C)<br>- experienced (C)<br>- trustworthy (C)<br>- in a close relationship (P) | No. 1 |
| | | The decision related to getting a summer job | | |
| | | - they have some experience, they are objective, their view is realistic, they know me and my abilities (G6) | - experienced (C)<br>- objective (C)<br>- knowledgeable (C) | |
| | | - they have brought me up and I trust them most (P2) | - trustworthy (C) | |
| | | - they want what is best for me, close relationship (P4) | - well-meaning (P)<br>- in a close relationship (P) | |
| | | The decision related to university and career | | |

| | | | | |
|---|---|---|---|---|
| | | - they were always there for me (M3) | - in a close relationship (P) | |
| | | - they have more life experience than I have, I trust them, they want what is best for me (M5) | - experienced (C)<br>- trustworthy (C)<br>- well-meaning (P) | |
| | | The decision related to training and sport | | |
| | | - they are my support in everything I do (P5) | - supportive (P) | |
| | | The decision related to health | | |
| | | - I trust them the most, they always make good decisions, they are smart, they know what they are doing, they want what is best for me (G3) | - trustworthy (C)<br>- knowledgeable (C)<br>- well-meaning (P) | |
| | sister | The decision related to relations to other people | | |
| | | - we are close, I can count on her (M4) | - in a close relationship (P) | No. 2 |
| | family member | The decision related to getting a job | | |
| | | - I grew up with her (grandmother), we are related, she has knowledge and experience (P2) | - in a close relationship (P)<br>- knowledgeable (C)<br>- experienced (C) | |
| **friends and peers** | friend | The decision related to relations to other people | | |
| | | - she knows me best, we have a really good relationship, we have been through a lot together, we always say what we think (M5) | - knowledgeable (C)<br>- a close relationship (P)<br>- honest (C) | |
| | | The decision related to the appearance | | |
| | | - best friend, she is sincere, she would not lie (P1) | - in a close relationship (P)<br>- honest (C) | |
| | | The decision related to getting a job | | |
| | | - they are closest to me and have experience, I trust can them, friends who I trust, I have known them for quite a while, it is simple to ask them, they have never let me down (G6) | - in a close relationship (P)<br>- experienced (C)<br>- trustworthy (C)<br>- easy to access (A) | |
| | | - we hang out every day, we always help each other (P2) | - easy to access (A)<br>- convenient (A) | No. 4 |
| | | - friends and peers - we are similar, we have a lot in common (P4) | - similar, a lot in common (P) | |
| | | The decision related to university and career | | |
| | | - a close relationship (godfather), know him all my life, he always helps me, I trust him, "he is my second father", experience - student at the university of interest (G1) | - in a close relationship (P)<br>- helpful (P)<br>- trustworthy (C)<br>- experienced (C) | No. 3 |
| | | - best friend, we understand each other, we are alike, have similar situation and circumstances (circumstances, ambition), I trust that she knows what she is talking about, she is smart, does not impose her opinion (M5) | - in a close relationship (P)<br>- understanding (P)<br>- similar, a lot in common (P)<br>- trustworthy (C)<br>- knowledgeable (C) | |
| | | The decision related to training and sport | | |
| | | - we are close, she will not tell others what I told her, we are in a similar situation, she can relate to my situation, she understands (M3) | - in a close relationship (P)<br>- confidential (P)<br>- similar, a lot in common (P)<br>- understanding (P) | No. 4 |
| | | - understands me, is in the same or similar situation (M3) | - understanding (P)<br>- similar decision situation, a lot in common (P) | |
| | | - in a similar situation (P4) | - similar decision situation, a lot in common (P) | |
| | | The decision related to health | | |

| | | | | |
|---|---|---|---|---|
| | | - was in the same situation, has experience (G3) | - similar decision situation, a lot on common (P)<br>- experienced (C) | |
| | peers | The decision related to school activities | | |
| | | - who are in the same situation (P3) | - similar decision situation, a lot in common (P) | |
| | | The decision related to getting a job | | |
| | | - we are similar (P4) | - similar, a lot in common (P) | |
| **experts** | physician | The decision related to the appearance | | |
| | | - he is educated, he has the experience, will not do anything to worsen my health, he would not lie, will provide accurate information (P1) | - knowledgeable (C)<br>- experienced (C)<br>- trustworthy (C)<br>- honest (C)<br>- provides accurate information (C) | No. 5 |
| | | The decision related to training and sport | | |
| | | - she knows what is best (P5) | - knowledgeable (C) | |
| | | The decision related to health | | |
| | | - he knows best, he is educated, this is what he does, his profession (G3) | - knowledgeable (C)<br>- experienced (C)<br>- professional (C)<br>- competent (C) | |
| | university student | The decision related to university and career | | |
| | | - experience (G1) | - experienced (C) | |
| | | - experience (G4) | - experienced (C) | |
| | | - has the first-hand experience, has information that cannot be found on the internet (G5) | - experienced (C)<br>- informative (A) | |
| | | - ex-student - has experience (M6) | - experienced (C) | |
| | Teacher | The decision related to school | | |
| | | - has experience and knowledge (P3) | - experience (C)<br>- knowledge (C) | |
| | | The decision related to getting a job | | |
| | | - has experience (P2) | - experienced (C) | |
| | | The decision related to university and career | | |
| | | - knowledge (G5) | - knowledgeable (C) | |
| | | - the most practical and fastest way, she has experience (G5) | - easily accessible (A)<br>- fast accessible (A)<br>- experienced (C) | No. 6 |
| | other people | The decision related to relations to other people | | |
| | | - who can help, who I can trust (M5) | - helpful (P)<br>- trustworthy (C) | No. 7 |
| **the internet, websites** | the internet | The decision related to university and career | | |
| | | - the easiest and fastest way to access information, the simplest way (G5) | - easily accessible (A)<br>- fast accessible (A)<br>- simply accessible (A) | |
| | | The decision related to purchase | | |
| | | - "Where else to look?", many results in a short period of time, it is faster (than going to the library for example) (M1) | - familiar (A)<br>- fast accessible (A) | |
| | | The decision related to health | | |
| | | - Google, I always go there when I look for something, it is the fastest way, I can access it from my mobile phone, has an answer to everything (G3) | - familiar (A)<br>- fast accessible (A)<br>- easily accessible (A)<br>- informative (A) | No. 8 |
| | website | The decision related to getting a job | | |
| | | - institution website, it is the page for student employment (P4) | - official (C) | |
| | | - I did not know where else to look (G6) | - familiar (A) | |
| | | The decision related to university and career | | |

| | | | | |
|---|---|---|---|---|
| | | - it is an official university website (G1) | - official (C) | |
| | | - university website, I use websites that are familiar to me and official, for information that is factual and needs to be accurate I use the internet, I would not use a book but the internet which is more accessible and faster, that way I will find the website faster than if I went to library and spend who knows how many hours of my life in finding some information, I know that webpage is official and that it contains accurate information when it is well known and most often has some regulations at the bottom, trademark and license - these characteristics are important to me and they tell me whether a website is good, I never use Wikipedia but websites which are verified and tell the truth (G1) | - official (C)<br>- familiar (A)<br>- provides accurate information (C)<br>- easily accessible (A)<br>- fast accessible (A)<br>- provides verified information (C) | |
| | | - university website did not know where else to look (M2) | - official (C)<br>- familiar (A) | |
| | | - it is the place for information about the university (M2) | - official (C)<br>- familiar (A) | |
| | | - academy website, it is official and the place for this kind of information, the information is verified (M6) | - official (C)<br>- familiar (A)<br>- provides verified information (C) | |
| | | - the official place for the needed information, it has accurate information (P1) | - official (C)<br>- provides accurate information (C) | No. 9 |
| **social networking sites** | YouTube | The decision related to food and diet | | |
| | | - I spend much time on this social networking site, it offers a lot of content on the subject (G5) | - convenient (A)<br>- informative (A) | |
| | | The decision related to university and career | | |
| | | - these *YouTubers* are praised in the comments as a useful information source, their videos have a high like/dislike ratio, they are recommended by people in comments, videos are visual (e.g. graphs) and therefore easier to understand (such as in economy-related topics) - it is faster and easier to understand information visually presented than from a large amount of some text (G1) | - reputable (C)<br>- visual (F)<br>- graphical (F)<br>- easy to understand (A) | |
| | | - did not know where else to look (G1) | - familiar (A) | |
| | | - it is online and free, easy to access (M3) | - freely accessible (A)<br>- available (A)<br>- easily accessible (A) | No. 10 |
| | | The decision related to purchase | | |
| | | - many videos which are more informative than textual/text articles, because I don't like reading and often don't feel like it, it takes less time than reading, I can hear, read and see and then I can understand better - better understands information when it comes in audio, textual and visual format, all at once (M1) | - visual format (F)<br>- fast access to information (A)<br>- visual, auditive and textual format (at the same time) (F)<br>- easy to understand (A)<br>- interactive (F) | No. 11 |

| | | | | |
|---|---|---|---|---|
| | | - you can ask questions and get answers, you can get a lot of information from many people, compare them and verify by comparing - and if they all say the same, then you know that it is true (M1) | - interactive (F)<br>- access to a lot of information (A)<br>- verifiable (C) | |
| | | The decision related to training and sport | | |
| | | - I heard that some *YouTubers* are good at what they do (P5) | - reputable (C) | No. 12 |
| | Facebook | The decision related to getting a job | | |
| | | - since many people use it, it is the fastest way to communicate with other people (P4) | - fast accessible (A) | |
| | forum | The decision related to getting a job | | |
| | | - many people use it for information (P4) | - reputable (C) | |
| **traditional information sources** | book | The decision related to food and diet | | |
| | | - is a credible source, it passed some checks, the content is coherent, it is easier to receive such information from a book (G5) | - credible (C)<br>- easy to understand (A) | No. 13 |
| | magazine | The decision related to university and career | | |
| | | - it is convenient ("I could be at home, lying down and reading about different universities"), it is a *big* and respected magazine, has recent and detailed information (G4) | - convenient (A)<br>- reputable (C)<br>- provides current information (C)<br>- provides precise information (C) | No. 14 |
| | documentary movie | The decision related to food and diet | | |
| | | - it is easy to consume information in this format, it is a form easy to consume, it is an easy and fast way to access information, and yet offers some information (G5) | - visual (F)<br>- easy to understand (A)<br>- easily accessible (A) | No. 15 |
| | student agency | The decision related to getting a job | | |
| | | - this is the purpose of this place/institution (G6) | - official (C) | No. 16 |

**Table 22 – Information sources and source characteristics which serve as criteria for source selection**

| Types of information source characteristics |
|---|
| C – the characteristics of credibility and cognitive authority |
| P – other personal characteristics |
| A – the accessibility characteristics |
| F – the form characteristics |

To illustrate the participants' answers and the procedure of analysis, Table 22.1 in Appendix 5 contains some quotes from the participants' answers, summaries provided by the researcher, the elicited information sources characteristics and identified categories of information source characteristics.

Table 22 shows that across the decision situations, family members are approached for information because of the information source characteristics that relate to perceived credibility and cognitive authority, but also because the participants believe they have other important personal characteristics. The participants reported thinking of them as knowledgeable, competent, experienced, trustworthy, honest, objective, as sources that are accurate, verified, and as an authority, which are characteristics related to credibility and cognitive authority (e.g. Table 22, example No. 1). The characteristics such as helpful, understanding, supportive, confidential, in close relationship with a decision-maker, and well-meaning because they want

what is best for a decision-maker, make other personal characteristics that the participants consider important when seeking information for help with everyday life decisions (e.g. Table 22, example No. 2).

The participants explained turning to friends and peers for information because they are thought to be knowledgeable, experienced, trustworthy, honest, which are source characteristics related to credibility and cognitive authority (e.g. Table 22, example No. 3). Moreover, these sources are consulted because of other personal characteristics: they are perceived as helpful, understanding, confidential, and being similar to a decision-maker or being in the same or similar situation as a decision-maker, meaning being the same age and facing the same decision (e.g. tonsils surgery, quitting some sport activity) (e.g. Table 22, example No. 4). They are also perceived as a suitable information source because of the close relationship with a decision-maker. Friends and peers are also the sources of information the participants turn to because of some source characteristics related to access since they are thought to be easily accessible and convenient to access (e.g. Table 22, example No. 4). On the other hand, experts in a decision-related domain, including a physician, a teacher, and a university student, are described mostly with the characteristics that relate to credibility and cognitive authority. They are thought of as information sources that are knowledgeable, experienced, as those who provide accurate information, professional, competent, trustworthy and honest (e.g. Table 22, No. 5). One characteristic of information source that is related to accessibility is mentioned in conversation about seeking information from a teacher (Table 22, example No. 6). One of the participants mentioned other people as information sources, describing them as those who would be helpful and trustful (characteristics related to credibility and cognitive authority) (Table 22, example No. 7). The internet and websites taken together are characterized by the participants as sources that are used because of their characteristics of access, and characteristics related to credibility and cognitive authority. They are thought of as easily, simply and fast accessible, familiar and informative, because they allow the access to a lot of wide range information (the access related characteristics) (e.g. Table 22, example No. 8). Websites of some institutions are consulted because they are considered official and as providing accurate and verified information (the credibility and cognitive authority related characteristics) (e.g. Table 22, example No. 9). Social networking sites, including *YouTube*, *Facebook*, and forums are described as sources of information the participants consult mainly because of the characteristics related to access and to the form of information their provide. They are convenient, informative (allowing access to a lot of wide range information), familiar, fast, easily and freely accessible, and available (the characteristics related to access) (e.g. Table 22, example No. 10). Another important type of characteristics that the participant emphasize are these related to form in which information is presented. They reported being fond of sources that allow interactivity and offer information in visual, auditive, graphic and textual forms, explaining that information presented in various forms is easier to understand (e.g. Table 22, example No. 11). The participants also explained that they acquire information from *YouTubers* and forums that are reputable, which is evident in other users' comments and a high like/dislike ratio and because the information it provides s verifiable by comparing with information from other sources. This shows that social networking sites may also be consulted when characterized by some perceived credibility and cognitive authority (e.g. Table 22, example No. 12). Traditional information sources, a book, and a magazine, are reported to be used because they are perceived as a credible source which offers coherent information and therefore is easy to understand (a book), and convenient to access, but also reputable and providing current and precise information (a magazine) (Table 22,

examples No. 13 and No. 14). One participant described seeking information in documentary movies because of its visual format which makes information fast and easily accessible, and easy to understand (Table 22, example No. 15). The student agency was consulted because it is official place for information for the specific decision (Table 22, example No. 16).

#### 3.4.3.3.3. Credibility

To reveal how the participants assess the credibility of acquired information, the participants were asked whether they believed that the gained information was good, accurate and useful and that it might help them with their decision, with an additional question that asked what made them think so. In most of their answers, the participants focused on the credibility of information sources and gave reasons for believing that the consulted information source provides credible information, with only three answers referring to credibility of acquired information itself. In these three cases, the acquired information was considered credible because it made some sense to a decision-maker, because it matched one's opinion and because it seemed realistic. The following quotes illustrate the participants' words:

*I: Okay, did you believe that what Petra told you was a good advice and that you would find it useful in making your decision?*
*M5: Yes.*
*I: Why?*
*M5: Because it makes sense.*
*I: Okay.*
*M5: It makes sense and again, that's making the most out of opportunities. Because I have a chance to do it and why would I miss it if I can take a year off later on or something, and now the professor I want wants me, why would I miss it then.*
*…*
*I: Ok, tell me did you believe that what she told you in your conversations was good, somehow correct and useful for your decision?*
*M3: Well, yeah.*
*I: Why?*
*M3: Well, I don't know, I believed that it was okay because I was leaning more towards what she was suggesting to begin with, I was about 80 percent sure that I was going to leave, 20 percent that I wasn't, so, as soon as you hear something what supports your side, you are somehow more convinced that it is good than I would be if there was an entire group of people telling me that it's really bad and that my thoughts are wrong, maybe I would end up not leaving, but I don't know. Depends. I was never in that situation so I wouldn't know.*
*…*
*I: Do you believe that what you find there is accurate and that it can be useful for your decision?*
*M3: I think yes, because lots of these websites are very trustworthy. I mean, there are certain ones that are I don't know, confirmed.*
*I: Confirmed. And how do you know that they are confirmed?*
*M3: I think that it says that on the website, I don't know.*
*I: You don't know who confirms them?*
*M3: No, I don't know. But I mean, I don't check it like a 100 percent, but they seem really real.*

In most of their answers, the respondents describe characteristics of information sources which, in their opinion, should guarantee the credibility of information. This is why these text segments were analyzed in the part of the dissertation which deals with information source characteristics as well. The collected data indicate that they base their credibility assessment on belief that sources have certain characteristics that are crucial for providing credible information. Table 23 presents the information sources the participants reported using, summaries of their answers about the credibility, and information sources characteristics, that were given as reasons why the acquired information was considered credible.

| Source | Paraphrased and summarized answers | Criteria for credibility assessment |
|---|---|---|
| mother | The decision related to relations to other people | |
| | - she has experience (M4) | - the source is experienced |

| | | |
|---|---|---|
| | - mum is always right, she has more experience than I do, does not want something bad to happen to me (P6) | - the source is experienced<br>- the source is well-meaning |
| | The decision related to the appearance | |
| | - she would not lie (P1) | - the source is honest |
| | The decision related to university and career | |
| | - she is my mother and I believe her although she proved to be wrong in some cases, she is the main authority in my life (G1) | - the source is believable<br>- the source is an authority |
| | - in the past she has mostly been right, she knows what is best for me, I simply trust her, she would not do anything against my interest (M2) | - the source is trustworthy, based on the prior experience<br>- the source is well-meaning |
| | The decision related to training and sport | |
| | - I trust in her, she will always be on my side, she would always stand by me, she would never do anything bad for me, she has experience (M3) | - the source is trustworthy<br>- the source is supportive<br>- the source is well-meaning<br>- the source is experienced |
| | - she knows everything, she wants what is best for me (P4) | - the source is knowledgeable<br>- the source is well-meaning |
| father | The decision related to university and career | |
| | - he always wants accurate and verified information, I trust him, he wants me to succeed (P1) | - the source provides accurate and verified information<br>- the source is trustworthy<br>- the source is well-meaning |
| parents | The decision related to school activities | |
| | - they told me what they know, they have experience (P3) | - the source is experienced |
| | The decision related to getting a summer job | |
| | - I believe that it is true what my parents say (G6) | - the source is trustworthy |
| | - they have more experience (P4) | - the source is experienced |
| | The decision related to training and sport | |
| | - they support me in everything I do (P5) | - the source is supportive |
| | The decision related to health<br>- they have some experience, want what is best for me (G3) | - the source is experienced<br>- the source is well-meaning |
| sister | The decision related to relations to other people | |
| | - she has the experience, she knows what she talks about (M4) | - the source is experienced<br>- the source is knowledgeable |
| | The decision related to university and career | |
| | - she would not lie to me, she always wants what is best for me, she told me the truth - both sides, good and bad (P1) | - the source is honest<br>- the source is well-meaning |
| family member | The decision related to getting a job | |
| | - grandmother, she is trusted because of some prior experience with the source (P2) | - the source is trustworthy, based on prior experience |
| friend | The decision related to relations to other people | |
| | - I trust they give helpful advice, they want best for me, I can trust them, they have been with me for a while (M4) | - the source is trustworthy<br>- the source is well-meaning |
| | - she is my best friend, we have a special relationship, she has been with me in many difficult situations, we have a close connection, we are open and sincere (P6) | - the source is in a close relationship with a decision-maker<br>- the source is honest |
| | The decision related to the appearance | |
| | - she has experience (P1) | - the source is experienced |
| | The decision related to getting a job | |
| | - I trust them, I have known them for quite a while, they have never let me down (G6) | - the source is trustworthy |
| | - I trust them (P4) | - the source is trustworthy |
| | - she is one of my best friends (P4) | - the source is in a close relationship with a decision-maker |
| | The decision related to university and career | |
| | - has experience (G1) | - the source is experienced |
| | - have no reason to lie and not tell truth (G2) | - the source is honest |

| | | |
|---|---|---|
| | - her words make sense (M5) | - information makes sense |
| | - he has known me since I was little, he wants what is best for me, he would give me everything if he could, he would never deceive me (M6) | - the source is in close relationship with a decision-maker<br>- the source is well-meaning |
| | The decision related to training and sport | |
| | - it was in line with my opinion (M3) | - information matches to a decision maker's opinion |
| | - she was in the same situation (P4) | - the source is in the same decision situation<br>- able to understand |
| | The decision related to health | |
| | - she went through the same experience (tonsils surgery) (G3) | - the source is experienced<br>- the source was in the same decision situation |
| physician | The decision related to the appearance | |
| | - has education, knowledge, experience (P1) | - the source is knowledgeable<br>- the source is experienced |
| | - does not have a reason to lie, generally, they are considered reliable (P1) | - the source is reliable |
| | The decision related to training and sport | |
| | - she is a professional, so I guess she knows what it is all about (P5) | - the source is professional<br>- the source is knowledgeable |
| | The decision related to health | |
| | - has the experience, he knows what he is doing (G3) | - the source is experienced<br>- source is knowledgeable |
| university student | The decision related to university and career | |
| | - it does not make any sense for him to lie (G2) | - the source is honest |
| | - they told me their subjective opinion and I trusted them because they do not have any personal interest in persuading me to enroll the university (G5) | - the source is unbiased |
| | - a student who just graduated from the academy – experience (M6) | - the source is experienced |
| teacher | The decision related to school | |
| | - they want what is best for us, have knowledge and experience (P3) | - the source is well-meaning<br>- the source is knowledgeable<br>- the source is experienced |
| | - teacher's goal is that the student makes a progress (M6) | - the source is professional |
| website | The decision related to getting a job | |
| | - student agency website, it has been checked since many students have found jobs using the websites (P4) | - the source is trustworthy, based on prior experience<br>- the source is verified |
| | The decision related to university and career | |
| | - university webpages, it sounds formal, I use familiar webpages, well known, official, most often contains regulations, trademark, and license at the bottom (G1) | - the source is official<br>- the source is familiar<br>- the source is reputable<br>- the source is trustworthy, based on the prior experience |
| | - website - you must have a feeling to see if someone who writes is subjective, extreme and biased, also if the information is not well connected, if it contains much information that is not important, then it is not accurate (G2) | - the source is objective<br>- the source is unbiased<br>- the source provides important information |
| | - university websites - credibility is undisputed, it is their job to inform students (G2) | - the source is credible<br>- the source is professional |
| | - university website, the official website is a trusted source and has accurate factual information (G5) | - the source is official<br>- the source is trustworthy<br>- the source provides accurate factual information |
| | - university website necessarily contains information for future students (M2) | - the source is official |

| | | |
|---|---|---|
| | - it is the academy website, they have no reason to lie, important information must be accurate (M6) | - the source is official<br>- the source gives accurate information |
| | - it is the original university website, they would not give false information to students (P1) | - the source is official |
| *YouTube* | The decision related to university and career | |
| | - the *YouTubers* are praised, popular, they are praised in comments and likes that they tell good things (G1) | - the source is praised<br>- the source is popular |
| | - travel vlog, these YouTubers seem open, when you see their experience and what they have been through, you simply believe them, it is some kind of instinct (M3) | - the source is experienced<br>- the source is believable |
| | - travel vlogs, it seems somehow realistic (M3) | - the source information seems realistic |
| *Instagram* | The decision related to getting a job | |
| | - information distributed by some people I know (P4) | - the source is familiar |
| | The decision related to leisure time activities | |
| | - it is the festival page and therefore information is verified | - the source is official |
| book | The decision related to food and diet | |
| | - it is the trustful source, it passed some checks (G5) | - the source is trustworthy |
| magazine | The decision related to university and career | |
| | - a respected magazine, it has recent information (G4) | - the source is respected<br>- the source provides current information |
| flyer | The decision related to purchase | |
| | - good prior experience with the source (M1) | - the source is trustworthy, based on prior experience |
| student agency | The decision related to getting a job | |
| | - this is their job, they give official information (G6) | - the source is official |

**Table 23 – Criteria for credibility assessment, based on information source characteristics**

Table 23 shows that majority of the characteristics of information sources, that the participants' give as reasons why the acquired information is considered credible, include usual characteristics that relate to credibility of information sources: experienced, honest, believable, authority, trustworthy, knowledgeable, providing accurate, verified and current information, reliable, professional, official, reputable, credible, respected, unbiased. However, some of the characteristics describing interpersonal information sources are not connected to two main components of credibility – trustworthiness and competence, and other related concepts. They somehow stand out from what we usually see as credibility. These characteristics are: being well-meaning, meaning a source wants what is best for a decision-maker, being familiar to a decision-maker, being supportive, being in the same decision situation and being in a close relationship with a decision-maker. It seems that when it comes to interpersonal information sources, the participants value a caring and protective relationship (e.g. *she does not want something bad to happen to me; want what is best for me*), a close bond (e.g. *she is my mother and I believe her although she proved to be wrong in some cases, she is the main authority in my life*; *I simply trust her, she would not do anything against my interest; I trust in her, she will always be on my side, she would always stand by me, she would never do anything bad for me*) and some common history (e.g. *in the past she has mostly been right, she knows what is best for me*; *they have been with me for a while*; *I trust them, I have known them for quite a while, they have never let me down*; *he has known me since I was little, he wants what is best for me*), perceiving the interpersonal information sources as someone they can rely on which, in turn, makes them trust the source. Moreover, it seems that some of the participants are prone to replace and mistake the quality of close, caring, trusting, and strong relationship with the interpersonal sources of information with the quality of information which these interpersonal

sources provide, i.e. credibility of the provided information. This transformation of relationship quality to information quality is well-expressed in the following quotes:

*M4: Because, I don't know, I believe that they give helpful advice. Okay, perhaps that advice I will not fully use, but it still is worth asking them, their opinion is important in my life.*
*I: And what makes their opinion so important?*
*M4: Well, because they have been with me for a while and I believe that they want what's best for me, the same as I want for them and that I can trust them in a situation like this.*
...

*I: Ok, tell me did you believe that what he told you was good, somehow correct and useful for your decision?*
*M6: Yes, because he has known me since I was a kid and he wants what is best for me. He would give me everything if he could, and I think that he would never deceive me.*

Some characteristics attached to social networking sites that provide information that is considered somehow credible include popularity and believability in the sense that a decision-maker simply believes because it *seems realistic* and like *it is some kind of instinct*. Table 23.1 in Appendix 5 illustrates the participants' answers and the analysis process (Table 23.1 - Criteria for credibility assessment, based on information source characteristics – quotes, summaries and sources characteristics that serve as bases for credibility assessment, Appendix 5). Furthermore, the analysis showed that the participants often assess the credibility of information provided by one information source by comparing it with information gained from other sources. It seems that they do not take for granted the credibility of acquired information but tend to verify it by comparison. If information matched up, then they are considered accurate. The following quotes illustrate how some of the participants describe assessing information credibility by comparing information gained from different sources.

When elaborating on his decision to buy a laptop, a boy describes how he searches *YouTube* and the internet, compares information and believes that the information is accurate only when more people (on *YouTube* and the internet) give the same information.

*I: And tell me did you believe that what you found out was correct and useful and that it could help you?*
*M1: Yes. Because more people said the same thing about it. I mean, so one piece of information was spreading from for example one person, so the second person said the same thing, and then the third, fourth, fifth, because I didn't research this for five minutes or five days, but two months and I got pretty well-informed.*
*I: You did that much research on YouTube?*
*M1: I mean I did research on YouTube and on the internet.*
*I: So if I understood correctly, you researched on YouTube, so what did you get from these other people?*
*M1: Confirmation that another guy is going to say the same as the first, and another one, and another one, so it's not like only one person told me and that's good because one person said it had good speakers, another person said the same thing and shared same information in general, people who are totally different had the same complaints. (...)*
*M1: Now, it can be useful, good not so much, correct, it doesn't have to be correct at all. It can only be correct when a number of people are saying the same thing, the same information.*
*I: And tell me, did you believe that everything you found on the internet was good, correct, useful, and that it could help you?*
*M1: Well I did, yes.*
*I: Why?*
*M1: Again because, I would find the same information again and again, like the same things I had read on a website would show up in a YouTube video, and someone else would say it somewhere on the internet.*
*I: Oh, so you would compare the information you found?*
*M1: Yes, I would compare. I would compare and notice which pieces of information were drastically different because of course, not everybody was doing a review of one laptop only, they would have one that was a bit stronger and one that was a bit weaker, so. But when they were comparing prices they would use two alternatives that are, I mean, the same laptop but the price isn't for example 800 euros, but 900 or 1000, and then they would say the 800 one is a bit weaker, the 900 one is average, and the 1000 one is if you want like a really hardcore one or some intense gaming.*

One of the girls explained how she assessed the credibility of information acquired from documentary movies by seeking information from other sources and comparing the information.

*I: Did you believe that what you heard there was correct, useful, good?*
*G5: Not everything because they're pretty biased, vegetarian documentaries especially are very subjective, but I definitely found out some things that I then researched further, and I wouldn't if I hadn't seen them there.*
*I: Do you trust documentaries to give you correct, useful, good information about that topic and why?*
*G5: Partially. Again, because I think that some are pretty subjective and pretty biased, but like, some information is legitimate. And if it proves to be correct…*
*I: And how does it prove to be correct?*
*G5: Again, by searching the internet, checking multiple sources, so if it matches the new information then.*

The participants seem to be especially suspicious toward information gained on social networking sites. When it comes to information sources such as *Facebook*, *YouTube*, *Instagram*, and blog, it seems that they do not put much trust in acquired information and tend to assess it by comparing with information acquired from other sources. The results suggest that although they do not consider them fully credible, they still find some value in the information they provide. The information acquired by this type of source might not be taken very seriously but is still considered helpful as a form of opinion and advice, which is not decisive in the decision-making process but may help in some way.

In the following quote, a girl explains her doubts about information posted on *Facebook* and *Instagram:*

*I: Okay, do you believe Facebook, or do you believe that the people on Facebook are the ones that can give you useful information for making a decision regarding getting a job?*
*P4: No.*
*I: Why?*
*P4: Well not Facebook in particular because as much as people can be honest there, they can also give false information and I would have to check it additionally and maybe ask around if someone has worked there before, what was their experience like, I would never get into something like that on my own, I would ask others for their opinion first and if they had any previous experience with that person in that job and only then. (...)*
*I: Good. In general, do you believe that you can get good and useful information that can help you make a decision on Instagram?*
*P4: No, no.*
*I: Why?*
*P4: Well because these are social networks so what someone writes there doesn't have to be correct or true.*
*I: And why did you trust the source in this case?*
*P4: Only because I knew her personally. (...)*
*I: And did you believe that what you found out on forums was good, correct, useful, and that it would help you?*
*P4: Well it did help me, I can't say too much for example this thing with my friend, what helped more was what she told me herself, because anybody can write anything on these forums, it's not too reliable, that's why. It's not really the best option.*

Another girl also expressed some doubts about the accuracy of the information provided by *YouTube* channels and blogs and gives her reasons. However, she says that *it helps her a lot* anyway and somehow inspires her.

*I: I understand. What you heard or saw from those Youtubers, did you believe that what you found out was good, that it was correct, that it could be useful in making your decision?*
*M3: So I definitely did, I mean surely something further inspired me, but it's not like I will watch a video and be like oh yeah, they live like that so I'm going to as well.*
*I: So what is it like?*
*M3: I will be looking for a back-up plan like and always have something, something else to lean on because I can't lean on their information if I don't know them. Although that's what they do but not all of it has to be correct, true and doesn't always have to, I don't know they are, for example, in the US and everything's actually different than here.*
*I: And how do you estimate to what extent to believe what they're saying?*

*M3: Well I don't know. Somehow, when you know someone in person, you know that they won't give you false information if you're close at least. And on the internet, they don't really care who watches those videos. I mean, they do care and they're trying to fit in as much information as possible, but who knows if they, they get money from YouTube. So it's not, and they can't say how much they earn from YouTube, I think there's a prohibition, like it's prohibited. So who knows how much money they're really making, and they often talk about these earnings so it's better for me to take a look at a webpage that's credible. I don't know, blogs and that, I read that often too. It's like private lives too. I mean, all these things are similar and it's not like I'm going to make a decision based on that, but it will help me a lot. I think that it's easier to see that someone is doing it as well, so it's easier than to just leave not knowing anyone who has done it before.*

The following quote is from another girl who also doubts Facebook information, but also says that it helps in some way:

*I: Okay, and do you believe that what you found out that way, over Facebook and such, is accurate, useful and that it can help you with your decision?*
*P1: Well not so much, I'm always sceptical, I'll always trust my sister or official websites more than some advertisements and such, but also they made a decision easier because I see that others are interested too, that they may have the same questions so it feels a bit easier, but it's not what I base my decision on.*
*I: Okay, why is it not what your base your decision on?*
*P: Because somehow, they advertise anything, and I'm always sceptical about it because you never know and with the internet also, you never know because people say a lot of different things and there is always some lies and when we orders something online, it's never exactly what it seemed like. I mean, anyone can write something that isn't true on the internet.*

The last quote suggests that although the participants report doubting the credibility of some information gained on social networking sites, they still see some value in it. Although the information is not considered completely credible, it may be useful as opinion, advice or inspiration, if taken *with a grain of salt*. Another quote brings words of a girl who explains how useful information does not need to be objective and completely true. The girl who made the decision to stop eating meat explains how information given on *YouTube* may be subjective, but for the *YouTubers* who give that information, it is accurate and true. She takes such information into account, when processing her decision, and holds it useful to some extent, but does not rely completely on it.

*I: Okay, did you believe that what you found on YouTube was correct, useful and that it could help you?*
*G5: A lot less than the information I found in books, but then again there were more personal experiences on YouTube, rather than concrete facts. So yes, when it comes to people's experiences, I mostly took it as legitimate information.*
*I: Why?*
*G5: Because that's subjective so I figured that, even if it might not end up being true for me, it most likely is true for that person, and because even if I blindly believe it, it doesn't affect me so much that I would base my entire decision on it.*
*I: Okay, do you believe that it's Youtubers that can give you good, useful information or opinions on that topic?*
*G5: Well I think that this was more like, providing previous experiences by people who've been doing it longer.*
*I: Doing what longer?*
*G5: I mean, not eating meat longer.*
*I: Okay.*
*G5: So, simply some sort of experience, I looked at it more as a conversation, not exactly a conversation, but it's like I got told someone's experience, just over a social media platform.*

#### 3.4.3.3.4. Cognitive authority

As elaborated earlier, the concept of cognitive authority denotes giving trust to people or other information sources for gaining information from within the specific domain and includes a kind of influence that is considered proper. In this dissertation, cognitive authority refers to the phenomenon of giving trust to some information source to provide some useful information

(i.e. additional knowledge, advice, help) that may help in the decision-making process. Information sources that are considered cognitive authorities are thought worthy of belief and trusted to make a positive influence on adolescent decision making.

In order to find out who the cognitive authorities which influence the participants' everyday life decisions are, the participants were asked whether they believed that the specific information source may give useful information which would help them with their decisions, and what made them think so. They were also asked who, among the information sources that provided information, influenced their decision the most, and why was that so. The answers were coded as a cognitive authority in cases when the participants report believing that the source can give useful information to help with the decision, which means that it can make some positive influence on the decision-making process, and when the participants name the source which influenced their decision the most. This revealed who or what the participants perceive as influencing their decisions by providing help. Table 24 presents the cognitive authorities and the participants who mentioned they influenced their decisions.

| **Cognitive authority** | | **Participants** | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| parents | mother | G1 | M2 | M3 | M4 | M5 | P1 | P6 | | | |
| | father | P1 | | | | | | | | | |
| | parents | G3 | G6 | M3 | P2 | P4 | | | | | |
| family members | sister | M4 | P1 | | | | | | | | |
| | family member | P2 | | | | | | | | | |
| friends | | G1 | G3 | G6 | M2 | M3 | M4 | M5 | P1 | P4 | P6 |
| experts | physician | G3 | P1 | P5 | | | | | | | |
| | teacher | G5 | M6 | P2 | P3 | | | | | | |
| | university students | G5 | M6 | | | | | | | | |
| website (university) | | G5 | P1 | | | | | | | | |
| *YouTube* | | M1 | M3 | P5 | | | | | | | |
| book (library) | | G5 | | | | | | | | | |
| student agency | | P4 | | | | | | | | | |

**Table 24 – The participants' cognitive authorities**

It can be seen from Table 24 that most of the participants reported that those who are worthy of their trust, able to make some positive influence, and who actually influenced their decisions are their friends. Also, for many of them, parents are cognitive authorities, and especially mothers. Experts in a domain of the decision – physicians, teachers, and university students, were also reported as authorities, as well as some *YouTubers*, a book and a student employment agency. The following quote illustrates one of the answers. A boy explains why his friend, who is his godfather, is worthy of trust.

*I: Okay. And could you please just repeat why he as a person and as a, we could say the source of information, or a person who gave you advice, what makes him the one you trust, and why should you take his advice into consideration?*
*G1: Well I'll go a bit off-topic now, I'm a person who has trouble trusting people. If I trust someone, I'll value that person incredibly, because throughout life I've had people let me down and I lose trust in people easily because of what they had done to me, and I trust him as a person. As I stated, he's always been like by my family's side, he has never cheated anyone, he's always been good to us, always hung out with my brother, was always here to help me, I saw him as like an ideal godfather for my confirmation, so I really trust him.*

Table 24.1 presents the cognitive authorities and the decisions which make the context of their authority.

| Cognitive authority | | Decisions |
|---|---|---|
| parents | mother | university and career, relations to other people, appearance, training and sport |
| | father | university and career |
| | parents | health (tonsils surgery), job, university and career |
| family members | sister | relations to other people, university and career |
| | family member | job |
| friends | | health (tonsils surgery), job, university and career, relations to other people, appearance, training and sport |
| experts | physician | health (tonsils surgery), appearance, training and sport |
| | university students | university and career |
| | teacher | university and career, job, school |
| website (university) | | university and career |
| YouTube | | purchase, university and career, training and sport |
| book (library) | | food and diet |
| student agency | | Job |

**Table 24.1 – Cognitive authorities and decisions which make the context of the authority**

As Table 24.1 shows, friends are held for cognitive authorities who influence and help across diverse decisions such as health decisions, decisions related to finding a job, university and career, relations to other people, appearance and training and sport. Parents and family members are also perceived as authorities whose advice can help with diverse decisions. On the other hand, experts' authority seems to be limited within the domain of their expertise. However, although generally seeing friends and family members as worthy of trust to provide help with their decisions, the participants' answers show that they are aware of how cognitive authority is related to some specific domain. In some of their comments they explain how experts, as those who have domain-related knowledge and experience, can be more trusted than other sources. In the following quote, the girl who had tonsils surgery explains why, what she had heard from a physician, influenced her decision the most.

*I: I understand, I understand. Okay, here. Now, we talked about different people or sources - parents, the doctor, the friend, the internet. Out of everything that you found out, what impacted your decision the most?*
*G3: The doctor, definitely.*
*I: Okay, can you tell me why? Why him?*
*G3: Because that's what he does in life and he graduated from university and he examined me and he has done these things many times before I came and I think he knows best.*
*I: In comparison to, for example, your parents?*
*G3: Yes, yes, yes. I mean, he must know more than they do, that isn't their job and it isn't my friend's job either, so.*

This girl believes that the physician is educated in this domain and has more knowledge than her parents. Therefore, he had a stronger influence on her decision, which makes him more of an authority than parents. Another girl explains that her friend, who also attends music school and plans to enroll into a music academy, understands her decision situation better than her parents do, and can be more helpful.

*I: I understand. Tell me, out of everything you heard from others, what impacted your decision the most, and in what way? So you mentioned Petra, you mentioned your parents, what impacted your decision the most and why?*
*M5: Petra somehow put everything into a different perspective. So maybe I don't have the same opinion as she does, that I should rush there right now, actually, she doesn't have that opinion, but in some sense be in a hurry right now, jump at this opportunity, but then again, I know what I want, I know what I want, I know I have the opportunity to get into it, peacefully, with the professor I wanted, with a professor that's communicative and open, who motivates me to do something so I think that I should go, or I decided that I should go there, and if I don't like it, I don't like it, there's always something I can do, but why not. (...) My parents don't do music,*

*they're on the other side completely and, well music isn't a job, it's a way of life that once you're a part of it's very hard to get out of, and if you get out, it's very hard to get back into it. And I mean, it's not an 8 am to 4 pm job but an actual way of life, and they didn't understand that until I explained it again and again and again, while Petra, of course, knows that because she's a part of it and I'll listen to someone who's realistic about it more, who can see my side of things too, who can understand what I think. and uh, and say something of their own they think could help too.*

As she described, her friend offered another perspective that influenced her decision, unlike her parents who do not understand the way musicians feel about their profession.

The analysis also revealed the reasons why the participants believe their cognitive authorities are worthy of trust. The answers were coded as bases of authority, extracted and analyzed. The bases of authority were also extracted from other text segments, in which the participants described why they trust the information sources, giving the reasons for that. Table 24.2 presents the information sources, the participants' paraphrased and summarized answers and the bases of authority that the participants reported as reasons why they give their trust to specific sources of information, i.e. cognitive authority.

| **Sources** | | **Paraphrased and summarized answers** | **Bases of authority** |
|---|---|---|---|
| parents | mother | The decision related to relations to other people | |
| | | - she has more experience in this, I know she will always be by my side when something happens, I can always count on her, I can call her and talk to her, and this makes me feel safer (M4) | - experience<br>- close relationship<br>- gives support |
| | | - she has been through a lot herself (M5) | - experience |
| | | - my mum is with me whenever I need her, just as my best friend is, no matter how difficult situation I face is, they always give me the best advice, and I know that none of them wishes me something bad, they are just here to help and listen to me, always (P6) | - gives support<br>- well-meaning<br>- helpful |
| | | The decision related to the appearance | |
| | | - I know that she would not lie (P1) | - honest |
| | | The decision related to university and career | |
| | | - I trust my mother most, she has always supported me, my mother is a basis of everything, always gives me a second opinion, gives me realistic picture of me, she is main authority in my life although she has proven to be wrong sometimes (G1) | - trusted<br>- gives support<br>- objective |
| | | - first, I talked to my mum because parents are the most important, they gave us most of the information and they know what is best; mums are here to protect us from our bad decisions, I trust my mum that she wants what is best for me and I know that she would make a positive contribution to my decision (M2) | - knowledge<br>- protect<br>- well-meaning<br>- close relationship |
| | | The decision related to training and sport | |
| | | - I know that my mother will always be on my side, she would always stand by me even if I did something horrible, she would never do anything against my interest, also, she knows what it is like when someone quits dancing because she is in this dancing organization (…) you always trust most to your family, you have some connection and you know they would not lie (M3) | - support<br>- well-meaning<br>- knowledge<br>- trusted<br>- close relationship<br>- honest |
| | father | The decision related to university and career | |
| | | - he always wants accurate information and I believe that he will give me 100 percent verified information, and also, he wants me to succeed so I don't have any doubts about him (P1) | - credible<br>- well-meaning<br>- trusted |
| | parents | The decision related to getting a summer job | |
| | | - they know me best and they know what I can do (G6) | - knowledge |
| | | - they've been through more than I have (P2) | - experience |

| | | | |
|---|---|---|---|
| | | - they have more experience and know what to consider when looking for a job, and so far, they have always been right, I trust them the most (P4) | - experience<br>- trusted |
| | | The decision related to university and career | |
| | | - they have experience with working and traveling, they are trying to gather information because they want to help (M3) | - experience<br>- helpful |
| | | The decision related to training and sport | |
| | | - I trust a physician as a professional, but I have more trust in my parents because I've been living with them all my life (P5) | - trusted |
| | | The decision related to health | |
| | | - they can advise me from what they hear and know, which is almost as much as I, but I believe I have to trust them always because they still know something (G3) | - trusted<br>- knowledge |
| family members | sister | The decision related to relations to other people | |
| | | - similar things had happened to her too, and she knew what to do about them, she would never betray me (M4) | - experience<br>- knowledge<br>- trusted |
| | | The decision related to university and career | |
| | | - she is there and attends university, she can ask someone, I'm sure she will put effort in looking for information and am 100 percent sure that she will give me accurate information (…) she knows how many people from Croatia come there because university is free of charge, she has been there for five years now so I know that she will give me good information, that she will be honest, and she is also my sister and she does what is in my interest (P1) | - experience<br>- trusted<br>- credible<br>- knowledge<br>- well-meaning<br>- honest |
| | family member | The decision related to getting a job | |
| | | - grandmother, she's been through laboratories in hospitals and also through private laboratories, she is a physician (P2) | - experience |
| friends | | The decision related to relations to other people | |
| | | - some of them were in similar situations and went through similar things so I believe they could give me some good advice (M4) | - experience |
| | | - we understand each other, we are honest with each other (M5) | - can understand<br>- honest |
| | | - romantic partner, I trust him and believe in his advice (M5) | - trusted |
| | | - she is always there for me, we've been through a lot together, she doesn't want anything bad for me (P6) | - close relationship<br>- well-meaning |
| | | The decision related to the appearance | |
| | | - I believed her because she has already done it, but I also wanted talk to others as well (…) another friend, we know each other very long and I believe that she would never lie to me, I know that she would be 100 honest (P1) | - experience<br>- trusted<br>- honest |
| | | The decision related to getting a job | |
| | | - friends who have experience in working summer jobs, they have the first-hand experience and it's logical to ask them; they are closer to my age than my parents are, they would understand me better (G6) | - experience<br>- similar/alike<br>- can understand |
| | | The decision related to university and career | |
| | | - he is my godfather, a close family friend and is a student at university I'm interested in, I trust him, he has always been around my family, he never deceived anyone, he has always helped me (G1) | - experience<br>- trusted<br>- disinclined to deceive<br>- close relationship<br>- helpful |
| | | - we are in the same situation and they would not lie, I trust my friends that they want what is best for me (M2) | - same situation<br>- honest<br>- trusted<br>- well-meaning |
| | | - we know each other very well, we talk about problems and help each other to cope, seek advice from each other, I trust her (…) she gave me a new perspective, she is also into music and is realistic about it, she can see my side, can understand me and say something that would help (M5) | - close relationship<br>- knowledge<br>- can understand |

| | | | |
|---|---|---|---|
| | | - I asked one boy who is into that, his opinion matters because he knows more than I do, has more experience (M6) | - knowledge<br>- experience |
| | | The decision related to training and sport | |
| | | - we're close, we're going through the same experience and I believe that it is important to ask for help someone who understands or is in the same situation (M3) | - close relationship<br>- same situation<br>- can understand |
| | | - we think alike, we are into this together for ages, we kind of *clicked*, we hang out and are friends (P4) | - similar/alike<br>- close relationship |
| | | The decision related to health | |
| | | - she has been through it herself and knows what it's like (G3) | - experience<br>- knowledge |
| experts | physician | The decision related to the appearance | |
| | | - he has no reason to lie and give me false information, you just trust to physician, he knows about my body because of all the education he has been through and would give me accurate information (…) he was honest, he did not have a reason to lie, he was neutral and told me that the surgery is not necessary, but If I wasn't happy, I could have the surgery, so I trusted him most (P1) | - honest<br>- trusted<br>- knowledge<br>- education<br>- gives accurate information<br>- unbiased |
| | | The decision related to training and sport | |
| | | - she went to university and all that, specializing (…) I believe that she has more experience and knowledge about this subject than my parents have (P5) | - education<br>- experience<br>- knowledge |
| | | The decision related to health | |
| | | - this is what he does, people go to him when they have a problem because he has MS in medicine; this is what he does, he has MS in medicine, he has done these things many times before so I believe he knows best (G3) | - education<br>- knowledge<br>- experience |
| | university student | The decision related to university and career | |
| | | - they come from a situation like mine, the experience is similar so perhaps their impressions would also be like mine (G5) | - experience<br>- similar situation |
| | | - he went through this, he attended this academy and I believe he knows, we are close, so I asked (M6) | - knowledge<br>- close relationship |
| | teacher | The decision related to school | |
| | | - she is very approachable and honest and with this honesty, you get some trust in that person (…) they had already been through what I was going through, they were my teachers and part of my education, they educate me and I trusted them, and also they had friendly approach (P3) | - approachable<br>- honest<br>- trusted<br>- experience<br>- official<br>- friendly |
| | | The decision related to getting a job | |
| | | - he organizes such things (school-based traineeship) for ages and is experienced in this, he knows where and how it should be done (P2) | - experience<br>- knowledge |
| | | The decision related to university and career | |
| | | - she has experience with things like this (G5) | - experience |
| | | - he has been through the same thing I am going through, some similar music academy, he was in my shoes and can tell me what to do (M6) | - experience |
| website | | The decision related to university and career | |
| | | - university website, I take the information which it gives as 100 percent accurate, I believe it should be accurate (G5) | - official<br>- trusted |
| | | - university website, it would not be moral to give false information because it is an institution which must be honest to students and because of that I believe that what they write is accurate (P1) | - official<br>- trusted |
| *YouTube*, blog | | The decision related to university and career | |
| | | - it inspires you when you have a decision to make, and you are not 100 percent sure, and you watch these *YouTubers* and read blogs, then you understand that there are many ways you can manage/get by even without money and then you think "Why not?" (M3) | - inspires<br>- encourages |
| | | The decision related to purchase | |

| | | |
|---|---|---|
| | - the video seemed of good quality, it made me feel safe, it made me feel trust, I believed that this man knows what he is doing; it seemed of good quality, professional and convincing (M1) | - of a good quality<br>- trust<br>- knowledge<br>- professional<br>- convincing |
| | The decision related to training and sport | |
| | - some *YouTubers*, I can see that they helped to many other people, for example in the series "Život na vagi" which I watch with my parents I can see the transformation of these people, how they helped them and affected them positively (P5) | - proven to help in the TV show |
| book (from a library) | The decision related to food and diet | |
| | - I trust books the most, I got most of the exact and accurate information from books and I based my decision on this information, and not on some subjective feeling (G5) | - trust<br>- gives accurate information |
| student agency | The decision related to getting a job | |
| | - it employs students exclusively and offers jobs which would be acceptable to us (P4) | - official (this is what they do) |

**Table 24.2 – Bases of cognitive authority**

Table 24.3 in Appendix 5 illustrates the participants' answers about the reasons why someone or something is believed worthy of authority and the process of analysis (Table 24.3 - Bases of cognitive authority – quotes, summaries, and bases of authority, Appendix 5).

According to a general understanding of the concept of cognitive authority, it is expected that interpersonal information sources are considered deserving of cognitive authority if they are competent, experts in the field, knowledgeable, skilled and educated, if they are thought highly of, if they are trusted, perceived as competent or successful, experienced or reputable.[566] When it comes to impersonal information sources, such as websites or some institutions, we can expect that they are thought worthy of authority if they are considered worthy of belief and credible. We can see that many of the bases of authority from the Table 24.2 align with such an understanding of bases of authority or reasons why a source would be considered worthy of trust to influence one's decisions. However, there are also some of the reasons given for holding someone or something worthy of authority, which include some new attributes, important to the participants.

When it comes to interpersonal information sources, parents and other family members are held worthy of trust to provide helpful information for making a decision because of their knowledge and experience, and because they are thought of as credible, trusted, honest, objective. Some new attributes that the participants use to explain why they consider their sources worthy of authority are: a person worthy of authority means well and wants what is best for a decision-maker, he or she gives support, is helpful and works to protect a decision-maker, and is in close relationship with a decision-maker. It seems that these new attributes highlight the importance of quality of the relationship between a decision-maker and a person who is believed worthy of authority, in construction of cognitive authority of the source. Friends are believed to be worthy of trust to positively influence on the decision-making process by providing information because of their knowledge and experience, and also because they are trusted, honest and disinclined to deceive, which are usual reasons for considering someone worthy of authority. Some new reasons that arise from the participants' answers are that they mean well and want what is best for a decision-maker, that they are in a close relationship with a decision-maker, and that they are similar to a decision-maker and/or in the same decision

[566] Cf. Wilson, Patrick. Second-Hand. P. 20-28; Rieh, Soo Y. Credibility. P. 1340.

situation, which makes them able to understand their position. Like in the case of family members, these new attributes that relate to the concept of cognitive authority emphasize the dimension of quality of relationship in the construction of cognitive authority. Moreover, people who have special knowledge in the domain of a decision - physicians, teachers, and university students, are described as worthy of trust because of knowledge, education, experience and ability to give accurate information, and because they are trusted, honest, official and unbiased. Just like in cases with family members and friends, the participants also add some new attributes to their authorities and describe them as friendly and approachable, being in a similar situation and being in a close relationship with them. On the other hand, university websites, are considered worthy of trust to influence the decision which university to enroll into because they are official and therefore trusted. When explaining how *YouTubers* and bloggers influence her decision about future life and why she thinks they are worthy of her trust, one girl described how they inspire and encourage her, without giving deeper reasons. On the other hand, another participant gives some formal reasons for giving his trust to a *YouTuber* who provided some helpful information for laptop purchase. The video seemed to be of good quality, professional and convincing, which made the participant feel safe and inclined to trust the *YouTuber*. The third participant who reported believing to *YouTubers* explained that she saw them giving helpful advice in some TV show and that the given advice worked. These answers open some new research topics which need to be addressed, considering the popularity of the *YouTube* channel, and social networking sites, in general among adolescents. Finally, a book from a library and a student employment agency seem to be trusted for traditional attributes of cognitive authority – they are trusted, believed to give accurate information and official.

The analysis did not seek for a deeper understanding of a kind of influence the reported cognitive authorities make, although it would be useful to find out in some future work what kind of positive influence different types of cognitive authorities provide (e.g. parents versus *YouTubers*). For example, the conversation with one girl offers an explanation that in her case, when deciding about future, *YouTubers* offer inspiration by showing the lifestyle she admires, while her parents provide the voice of reason.

Aiming to capture the bases of authority which serve as an assessment of authority of competing information sources which provide diverse information that are somehow in conflict, the participants were asked what they did when they acquired information from different places that disagreed with each other, when they acquired information that was in conflict with their prior knowledge, and when they acquired information they did not like and/or was not in line with their thinking about their decision (the matching interview questions are questions 10, 11 and 12 in the interview guide, in Appendix 4). The interviews elicited five descriptions of weighing the acquired competing information. The participants explained how they judged which sources to trust, and the answers were coded as bases of authority. Table 24.4 presents competing sources, the source which was given more authority and the bases of its authority.

| **Competing sources** | **Cognitive authority** | **Bases of authority** |
|---|---|---|
| other people vs. other people | people who were with me, who know me and understand me, and do not judge | - a close relationship<br>- knowledge<br>- understanding<br>- not judgemental |
| sister, university website, intermediary agency, vs. a friend (P1) | sister, the university website, the intermediary agency | - experience (sister)<br>- official (university website)<br>- professional (intermediary agency) |
| physician vs. friend | physician | - friends' situation is different from mine |

| | | |
|---|---|---|
| | | - educated<br>- objective<br>- experienced |
| friend vs. friend | the friend who is more similar/alike to her, who thinks alike | - similar/alike<br>- similar thinking |
| mother vs. friend | mother | - experience<br>- wants to protect<br>- well-meaning |

**Table 24.4 - Competing information sources, the source which was given more of authority and the bases of its authority**

It is visible from the Table 24.4 that the bases for authority are the same as these listed in Table 24.2. This means that when assessing the authority of competing information sources, the participants use the same criteria or bases of authority. To illustrate the participants' answers and the process of analysis, Table 24.5 in Appendix 5 presents the quotes from the participants' answers, competing information sources, the source which was given more of authority and the bases of its authority (Table 24.5 - Competing information sources, the source which was given more of authority and the bases of its authority, Appendix 5). One participant mentioned acquiring conflict information from her friend on one side, and university website, her sister (who already studies in Denmark, where she wants to go), and an intermediary agency on the other side. She trusted more the university website, the sister, and the agency. She explains trusting the university website by stating that it is expected of institutional website to provide verified information:

*P1: Well, because my sister took this test and got in, and I don't believe that they would present the university on the website by giving false information, and also the agency which goes from school to school, they should have verified information.*

#### 3.4.3.3.5. Types of help the acquired information provides

Finally, to find out what kind of help the information sources provide, the participants were asked how the information acquired from specific information sources helped in the decision-making process. After the first reading of the transcripts, two types of help reported by the participants, were recognized. These types of help correspond with the types of help recognized by Julien and therefore were coded by categories of *instrumental help* and *emotional help*, identified in her work. Instrumental help assists the participants to gain ideas, improve understanding, make plans and decisions, while emotional help motivates them, provides reassurance, confirmation, and support and makes the process calmer and easier.[567]

In this study, the text segments coded as instrumental help include the participants' answers which describe getting help as getting information and/or knowledge, getting second opinion, opening new possibilities, help in getting an opinion and offering other opinion, offering more decision alternatives, prompting to rethink a decision and to broaden horizons, to consider other decision options, think deeper, giving reasons for one of the options, directing toward one of the decision options, giving another perspective, help in sorting out one's thoughts, narrowing down the number of decision options. The sources reported by the participants to provide instrumental help are friends, *YouTube* video (*YouTubers*), *Instagram*, family members (grandmother, sister), university students, physicians, the internet (*Google*, websites, internet portal), teachers, documentary movies, parents (mother), student agency. The acquired

[567] Cf. Julien, Heidi. How does information. P. 89.; Julien, Heidi. Adolescent career. P. 377-378.; Julien, Heidi. How career information. P. 376.-378.

information comes in the form of factual information, information from other people's experiences with the same or similar situation (when it comes to human sources), advice and opinion. The summarized participants' answers and the sources which provided them are presented in Table 25 in Appendix 5 (Table 25 - Instrumental help – summarized answers about type of help which the information sources provided, Appendix 5). In the quote that illustrates getting instrumental help, a girl describes how the information acquired from the students, who attend the university of her interest, helps her in making her decision.

*I: Okay, how did the things you heard help you make a decision?*
*G5: Well it had more to do with practical information about living and studying there and what it all looks like, so I decided, so when I was looking at purely objective facts on university websites, I didn't have that subjective part and some things I tried to find out but couldn't, like how hard it is to find housing, how hard it is for a Croatian student to settle in in Italy and things like that are what I could find out from them. So it was pretty useful when it comes to that.*

Another example illustrates how the information given by her parents prompted a girl to rethink and considering other possibilities and widened her horizon.

*I: And tell me, did what they said help you and if it did, in what way?*
*M3: Well it helped me to, for example, firstly, I didn't even want to think about university, but now after they've told me about I don't know, about the future after that journey, because I'm not gonna be 60 and living in a van, so they helped me think about it, to widen my horizons, let's say, not to just go, because if I had to manage these things from the internet alone, maybe I'd go on that journey or something and then it would be very hard for me later, maybe I wouldn't have money and so, and now I'm making up a plan B.*

The text segments that are coded as emotional help include the answers which describe how the help provided encouraged and motivated the participants, how the information sources provided support, assurance, and comfort, how they gave approval, helped the participants to calm down, inspired them, boosted self-confidence and made things easier and more relaxed. This kind of help was provided by parents and family members, friends, physicians, teachers, university students, and *YouTubers* and bloggers. The summarized participants' answers and the sources which provided them are presented in Table 25.1 in Appendix 5 (Table 25.1 - Emotional help – summarized answers about type of help which the information sources provided, Appendix 5). In the quote which illustrates emotional help, a girl explains how information acquired from *YouTubers* who work and travel, which is something she would like to do after graduating high school, provide her comfort.

*I: I understand. Did what you found out from YouTubers help you make that decision, and in what way? Or is it helping you, since you haven't made up your mind yet?*
*M3: I think it's helping me.*
*I: But in what way?*
*M3: Well in a way, when you see, it's easier when you see someone doing the same thing as you are.*
*I: Why is it easier?*
*M3: I don't feel alone in it if that makes sense.*
*I: Right, it does make sense. Can you think about what that gives you, how it*
*M3: Well I think that it's just some sort of comfort, let's say. I think that it's not some correct and useful information, but it's just easier. It's a feeling.*

Another example shows how a conversation with a friend about music academy they are about to enroll into boosted a girl's self-confidence and provided support.

*I: In what way did that affect your decision, your conversations? Did it help you, and how?*
*M5: Of course they help, these conversations help because you know you're not alone in this (...) it probably helps your confidence because you get the feeling that you're not alone and that you can do this, someone will always help you if you need something, they'll always, either these people will help you or someone else will, and you know that if things get difficult you have someone to lean on.*

Moreover, some information sources provided both types of help, instrumental and emotional: parents and family members, friends, physicians, teachers, university students, and YouTubers. The following quotes illustrate this type of help, reported by the participants. One girl describes how a physician explained a surgery procedure and provided and assurance when she was making a decision about having cosmetic ear surgery.

*I: How did what you found out from the doctor help you make the decision?*
*P1: It helped a lot because he explained what would happen and what's happening and that he would be there, that he would perform surgery on me, that I shouldn't worry and he somehow made everything easier for me so helped me a lot in making that decision.*

In another example, a girl who decided not to apply to music academy in Ljubljana, because she thought that there is not enough information available that would allow her to plan and prepare, explains how it made her stick to her decision when she heard from her friends that they would not apply either.

*I: Did that entire interaction and conversations with them about that decision help you in any way?*
*M2: Yes, it helped me because I heard their decision too, I mean, what they decided to do. I was the first one who got the idea to take the entrance exam and I told them and asked them what they were going to do. And then they said that they wouldn't take the entrance exam so we talked about the options for a bit, why yes, why no, and it helped me a lot because they're in the same situation as I am and their opinion, their decision will help me make mine.*
*I: And in what way?*
*M2: Because if someone's taking it and is confident enough that they can take it even if there's not enough information and they didn't send in their paperwork, then I can be confident enough to do the same thing, even though I know close to nothing.*
*I: And since that didn't happen, in what way did this help you?*
*M2: Well in the same way actually, because I said I wouldn't take it, but for every decision, always, there's a what if, and of course I wasn't 100% sure about that decision because when I talked to my friends about it, I hadn't even talked to my mom yet but had just made a decision on my own so it still wasn't 100% certain, but then I talked to my friends and when they said that they weren't going I'm not going either, then I was more certain because they're not confident enough to go either.*

#### 3.4.3.4. Summary of research question 3

The third research question aimed at finding out how adolescents select sources of information when they make decisions in everyday life. The focus group interviews and the individual interviews results show that the participants use plenty of diverse information sources to acquire helpful information and seek information from two main types of information sources: interpersonal sources of information, and sources that are available online, on the internet. Traditional information sources, such as books, magazines, and newspapers, were barely mentioned by the participants, and only one participant mentioned a library. Interpersonal information sources the participants reported turning to include family members (parents, siblings, and others), friends and peers and people with experience and knowledge in the domain of a decision (such as physicians, teachers, and university students). The sources available on the internet include the internet in general, usually accessed using *Google* search engine, specialized websites and social networking sites (such as forums, *YouTube*, *Instagram*, and *Facebook*). The focus group results indicate that the perceived significance of the decision at hand influences information behavior, including how the participants select information sources. However, the survey results contradict to this hypothesis and do not show many differences in the participants' propensity towards using the types information sources when making the most and the least significant decision, but rather reveal the same preference for using one type of information sources, for both the most and the least significant decision – the

preference for personal sources of information. The survey results add to the findings by revealing the participants' tendency towards consulting people who have knowledge and experience related to the decision, family members, and friends and peers as sources they would consult. On the other hand, the participants showed that they are less inclined towards impersonal information sources and that they do not think of social networking sites as information sources that may provide helpful information for making decisions. Overall, the results of all three research phases show that the participants seek helpful information for making their everyday life decisions from a variety of information sources but prefer consulting other people. The focus group interviews revealed that the participants reflect upon the selection of information sources which they consult for helpful information. The results show that the information source characteristics of information availability and accessibility somehow direct the selection of information sources, that the participants are aware of the issues of credibility and cognitive authority, considering the specific others deserving of cognitive authority based on some specific bases of authority (e.g. experience and knowledge in the decision domain, honesty, quality of the relationship with a decision-maker, etc.). To take a step further, the survey investigated the participants' opinions on the importance of specific source characteristics when seeking information for making the decision they perceive as the most, and as the least significant for their lives, following possible differences in the participants' information behavior identified in the focus group interviews. Again, the results do not reveal a lot of differences - for making both, the most and the least significant decision, the participants believe it is the most important to turn to information sources that provide accurate information, and that it is important that information source is easy to access, easy to use and that it allows them to acquire information quickly. However, the participants were not sure whether the anonymity which a source provides is important to them when they choose information sources that would provide helpful information. The focus group interview and the survey results are proved and deepened in individual interviews. Three closely related, yet different concepts were investigated: characteristics of information sources that serve as the criteria for source selection, information credibility, and cognitive authority. The interview results contribute to understanding how the participants select information sources by identification of the information source characteristics, that were identified in the individual interviews from the participants' answers as the reasons or criteria that serve for the selection of information sources. The identified information source characteristics could be divided in four groups: (1) the characteristics of information sources that relate to credibility and cognitive authority (e.g. knowledgeable, competent, reputable), (2) other personal characteristics that the participants attach to information source they tend to consult for helpful information (e.g. being helpful, understanding, supportive, confidential), (3) the information source characteristics that relate to accessibility of information sources (e.g. being easy, fast and simply accessible), and (4) the information source characteristics that refer to the form in which an information comes (visual, auditive and textual, and interactive). Moreover, the interview results contribute to understanding of the participants' judgments on the credibility of acquired information by revealing that they assess the information mainly basing on the characteristics of the information sources which provided the information. Some of the criteria used for judgment about the credibility of information are the characteristics of information sources which correspond with two main components of credibility, competence in some area and trustworthiness (e.g. experienced, honest, knowledgeable, etc.), but also on some of the personal characteristics of interpersonal information sources which somehow stand out from

what we usually see as credibility, such as being well-meaning, being familiar to a decision-maker, supportive, etc. The participants value a caring and protective relationship, a close bond, and some common history, perceiving the interpersonal information sources as someone they can rely on, which in turn makes them trust the source. This suggests that some of the participants might mistake the quality of relationship with interpersonal information sources with the quality or credibility o information that they provide. The credibility of information acquired on some social networking sites, such as *YouTube*, are based on characteristics such as popularity and reputation in the user community. Moreover, the results show that the participants tend to verify the accuracy of information by comparing information acquired from different information sources and that even if the information source is not considered fully credible, the acquired information may still have some value as a form of helpful opinion and advice, which is not decisive in making a decision, but may help in some way. The interview results contribute to answering the third research question by revealing who the participants' cognitive authorities are and what makes them worthy of authority. The findings show that the cognitive authorities include mostly their friends, parents, especially mothers, and experts in the domain of the decision they are making, such as physicians, teachers, and university students, and in some cases some *YouTubers*. Likewise, information sources that are perceived as somehow official, such as student employment agency and university websites, as well as library books, are perceived as worthy of authority. The reasons why the participants hold them worthy of authority, or bases of authority, were also identified, and in many cases include the bases such as experience, knowledge, honesty, trust, perceived objectivity and being disinclined to deceive, which align with a general understanding of the concept of cognitive authority describing information sources deserving of cognitive authority as competent, expert in the field, knowledgeable, and alike. However, for interpersonal sources of information that present their cognitive authorities, the participants gave some new reasons for believing a source worthy of authority, such as source meaning well and wants what is best for a decision-maker, giving support, being helpful, being in a close relationship with a decision-maker, and alike. In cases of *YouTube* videos and their authors, the participants reported basing their authority on surface cues such as a good quality of a video which makes it look professional and convincing and their appearance in a television show. In one case of giving authority to a website over a friend, when the sources provided conflict information, the authority was given to the website because it was expected that an institutional website provided verified information. Finally, the interview results reveal that the participants need and get two main types of help from the information sources they consulted: instrumental help and emotional help. Instrumental help assists in increasing knowledge and deepening understanding of the decision situations they deal with by giving information and knowledge, offering second opinion and another perspective on the situation, by encouraging to think deeper and rethink a decision, to broaden a horizon and consider another decision options, and alike. Emotional help includes encouragement, inspiration, motivation, support, assurance, comfort and approval, boosting self-confidence, making things easier and more relaxed, helping to calm down.

### 3.4.4. Research question 4: To what extent does information serve as a basis in adolescent everyday life decision-making process?

#### 3.4.4.1. Focus group results

Generally, the conversations within the groups of students were about what they do when they make decisions. The transcripts of the focus group sessions allow us to extricate 65 descriptions of how the participants arrive at a decision. The descriptions were analyzed to reveal how the respondents describe making the decisions, as their self-report. In most of the descriptions, the respondents were talking about *thinking* and *seeking information* or *getting informed*. Moreover, they were mentioning *assessing* and *considering possible solutions*, *considering the goal*, decision *consequences*, and decision *outcome* as well as *considering benefits and drawbacks*, *good sides and bad sides* of a decision which may come as the decision outcome. The participants were also talking about *weighing decision alternatives*. Furthermore, the respondents were talking about *decision situation analysis*, *sorting out* and *considering priorities* and thinking about what is *a moral thing to do*. The participants were mentioning time in two ways, they pointed out the necessity of thinking about a decision within a wider time span and the necessity of *giving it a time* or *taking time for making a decision*. One participant explained that it is important to set a decision aside and let it *grow mature*. They were also talking about the *unconscious*, feelings, and instincts. They were explaining that sometimes they decide because they *feel like it* or because they are in a specific *mood*. One of the boys reported not thinking when considering *minor* decisions but seeking information for *bigger* decisions. The following quotes illustrate how they explained what they do when they make decisions.

When asked what they would do if faced with some big or important decision which may influence their life, one of the respondents answered:

M8: *First, I would think about it, maybe talk to someone. I would talk to my parents first, then I would write down all positive and negative sides so I could see what's good and bad about it and I would think about the future, what my life would be like if I did it. For example, if I decide on a certain school, I would think about what my life will be like if this is to be my vocation. I would think about that and consult everyone I know about it. I would ask my parents, even the people I don't know. I would ask everyone to see what they all thought. And then, probably some of that information would confirm what I was thinking and maybe some of them would offer me a new perspective. So based on all that, I would make a decision. Regardless if it's a good one or a bad one. If it's a bad one, then I would say, ok, it's a bad choice but at least I did it myself and it was a decision that was thought over well.*
M3: *I think we all feel the same.*
M7: *Yes*
(…)
Moderator: *So what do you do when you enter into a conflict with a friend or have some unresolved issues with them, how do you decide what to do then?*
G6*: I act instinctively, I don't really think it through much.*

At the end of the last session, the respondents were asked whether the sessions made them think more about making decisions, one of the respondents answered:

Moderator: *Have you started thinking more about the decisions you make?*
More respondents: *No, no*
G7: *I never think about it, I don't really think that it is a decision I'm making.*
G5: *You're not aware of it.*
Moderator: *So most of you or you all think that you are not aware when you are making a decision?*
G1: *Well, not really*
G5: *No, you don't think about it like ''So, I'm making a decision right now''.*

G2: *Well, until now, I haven't been really thinking that I was making a decision at a certain moment, it was just like, you do things.*
G5*: Like you don't really think about breathing.*

#### 3.4.4.2. Survey results

The results presented in Table 3 (in the section presenting the results to the research question 1) which reveal the participants' the perception of having information needs, arising from specific decision situations, show that the respondents perceive having information needs to the greatest extent only for information needs arising from a decision when selecting a university or future occupation (M=4,30; SD=0,893).

**a) Adolescents' opinions on what should serve as a basis for making the most significant decision**

The survey aimed at revealing adolescents' opinions about what should serve as a basis for making the decision they perceive as the most significant (among the decisions listed in task 2). The analysis of arithmetic mean for the statements which assessed the participants' opinions showed that, on average, they believe it is most important to think the decision over really well (M=4,62; SD=O,656). Moreover, to a lesser extent, they believe that they need to have appropriate information (M=4,37; SD=0,754), to follow intuition and/or instinct (M=3,74; SD=0,986), and feelings and/or mood (M=3,51; SD=1,107). The participants showed that they do not believe that the statement about not being aware of making the most significant decision refers to them (M=2,18; SD=1,198). The results may be found in Table 26 – The participants' opinions on what should serve as a basis for making the most significant decision.

| | M | SD | Does not refer to me at all | | Mostly does not refer to me. | | Neutral. | | Mostly refers to me. | | Fully refers to me. | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | f | % | f | % | f | % | f | % | f | % | f | % |
| I have to **think it over really well**. | 4,62 | ,656 | 1 | 0,4 | 3 | 1,1 | 11 | 4,1 | 68 | 25,1 | 187 | 69,3 | 270 | 100,0 |
| I have to have **appropriate information to know as much as possible**. | 4,37 | ,754 | 3 | 1,1 | 2 | 0,8 | 21 | 7,8 | 110 | 40,7 | 134 | 49,6 | 270 | 100,0 |
| I have to follow my **intuition and/or instinct**. | 3,74 | ,986 | 8 | 3,0 | 18 | 6,6 | 72 | 26,7 | 109 | 40,4 | 63 | 23,3 | 270 | 100,0 |
| I have to follow my **feelings and/or mood**. | 3,51 | 1,107 | 14 | 5,2 | 35 | 13,0 | 74 | 27,4 | 93 | 34,4 | 54 | 20,0 | 270 | 100,0 |
| I am often **not aware that I am doing it**. | 2,18 | 1,198 | 104 | 38,5 | 67 | 24,8 | 60 | 22,2 | 24 | 8,9 | 15 | 5,6 | 270 | 100,0 |

**Table 26 - The participants' opinions on what should serve as a basis for making the most significant decision**

**b) Adolescents' opinions on what should serve as a basis for making the least significant decision**

The survey aimed at revealing adolescents' opinions about what should serve as a basis for making the decision they perceive as the least significant (among the decisions listed in task 2). The analysis of arithmetic mean for the statements which assessed the participants' opinions showed that on average, they believe it is most important to think the decision over really well

when making the least significant decision (M=3,54; SD=1,229). They were not able to assess whether they need appropriate information (M=3,46; SD=1,159), and whether they should follow feelings and/or mood (M=3,40,; SD=1,231) and intuition and/or instinct (M=3,37; SD=1,220). Finally, they showed that they do not believe that the statement about not being aware of making the least significant decision refers to them (M=2,38; SD=1,310). The results are presented in Table 27 - The participants' opinions on what should serve as a basis for making the least significant decision.

| | M | SD | Does not refer to me at all. | | Mostly does not refer to me. | | Neutral. | | Mostly refers to me. | | Fully refers to me. | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | f | % | f | % | f | % | f | % | f | % | f | % |
| I have to **think it over really well**. | 3,54 | 1,229 | 16 | 5,9 | 49 | 18,2 | 49 | 18,2 | 83 | 30,9 | 72 | 26,8 | 269 | 100,0 |
| I have to have **appropriate information to know as much as possible**. | 3,46 | 1,159 | 16 | 5,9 | 44 | 16,3 | 65 | 24,1 | 90 | 33,3 | 55 | 20,4 | 270 | 100,0 |
| I have to follow my **feelings and/or mood**. | 3,40 | 1,231 | 27 | 10,1 | 34 | 12,7 | 67 | 25,0 | 85 | 31,7 | 55 | 20,5 | 268 | 100,0 |
| I have to follow my **intuition and/or instinct**. | 3,37 | 1,220 | 26 | 9,7 | 37 | 13,8 | 70 | 26,0 | 83 | 30,9 | 53 | 19,7 | 269 | 100,0 |
| I am often **not aware that I am doing it**. | 2,38 | 1,310 | 98 | 36,3 | 50 | 18,5 | 65 | 24,1 | 35 | 13,0 | 22 | 8,1 | 270 | 100,0 |

**Table 27 - The participants' opinions on what should serve as a basis for making the least significant decision**

Table 28 shows that for making both, the most significant and the least significant decision, the respondents believe that they need to think the decision over really well. Their opinion is especially strong for making a decision they perceive as the most significant. They also believe that they need to have appropriate information when making the most significant decision, only to a lesser extent. However, they are not sure whether they need appropriate information or not, when making the decision they perceive as the least significant for their lives. Furthermore, while they believe that intuition and/or instinct, and feelings and/or mood are to some extent needed when making the most significant decision, they were not sure whether they are needed or not when making the least significant decision. Finally, for both decisions, the one perceived as the most important, as well as for the least important, the participants show that they do not believe they are unaware of making such a decision. This is presented in Table 28.

| | **The most significant decision** | **The least significant decision** |
|---|---|---|
| Bases of | to think the decision through (M=4,62; SD=O,656) | to think the decision through (M=3,54; SD=1,229) |
| | appropriate information (M=4,37; SD=0,754) | appropriate information (M=3,46; SD=1,159) |
| | intuition and/or instinct (M=3,74; SD=0,986) | feelings and/or mood (M=3,40,; SD=1,231) |
| | feelings and/or mood (M=3,51; SD=1,107) | intuition and/or instinct (M=3,37; SD=1,220) |
| | not aware of making the decision (M=2,18; SD=1,198) | not aware of making the decision (M=2,38; SD=1,310) |

**Table 28 - Adolescents' opinions on what should serve as a basis for making the most and the least significant decision**

#### 3.4.4.3. Interview results

After recalling one or more decisions they had made during the school year, the students were asked to explain how they arrived at the decisions. The interview transcripts offer 48 text segments that describe how the participants came to their decisions. These text segments were

analyzed to reveal what serves as a basis for their decisions and whether information plays some role in their decision-making process. The participants reported basing their decision on the information they sought and acquired, thinking it over and then making the decision, and following instinct and emotions. In many of the descriptions of how they arrived at the decision, the participants describe how they sought for information using phrases such as *I consulted some people (..), It all came to its place after I did some research and reading, it all becomes clear* (…), *I was watching, listening and reading about it* (…), *and then I decide to get informed about it* (…) and alike. Moreover, in many of the descriptions the students explain how they were thinking over the decision by using phrases such as *I talked to myself for a while (...), I said to myself: I'll be happy afterward (...), I was thinking whether I want (...), I questioned my priorities (...)*, and alike.

The following quote illustrates the participants' answers. One girl explains how she decided to stop eating meat, after acquiring information about some harmful effects of meat production and consumption.

*I: Tell me, how did you reach that decision?*
*G5: I spent a lot of time watching, listening and reading about it, and then, guilt let's say made me, after receiving all that information I couldn't just continue eating meat.*

Another girl describes how she acquired information about ear surgery which prompted her to seek for further information, which in the end resulted in her decision to have the surgery.

*I: Okay, just as with the first decision, I would like to know how you reached this decision?*
*P1: Well my ears always bothered me and I always wore my hair down, never in a ponytail, nothing, just so that they wouldn't be visible, although now when I look at photos from back then, it wasn't so bad, but that's what it's like when you're sixteen. And I really wanted to have that surgery. I found out about the surgery from a friend and I found out that it was free of charge for minors. I just have to go to the doctor's so he can take a look and see if it's really necessary and then that, that it's a very minor surgery and she had it, that it's no big deal, that it worked out great for her and that's how I found out so I talked to my mom about it and she said okay, that if I have a problem with it it's better to solve it than to have me continue suffering because of my ears.*

The girl who decided not to apply for a music academy in Ljubljana explains how she thought her decision through.

*M2: The deadline for sending in an application was 18th March. And they sent all these things the day before yesterday and the day before that, the timetables and all, and if I'm not sure how things are gonna go, my timetable, because I have to buy a ticket to Ljubljana too, I can't just buy a random ticket for some random time if I don't know when my entrance exam is gonna be. And then I did some thinking and decided not to go because I simply didn't feel safe, I don't like to jump into situations without knowing enough, being sure and that's that.*

The girl who described how she decided not to break up with her boyfriend explains that she followed her feelings.

*I: How did you know what to listen to, your emotions or Petra's advice?*
*M5: Well I always listen to my emotions.*
*I: Why?*
*M5: Because I trust them. I trust my emotions more than I trust my head, I mean, I trust my head too because everything makes sense, but then again, that's a theory, and in practice, it's something else. So, I don't know. In a way, or no, not in a way but I'm not ashamed of my emotions so I decide to follow them.*
*I: So if I understood correctly, in a way you set aside Petra's advice and followed your emotions?*
*M5: Yes.*
*I: Those two were opposed?*
*M5: Yes.*
*I: Okay, good, I understand, because in the end, you trust your emotions more.*
*M5: Yes*

#### 3.4.4.4. Summary of research question 4

The fourth research question aimed at revealing to what extent information serves as a basis in adolescent everyday life decision making. The focus group discussions revealed, from the participants' descriptions of the decision-making processes they perform, that adolescents think decisions over, assess decision alternatives and their outcomes, consider the goal they want to achieve, as well as their priorities, benefits, and drawbacks that may come out of the decision. Moreover, they sometimes intentionally seek information that would help them in making everyday life decisions. Emotional states such as mood or feelings, and instinct also showed as important, and some of the participants believed that often they make decisions unconsciously. The survey was used to further explore adolescents' opinions about the importance of having appropriate information when making the decision they perceive as the most significant and the least significant. It showed that the participants believe that they need to think the decision over really well, especially when making the decision they perceive as the most significant. They also believe that they need to have appropriate information when making the most significant decision, only to a lesser extent. However, they are not sure whether they need appropriate information, or not, when making the decision they perceive as the least significant for their lives. The interview results are similar to those of focus groups and show again that the participants base their decision on the information they sought and acquired, think a decision over and then make the decision, and follow instinct and emotions.

# 4. Discussion

The research on adolescent information behavior in the context of making everyday life decisions is, to the best of our knowledge, among few in the international context, and the first in the Republic of Croatia. Similar studies dealt with adolescent information behavior as a part of the process of making decisions about a future career and were conducted in Canada[568] and Sweden[569]. Since these studies focus on one specific decision, very important because it shapes young people's future, this study seems to be the first that investigates information behavior as a part of the process of making decisions in the wider context of everyday life. It was conducted among high school students in the city of Rijeka, covering the population coming from three types of high schools in the Croatian school system: grammar schools, vocational schools, and art schools. Methodologically, the study included three research phases and employed three research methods: focus group interviews, a survey and semi-structured interviews.

The first research question aimed at revealing the types of the participants' information needs arising from their everyday life decisions. Information needs arise from some inadequacy in one's knowledge, and specifically in problematic situations, including situations in which one needs to make a decision. The focus group interviews and individual interviews results revealed that the participants deal with a multitude of everyday life decision situations, which give rise to information needs across diverse life areas: future and career, school and education, identity and personality development, relations to other people and social life, earning money and money management, appearance, leisure time activities and entertainment, consumption of illegal and/or harmful substances – drugs and alcohol, purchase, food and diet, health, and others. The survey results show that the respondents perceive having information needs for making a decision about higher education or future occupation (M=4,30; SD=0,893) (Table 3 – The adolescents' perception of having information needs arising from specific everyday life decision. However, on average, they are not sure whether or not they have information needs arising from a purchase decision (M=3,42; SD=1,184), a decision related to a healthy diet (M=3,29; SD=1,127), a decision related to protection of one's health (M=3,06; SD=1,299), a decision how to behave and/or what to do in relations to other people (M=2,91; SD=1,207), a decision related to studying and homework (M=2,81; SD=1,157), money management decision (M=2,78; SD=1,296) and a decision related to appearance (M=2,68; SD=1,227). Moreover, it showed that the respondents do not perceive having information needs which would arise from a decision related to their own identity (M=2,43; SD=1,361), a decision how to behave among people (M=2,31; SD=1,152), a decision related to illegal and/or harmful activities: alcohol and/or drugs consumption (M=2,05; SD=1,162) and a decision about what to do in free time (M=1,95; SD=1,135). Considering the results of all the research phases, we may argue that the participants' information needs originate from multitude of everyday life decisions and diverse areas of their lives: future and career (e.g. higher education, lifestyle), identity and personality development (e.g. who I want to be and how I want other people to see me), school and education (e.g. whether to attend a student exchange program), relations to other people (e.g. whether to end a friendship or stop hanging out with some bad company), social life and

[568] Cf. Julien, Heidi E. How does information.
[569] Cf. Hultgren, Frances. Approaching.

behavior (e.g. how to behave among a group of unknown people), earning and money management (e.g. whether to accept a part-time job offer, whether to spend some money or save it), appearance (e.g. what hairstyle to get, what to wear to a prom), leisure time activities and entertainment (e.g. what movie to see, whether to go out or stay at home, whether to stop training some sport), consumption of illegal and/or harmful substances – drugs and alcohol (e.g. whether to reduce a consumption of alcohol), purchase (e.g. what laptop to buy), food and diet (e.g. decision to stop eating meat), health (e.g. whether to have a tonsils surgery), and others (e.g. whether to attend a driving school). However, the participants showed being aware of only one information need, the one about higher education and career. Although they reported actively seeking information for some other decisions, it seems that they are not fully aware of needing some additional information and engaging in seeking information to satisfy their information need, to get deeper knowledge and understanding about the decision situations they are dealing with, in order to make better decisions.

A comparison of the study results with the existing body of research on adolescent information needs reveals a high level of similarity with the results of many studies. Firstly, the participants from this study showed that their information needs arise from diverse everyday life situations, such as making plans and dealing with problems and curiosities, and that they need advice, support and an empathetic understanding of others, which aligns with findings by Shenton and Dixon.[570] The participants seem to have the same types of information needs as the participants from previous studies. The types of adolescent information needs that align with the previous studies include future, higher education and career (Poston-Anderson and Edwards (1993), Agosto and Hughes-Hassell (2006a, 2006b), Stričević (2006), Nwagwu (2009), Koo (2012), Markwei and Rasumssen (2015), Rafedzi and Abrizah (2016)), identity and personality development (Agosto and Hughes-Hassell (2006a, 2006b)), school and education (Poston-Anderson and Edwards (1993), Shenton and Dixon (2003), Agosto and Hughes-Hassell (2006a, 2006b), Nwagwu (2009), Koo (2012), Franklin (2013), Markwei and Rasumssen (2015), Buchanan and Tuckerman (2016), Rafedzi and Abrizah (2016), Bopape, Dikotla, Mahlatji, Ntsala, and Makgahlela (2017), Stričević (2006), relations to other people and social life (Poston-Anderson and Edwards (1993), Agosto and Hughes-Hassell (2006a, 2006b), Koo (2012)), Franklin (2013), Lloyd and Wilkinson (2016), earning money and money management ((Agosto and Hughes-Hassell (2006a, 2006b), Nwagwu (2009), Markwei and Rasumssen (2015), Buchanan and Tuckerman (2016), Lloyd and Wilkinson (2016)), appearance (Agosto and Hughes-Hassell (2006a, 2006b)), leisure time activities and entertainment (Shenton and Dixon (2003), Agosto and Hughes-Hassell (2006a, 2006b), Franklin (2013), Rafedzi and Abrizah (2016)), consumption of illegal and/or harmful substances – drugs and alcohol (Todd and Edwards (2004), purchase (Shenton and Dixon (2003)), and health (Agosto and Hughes-Hassell (2006a, 2006b), Nwagwu (2009), Buchanan and Tuckerman (2016), Rafedzi and Abrizah (2016), Bopape, Dikotla, Mahlatji, Ntsala, and Makgahlela (2017), Ibegbulam, Akpom, Enem, and Onyam (2018), Lloyd and Wilkinson (2016), Bopape, Dikotla, Mahlatji, Ntsala, and Makgahlela (2017), Ibegbulam, Akpom, Enem, and Onyam (2018), Martinović, Bakota, and Badurina (2018)). This aligns with Agosto and

[570] Cf. Shenton, Andrew K.; Dixon, Pat. Models. P. 10.

Hughes-Hassell's major finding that adolescents have similar information needs across socioeconomic, ethnic, cultural, and geographic boundaries[571].

The second research question aimed at finding out what types of information behavior adolescents employ when making decisions in everyday life. The results revealed that the participants acquire useful information by passive and active types of information behavior. In the focus group interviews, it was found that the participants employ active behaviors - intentional information seeking and information sharing; as well as passive behaviors - passive monitoring of information and passive attention, which sometimes result in an accidental acquisition of information. In the individual semi-structured interviews, the participants reported employing all these behaviors and added one new, active type of behavior - information avoidance. The reported active information behaviors correspond with active behaviors denoted by Savolainen as information seeking and information sharing behavior.[572] These goal-directed behaviors are employed with the intention of acquiring information, increasing the state knowledge and developing a better understanding of a decision situation, to eventually make a better decision. While intentional information seeking refers to one person seeking information to facilitate the decision-making process, information sharing is a two-way activity of people who give and receive information in the context of one decision with the mutual intention of getting informed. Most of the intentional information seeking activities, reported in focus group interviews and individual semi-structured interviews, were conducted to facilitate making the decisions related higher education and career, and to relations with other people and social life (e.g. whether to break up a friendship and how to behave when meeting new people). The participants also intentionally sought information for managing school-related activities (e.g. whether to study or not, whether to read a compulsory school reading), for making decisions about leisure time activities (e.g. what movie to see, whether to go out with friends, whether to stop training some sport), purchase decisions (e.g. mobile phone, laptop, clothes), decisions about one's appearance (e.g. which hairstyle to get, what type of glasses to get), food and diet (e.g. decision what to eat during a lunch break, about stopping eating meat), a part-time job, consumption of drugs and alcohol, and other decisions that occur in everyday life (Table 5 – The respondents who reported some intentional information seeking activity they conduct or would conduct when facing the decision listed, Table 9 - Reported intentional information seeking for making decisions). The participants reported sharing information to help each other manage school tasks, and to make decisions related to higher education, to training and sport, getting a part-time job and decision related to diet (Information sharing for making decisions, p. 115-116; Table 10 - Reported information sharing behaviour for making decisions). The individual interviews revealed one type of active and intentional information behavior that is not directed towards the acquisition of information that would help in making a decision (Information avoidance, p. 130-131). This type of behavior, denoted as information avoidance and described by Case, is intentional behavior that does not involve seeking information.[573] A girl who reported such behavior was avoiding information she might get from her friends because she did not want to be talked out of her preferred decision option. Passive information behaviors, reported by the participants, were denoted by Savolainen's

[571] Cf. Agosto, Denise E.; Hughes-Hassell, Sandra. Toward a model, part 2: empirical model. P. 1425.
[572] Cf. Savolainen, Reijo. Everyday Life Information Seeking.; Savolainen, Reijo. Everyday Information Practices.
[573] Cf. Case, Donald O. Op. cit., p. 5.

concept of passive monitoring and Wilson's concept of passive attention. Passive monitoring behavior refers to the monitoring of everyday life information while *keeping an eye* on the environment and registering information mediated through various media, which may result in accidental information acquisition. The participants reported monitoring social networking sites such as *Facebook, YouTube, Instagram* and magazines, which sometimes results incidental acquisition of information that was useful for making decisions about relations to other people (e.g. information about drug addiction which might help in deciding to stop hanging out with a friend who started doing drugs), for making a decision about higher education and career (e.g. coming across information about new university department on *Facebook*), for a decision related to appearance and diet (e.g. *YouTuber's* advice about the type of glasses that fit one's face shape and about specific types of diet), for getting a part-time job (e.g. acquiring information on *Instagram* that was useful in getting a job), a purchase decisions (e.g. *Facebook* add which resulted in some makeup purchase), training and sport (e.g. coaches giving advice on *YouTube* channel), and leisure time activities (e.g. following a music festival *Instagram* page and finding out about the lineup which helps in deciding to go to the festival) (Table 6 - Reported passive monitoring for making decisions, Table 8 - Reported accidental acquisition of information for making decisions, Table 11- Reported passive monitoring behavior which resulted in accidental information acquisition for making decisions). Another reported type of passive behavior, which sometimes results in the incidental acquisition of information is passive attention and includes acquiring information in a passive and undirected manner by simply being aware. The participants acquired information (1) from other people, who assumed it would be useful to them, although they did not ask for it, (2) from other people who seek information on their behalf in order to help, (3) in the course of conversation with others when useful information simply came up, and (4) from their environment. The participants reported *being told* and acquiring the information they did not seek from other people who assumed they might need information about higher education and career, school, harmful and risky behaviors such as smoking and consumption of alcohol and drugs, sexual behavior, school and education, and managing time and activities. Such information is usually provided in school by teachers, psychologists and pedagogists, and parents. This type of behavior is identified by McKenzie when pregnant women were approached and *being told* because information providers assumed that they might need the information.[574] The participants also acquired information in a passive manner by people who seek information in their behalf, by encountering useful information in a conversation and from their environment, which was helpful for decisions related to appearance (e.g. having cosmetic ear surgery), diet (e.g. stop eating meat), getting a job, purchase of some item (e.g. buying a laptop), health (e.g. having a tonsils surgery), and higher education and career. Many of the participants reported acquiring higher education and career-related information by passive attention behavior (Table 7 - Reported passive attention behavior for making decisions; Table 8 - Reported accidental acquisition of information for making decisions; Table 12 - Reported passive attention behavior which resulted in accidental information acquisition for making decisions). This does not come as surprise, assuming that people who have adolescents' best interests in mind, such as family members and teachers, make efforts to inform them about choices that will direct their future. Moreover, the study showed that some types of information behavior sometimes intertwine – one type of behavior

[574] Cf. McKenzie, Pamela J. Negotiating. P. 219.

results in another. The information acquired by the type of behavior that is not necessarily intentional, self-initiated, and directed toward the acquisition of information (e.g. passive monitoring, passive attention, and imposed information seeking behavior) in some cases initiate intentional information seeking directed toward the acquisition of some new piece of information (Table 13 - The reported intertwining of the types of information behavior). It shows that a piece of useful information acquired in an unintentional and imposed manner may spark one's interest to learn more about the topic or can make one realize that it would be beneficial to seek and acquire more information, and therefore prompt engagement in intentional information seeking activity. Inability to get started, due to a lack of domain knowledge on the topic and unfamiliarity with the information source, is among the identified types of help-seeking situations people experience when searching digital libraries.[575] If a piece of information acquired in an unintentional and imposed manner may prompt adolescents to start intentional information seeking activity, it would be beneficial to explore the how it helps them to start: perhaps by making one aware of his or her information needs, by increasing the domain knowledge, or by directing them to available information sources and showing the ways of using them. Further research on this matter in the web environment could identify how a piece of information acquired in unintentional and imposed manner prompts adolescents to start new intentional information seeking activity, and that might allow the development of aids that would help adolescents in seeking information.

The findings of the participants' information behavior related to making everyday life decisions correspond with previous studies in the field in many ways. Many studies on pre-adolescent and adolescent information behavior in the context of dealing with life challenges, solving problems and making decisions and generally everyday life, such as those conducted by Poston-Anderson and Edwards[576], Julien[577], Shenton and Dixon[578], Agosto and Hughes-Hassell[579], Lu[580], Meyers, Fisher, and Marcoux[581], Hultgren[582], Koo[583], Markwei and Rasmussen[584], Franklin[585], Basic and Erdelez[586], Ibegbulam, Akpom, Enem, and Onyam[587], Porsteinsdottir and Kane[588], Dorado, Obille, Garcia and Olgado[589] and by Martinović, Bakota, and Badurina[590], already showed that young people make endeavors to find information and

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[575] Cf. Xie, Iris; Cool, Colleen. Understanding help seeking within the context of searching digital libraries. // Journal of the American Society for Information Science and Technology 60, 3(2009), p. 483-484. URL: https://cpb-us-w2.wpmucdn.com/sites.uwm.edu/dist/7/112/files/2016/04/understanding_help_seeking-v3irzl.pdf (2020-05-16)
[576] Cf. Poston-Anderson, Barbara; Edwards, Susan. Op. cit.
[577] Cf. Julien, Heidi. Adolescent decision.; Julien, Heidi. Barriers.; Julien, Heidi. How career information.; Julien, Heidi. Adolescent career.
[578] Cf. Shenton, Andrew; Dixon, Pat. Youngsters.; Shenton, Andrew K.; Dixon, Pat. Models.
[579] Cf. Agosto, D. E.; Hughes-Hassell, Sandra. People.; Hughes-Hassell, Sandra; Agosto, Denise E. Modeling.
[580] Cf. Lu, Ya-Ling. Children's strategies.; Lu, Ya-Ling. Children's information seeking.; Lu, Ya-Ling. Everyday.
[581] Cf. Meyers, Eric M.; Fisher, Karen E.; Marcoux, Elizabeth. Op. cit.
[582] Cf. Hultgren, Frances. Approaching.
[583] Cf. Koo, Joung H. Op. cit.
[584] Cf. Markwei, Evelin; Rasmussen, Edie. Op. cit.
[585] Cf. Franklin, Lori L. Op. cit.
[586] Cf. Basic, Josipa; Erdelez, Sanda. Active.; Basic, Josipa; Erdelez, Sanda. The role.
[587] Cf. Ibegbulam, Ijeoma J.; Akpom, Chinwendu C.; Enem, Fidelia N.; Onyam, Dora I. Op. cit., p. 298.
[588] Cf. Porsteinsdottir, Guorun; Kane, Bridget. Op. cit., p. 262.
[589] Cf. Dorado, Dan Anthony D.; Obille, Kathleen Lourdes B.; Garcia, Rhianne Patricia P.; Olgado, Benedict Salazar. Op. cit., p. 287-288.
[590] Cf. Martinović, Ivana; Bakota, Sara; Badurina, Boris. Op. cit., p. 24-25.

employ intentional information seeking behavior to acquire information that would help them face life challenges, solve problems and help in making decisions. The adolescents' tendency toward sharing information with others, who might benefit from the information, is also known from studies such as those by Agosto, Abbas and Naughton[591] and Markwei and Rasmussen[592]. Moreover, Lu[593] and Hultgren[594] found that pre-adolescents and adolescents sometimes avoid information for reasons such as believing that information is useless and unhelpful, potentially threatening or meaningless[595], and relying on their own powers and capabilities to solve problems[596]. Previous studies also showed that they often acquire information in an unintentional and passive manner, as emphasized by authors such as Julien[597], Markwei and Rasmussen[598], Buchanan and Tuckerman[599], and Basic and Erdelez[600]. The fact that the participants from this study, and from a large number of studies by other authors, show employing intentional information seeking behavior directed towards acquisition of everyday life information that would help in making their decisions and dealing with life-challenges, aligns with postulates by decision-making theory classic H. Simon who claimed that when making decisions, people need the information to improve their knowledge about decision options and possible outcomes since the information which decision-maker has at his or her disposal shapes the process of making the decision in a certain way. Such an understanding of the concept of information emphasizes the role of information and knowledge in the decision-making process.[601] This aligns with Savolainen's concept of *everyday life information seeking* (ELIS) which denotes the acquisition of information that people use to orient themselves and to solve the problems in everyday life.[602] However, it shows that the participants from this study, and those from some previous studies, acquire useful information for making everyday life decisions and dealing with some life challenges by passive types of information behavior, by acquiring useful information accidentally. Moreover, it shows that they might choose not to acquire information and to employ active behavior of information avoidance. Finally, during the interviews, the participants were dominantly reporting on active and intentional information behaviors (Figure 10 - The code frequencies of the types of information behaviors detected in the interviews). Considering that much of information is acquired unintentionally and in a passive manner, as Bates argues[603], we may assume that the participants remembered best and reported conscious and intentional behaviors, while other types of behavior were reported only to a limited extent. Therefore, some future work should focus on passive and unintentional behaviors, which make a significant part of human information behavior.

The third research question aimed at finding out how adolescents select sources of information when they make decisions in everyday life. The focus group interviews and the

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[591] Cf. Agosto, Denise E.; Abbas, June; Naughton, Robin. Relationships.
[592] Cf. Markwei, Evelin; Rasmussen, Edie. Op. cit.
[593] Cf. Lu, Ya-Ling. Children's information seeking.
[594] Cf. Hultgren, Frances. Approaching.
[595] Ibid., p. 186.
[596] Cf. Lu, Ya-Ling. Children's information seeking.
[597] Cf. Julien, Heidi. Adolescent career. P. 378.
[598] Cf. Markwei, Evelin; Rasmussen, Edie. Op. cit.
[599] Cf. Buchanan, Steven; Tuckerman, Lauren. Op. cit.
[600] Cf. Basic, Josipa; Erdelez, Sanda. Active.
[601] Cf. Simon, Herbert A. A behavioral. P. 100.
[602] Ibid., p. 267.
[603] Cf. Bates, Marcia J. Toward.

individual interviews results show that the participants used plenty of diverse information sources to acquire helpful information, as presented in Table 14 and Table 21 (Table 14 – The sources the respondents reported turning to for information when making the listed decisions; Table 21 - The sources the respondents reported turning to for information when making the listed decisions). The participants reported seeking information from two main types of information sources: interpersonal sources of information, and sources that are available online, on the Internet. Traditional information sources, such as books, magazines, and newspapers, were barely mentioned by the participants. Also, only one participant mentioned a library. Interpersonal information sources the respondents reported turning to include family members (parents, siblings, and others), friends and peers and people with experience and knowledge in the domain of a decision (such as physicians, teachers, and university students). The sources available on the internet include the internet in general, usually accessed using *Google* search engine, specialized websites and social networking sites (such as forums, *YouTube*, *Instagram*, and *Facebook*). Moreover, the survey revealed the participants' high preference for interpersonal sources of information. When answering which information sources they prefer using when making the most significant decision and the least significant decision, the participants showed the same preference interpersonal sources of information (Table 15 – Information sources that should be used for making the most significant decision; Table 16– Information sources which should be consulted for making the least significant decision. They showed a tendency towards turning to people who have knowledge and experience in a domain of the decision, family members, and friends and peers. On the other hand, they showed less inclined towards impersonal information sources - the internet, books, newspapers and magazines, and forums and social networking sites, for seeking information when making the most and the least significant decision. The results also show that the participants do not think of social networking sites (forums, *YouTube*, *Facebook*, *Instagram*) as information sources that may provide helpful information for making decisions. Overall, the results of all three research phases show that the participants seek helpful information for making their everyday life decisions from a variety of information sources, but prefer consulting other people (family members, friends, people with experience and knowledge, etc.). This finding is not novel, in fact, it is safe to say that it is almost a standard finding in information behavior research, which occurs across youth information behavior studies, such as these by Poston-Anderson and Edwards[604], Julien[605], Agosto and Hughes-Hassell[606], Meyers, Fisher, and Marcoux[607], Lilley[608], Markwei, and Rasumssen[609], and Martinović, Bakota, and Badurina[610]. Although some studies which are conducted in an information environment dominated by the internet, and electronic, digital and wireless devices as a means of communication, show ubiquitous use of the internet and digital mobile devices as a sources of information and communication among

[604] Cf. Poston-Anderson, Barbara; Edwards, Susan. The Role. p. 25-30.
[605] Cf. Julien, Heidi. How does information. P. 89.; Julien, Heidi. Adolescent career. P. 377-378.; Julien, Heidi. How career information. P. 376.-378.
[606] Cf. Agosto, Denise E.; Hughes-Hassell, Sandra. People.; Hughes-Hassell, Sandra; Agosto, Denise E. Modeling.
[607] Cf. Meyers, Eric M.; Fisher, Karen E.; Marcoux, Elizabeth. Op. cit., p. 320.
[608] Cf. Lilley, Spencer C. Op. cit.
[609] Cf. Markwei, Evelin; Rasmussen, Edie.Op. cit.
[610] Cf. Martinović, Ivana; Bakota, Sara; Badurina, Boris. Op. cit., p. 24-25.

the youth (e.g. Franklin[611], Meyers, Fisher, and Marcoux[612], Qayyum, Williamson, Ying-Hsang, and Philip[613], Basic and Erdelez[614], Ibegbulam, Akpom, Enem, and Onyam[615], Martinović, Bakota, and Badurina[616], Yeo and Chu[617]), the participants from this study showed strong reliance on interpersonal information sources for help dealing with their everyday life decisions.

The focus group interviews revealed that the participants reflect upon the selection of information sources which they consult for helpful information. In many cases, they express critical stance toward sources of information, both interpersonal and internet-based sources, such as questioning possible motives of a person who may be an expert in the domain of decision topic but may also want to deceive, not having the advice seeker's best interest in mind when providing information. Moreover, the participants' answers revealed the role of the information source characteristics of information availability and accessibility, in directing the selection of information sources for seeking information when making a decision. These characteristics are also recognized by Savolainen as source preference criteria in the map of information source horizons and source preferences in the context of seeking orienting information.[618] The focus group discussions also revealed the participants' awareness of the issues of credibility and cognitive authority and awareness that not all information sources are able to offer a piece of good information that would help them in making their decisions. The comments also revealed the reasons why they consider the specific others deserving of cognitive authority, which corresponds with P. Wilson's concept of *bases of authority*. The identified bases of authority include experience and knowledge in the decision domain, honesty, authority, wisdom, and trustworthiness. Quality of the relationship with a decision-maker, closeness and wanting the best for a decision-maker is also emphasized as important bases of authority. Moreover, a similarity, in terms of having a lot in common with a decision-maker, and the possibility of being in the same situation also revealed important, as well as the ability to listen and to give a piece of advice. These results are proved and deepened in individual interviews. Three concepts that are closely related, yet different, both on the practical and theoretical level, were investigated in the third research phase– characteristics of information sources that serve as criteria for source selection, information credibility, and cognitive authority. As it was already elaborated in this dissertation, credibility includes two main components – competence or expertise and trustworthiness and is also defined with concepts such as believability, trustworthiness, truthfulness, accuracy, completeness, precision, freedom of bias and objectivity.[619] Cognitive authority refers to a kind of influence which an information source, that is considered worthy of authority, has on a person who receives information. Cognitive authority is perceived as knowledgeable in some specific domain and described as expert, trustworthy, competent, successful, experienced, reputable, worthy of belief, and the

[611] Cf. Franklin, Lori L.
[612] Cf. Meyers, Eric M.; Fisher, Karen E.; Marcoux, Elizabeth. Op. cit., p. 320.
[613] Cf. Qayyum, M. Asim; Williamson, Kirsty; Liu, Ying-Hsang; Hider, Philip. Op. cit., p. 187.
[614] Cf. Basic, Josipa; Erdelez, Sanda. Active.; Basic, Josipa; Erdelez, Sanda. The role.
[615] Cf. Ibegbulam, Ijeoma J.; Akpom, Chinwendu C.; Enem, Fidelia N.; Onyam, Dora I. Op. cit., p. 298.
[616] Cf. Martinović, Ivana; Bakota, Sara; Badurina, Boris. Op. citl, p. 24-25.
[617] Cf. Yeo, Tien Ee Dominic; Chu, Tsz Hang Chu. Op. cit.
[618] Cf. Savolainen. Everyday information practices. P. 91
[619] Cf. Savolainen, Reijo. Everyday life information practices. P. 156; Rieh, Soo Y. Credibility. P. 1337-1338.

one who guarantees the quality of information.[620] On the theoretical level, the superordinated concept of characteristics of information sources encompasses both the credibility and cognitive authority of information sources and includes some other characteristics that are not in relation to these two concepts. The information source characteristics, that were identified in the individual interviews from the participants' answers as criteria that serve for the selection of information sources, could be divided in four groups: (1) the characteristics of information sources that relate to credibility and cognitive authority, (2) other personal characteristics that the participants attach to information source they tend to consult for helpful information, (3) the information source characteristics that relate to accessibility of information sources, and (4) the information source characteristics that refer to the form in which an information comes.

(1) *The characteristics of credibility and cognitive authority* are: knowledgeable, competent, such that it provides good quality information, accurate information, verified information, current information, and precise information, trustworthy, authority, experienced, honest, objective, professional, official, reputable, verifiable, and credible. These information source characteristics seem to guarantee that the provided information is of good quality and align with Savolainen's type of source preference criteria *content of information*, which includes quality of information, which people apply in the context of seeking orienting information.[621] Agosto also found that perceived quality of informational content plays a role in young people's Web site evaluation.[622] Julien found that trustworthiness is critical in providing information that is useful to decision-makers[623], and that expertise, knowledge, and experience are crucial characteristics of information source that can provide helpful information.[624] Credibility is considered an important source characteristic to homeless young people in Markwei and Rassumsen's work.[625]

(2) *Other personal characteristics* that characterize favored interpersonal information sources are being helpful, understanding, supportive, confidential, in close relationship to a decision-maker, being well-meaning, i.e. want what is the best for a decision-maker, having a lot in common with a decision-maker and/or being in the same situation, in terms of having the similar experience of making the same or similar decision themselves. These characteristics seem to refer to some kind of personal trust, which a decision-maker puts in the consulted interpersonal source of information. These information source characteristics seem to guarantee that the consulted interpersonal information source can understand a decision-maker, wants to help, offers confidentiality and has the best decision maker's interest in mind. Therefore, a decision-maker puts some personal trust in an interpersonal information source, which does not exclusively refer to the trust in providing a piece of good quality information, but more to the trust that the source has a decision-maker's best interest in mind and therefore wants to help. Established personal relationships showed important when seeking information for young people from Agosto and Hughes-Hassel's study[626], and the appreciation for the help provided in trusting and friendly relationships

[620] Cf. Savolainen, Reijo. Everyday life information practices. P. 164.
[621] Cf. Savolainen, Reijo. Everyday life information practices. P. 92.
[622] Cf. Agosto, Denise E. A model. P. 316.
[623] Cf. Julien, Heidi E. How does. Op. cit. p. 144, 175.
[624] Cf. Julien, H. E. How career. Op. cit., p. 375-378
[625] Cf. Markwei, E.; E. Rasmussen. Op. cit., p. 24
[626] Cf. Agosto, Denise E., Hughes-Hassell, Sandra. People. P. 155-158.

also proved important to adolescents who make career-related decisions in Julien's work.[627] Todd and Edwards reveal that confidentiality and trustworthiness are the important characteristics of interpersonal information sources that were approached for information about drugs.[628] Rieh emphasizes that sharing information works best when people share similar beliefs, values, educational levels, and social statuses, i.e. have a lot in common, and argues that young people's strategies for seeking information and using information are deeply influenced by others with whom they feel socially close.[629] The value of other peoples' personal experience with the same or similar decision is close to the view of Fergie, Hunt and Hilton's participants who also appreciated *relatable* personal experiences of other young people.[630]

(3) *The accessibility characteristics* are being easy, fast and simply accessible, convenient to access, familiar, meaning that the participants have some experience in accessing information from a source, and informative, meaning the source offers access to a lot of information, of a wide range. These information source characteristics seem to enable fast, simple and easy access to information. This type of information source characteristics corresponds with Savolainen's source preference criteria *availability and accessibility of information*[631], and also aligns with Julien's finding that the adolescents who seek information for help in making career decisions turn to familiar and accessible sources.[632] Other studies also showed the importance of accessibility and convenience of information sources, such as these conducted among homeless youth by Markwei and Rasmussen [633] and among college students by Rieh.[634]

(4) *The form characteristics* are visual, auditive and textual, and interactive. These information source characteristics seem to enable that useful information comes in various formats and therefore is easier to comprehend. This is supported by Agosto's finding that the form in which information comes is important to young people who appreciate graphic and multimedia content and interactivity[635], Julien's finding that adolescents appreciate interactivity of people as human sources[636], which is nowadays provided by internet-based sources as well, more specifically social networking sites such as Facebook, forums, etc., and Subramaniam, Taylor, St. Jean, Follman, Kodama, and Casciotti's finding that tweens heavily rely and generally prefer non-textual forms, such as audio and video.[637]

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[627] Cf. Julien, H. E. How career. Op. cit., p. 375-378.
[628] Cf. Todd, Ross J.; Edwards, Susan. Op. cit., p. 376-377.
[629] Cf. Rieh, Soo Young; Hilligoss, Brian. College Students'. P. 64-65.
[630] Cf. Fergie, Gillian; Hunt, Kate; Hilton, Shona. Op. cit., p. 587.
[631] Cf. Savolainen, Reijo. Everyday life information practices. P. 92.
[632] Cf. Julien, Heidi E. How does. Op. cit. p. 179.
[633] Cf. Markwei, E.; E. Rasmussen. Op. cit., p. 24
[634] Cf. Rieh, Soo Y.; Hilligoss, Brian. College Students'. P. 64.
[635] Cf. Agosto, Denise E. A model of. P. 316-317.
[636] Cf. Julien, H. E. How does. Op. cit., p. 115.
[637] Cf. Subramaniam, Mega; Taylor, Natalie Greene; St. Jean, Beth; Follman, Rebecca; Kodama, Christie; Casciotti, Dana. Op. cit.

It seems that the study participants consider these four types of information source characteristics when they chose where to look for information that would help them in making their decisions. The results presented in Table 22 suggest that family members, friends, and peers are consulted for helpful information that would facilitate the decision making process because of the attached information source characteristics of credibility and cognitive authority, and because of other personal characteristics that the participants value, such as being helpful, understanding, well-meaning and others (Table 22 – Information sources and source characteristics which serve as criteria for source selection). Although it was not emphasized in the answers, they are probably approached for information also because of accessibility characteristics, since they are usually near to a person who seeks information and therefore simply, easily and fast accessible. On the other hand, experts within a domain of the decision, such as physicians and teachers, seem to be usually approached for information because of the attached characteristics of credibility and cognitive authority. The internet and websites were reported being consulted because of the characteristics of access, which is understandable and expected since the online sources allow simple, fast and easy access to a wide range of information, and also for the characteristics related to credibility and cognitive authority, in the cases of institutional websites, such as university website. Moreover, the participants seem to look for information on social networking sites because of access characteristics, like all the internet-based sources, but also because of form characteristics, since they offer information in various forms: textual, audio and visual, which is easier to understand. However, it showed that some of the participants also perceive some *YouTubers* as credible sources, assessing the credibility by elements such as other users' comments, a high like/dislike ratio, and by verifying the acquired information by comparing it with information from other information sources. This aligns with Loke, Foo, and Majid's finding that post-secondary use socially generated cues, such as the comments of the video, to assess its quality[638], Rieh's finding that college students verify accuracy by comparing information from different sources[639], Fergie, Hunt and Hilton's finding that opinions and personal experiences featured on social media websites are evaluated by various criteria, such as the number of views, 'likes' and 'dislikes' facilities, user-ratings, and other users' interaction which is seen as the regulatory function that a group of users together provide to create some kind of quality control over content[640], and Hirvonen, Tirroniemi and Kortelainen's finding that girls and young women view the online forum as a credible source of opinions and experimental information and that comparison with information from other sources is among their evaluation strategies.[641]

The survey investigated the participants' opinions on the importance of specific source characteristics when seeking information for making the decision they perceive as the most, and as the least significant for their lives. It showed that for making both, the most and the least significant decision, the participants believe it is the most important to turn to information sources that provide accurate information. It is also important that information source is easy to access, easy to use and that it allows them to acquire information quickly. In the case of the most important decisions, experience with a source is also important. However, the participants were not sure whether the anonymity which a source provides is important to them when they

[638] Cf. Loke, Cliff; Foo, Schubert; Majid, Shaheen. Op. cit., p. 321.
[639] Cf. Rieh, Soo Young; Hilligoss, Brian. College Students'. P. 64.
[640] Cf. Fergie, Gillian; Hunt, Kate; Hilton, Shona. Op. cit.
[641] Cf. Hirvonen, Noora; Tirroniemi, Alisa; Kortelainen, Terttu. Op. cit.

choose information sources that would provide helpful information (Table 20 – Importance of source characteristics when seeking information for making the most significant decision and the least significant decision). We may conclude that when choosing where to seek helpful information for making their everyday life decisions, the participants from this study hold accuracy of the information source, which belongs to the type of information source characteristics that relate to credibility, the most important. The access information source characteristics are also important, in terms of providing easy and quick access to information. Todd and Edwards posit that anonymity and confidentiality might be important to those who seek drug-related information and anticipate that World Wide Web, as a virtual space that provides such access to information, might be the source for such information.[642] This sounds very likely, and this is why it is somehow surprising that information source characteristic of anonymity did not prove to be important to the participants, since everyday life decisions often include decisions related to intimacy, and it is possible that for such decisions young people want to acquire information, but stay anonymous. Contrary to the study results, a study by Fergie, Hunt, and Hilton shows that young people value health-related online sources because they provide anonymity and opportunity for hassle-free access to information.[643]

Summarizing the results from all three research phases, we may conclude that four types of information source characteristics play a major role in the participants' selection of information sources: credibility and cognitive authority related information source characteristics, personal characteristics of interpersonal information sources, access related information source characteristics and form related information sources characteristics. This finding aligns with the body of research that shows that to adolescents, it is important an information source provides information of good quality, and that credibility, trustworthiness, expertise, knowledge, and experience are the crucial characteristics of information source that provides helpful information.[644] It also echoes the earlier studies which revealed the importance of established trusting and friendly personal relationships and confidentiality[645], showed adolescents' tendency toward sources which are available, accessible, convenient and familiar[646], and their tendency toward using information that comes in various forms, such as visual, auditive and interactive.[647]

The individual interviews also sought to reveal how the participant assess the credibility of acquired information. In most of the answers, they were talking about the credibility of information sources, rather than of the acquired information itself, and described characteristics of information sources which, in their opinion, should guarantee the credibility of the information. Rieh emphasizes that people base their judgments about how good, useful, trustworthy, accurate information is on certain characteristics of information objects and information sources, which make the reasons underlying such judgments.[648] The majority of

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[642] Cf. Todd, Ross J.; Edwards, Susan. Op. cit., p. 380-382.
[643] Cf. Fergie, Gillian; Hunt, Kate; Hilton, Shona. Op. cit., p. 588.
[644] Cf. Agosto, Denise E. A model. P. 316.; Julien, Heidi E. How does. Op. cit. p. 144, 175.; Julien, H. E. How career. Op. cit., p. 375-378; Markwei, E.; E. Rasmussen. Op. cit., p. 24
[645] Cf. Agosto, Denise E., Hughes-Hassell, Sandra. People. P. 155-158.; Julien, H. E. How career. Op. cit., p. 375-378.; Todd, Ross J.; Edwards, Susan., Op. cit., p. 376-377.
[646] Cf. Savolainen, Reijo. Everyday life information practices. P. 92.; Julien, Heidi E. How does. Op. cit. p. 179.; Markwei, E.; E. Rasmussen. Op. cit., p. 24; Rieh, Soo Young; Hilligoss, Brian. College Students'. P. 64.
[647] Cf. Agosto, Denise E. A model of. P. 316-317.; Julien, H. E. How does. Op. cit., p. 115.
[648] Cf. Rieh, Soo Y. Credibility. P. 1341.

the characteristics of information sources, which present reasons why the acquired information is considered credible by the participants, include usual characteristics that relate to credibility of information sources: experienced, honest, believable, authority, trustworthy, knowledgeable, providing accurate, verified and current information, reliable, professional, official, reputable, credible, respected, reputable, unbiased (Table 23 – Criteria for credibility assessment, based on information source characteristics). However, some of the characteristics describing interpersonal information sources somehow stand out from what we usually see as credibility. These characteristics are being well-meaning, meaning a source wants what is best for a decision-maker, being familiar to a decision-maker, being supportive, being in the same decision situation and being in a close relationship with a decision-maker, which makes him or her able to understand a decision-maker. This finding suggests that although the participants recognize some features of information sources that may provide credible information, such as knowledge, expertise, experience, etc., they seem to tend to hold the information acquired from some interpersonal source credible because of some of the personal characteristics of the source (i.e. being supportive, well-meaning or in close relationship with a decision-maker). By doing so, they seem to assess the credibility not only by usual criteria such as characteristics that involve competence in some area and trustworthiness, which are the two components of credibility according to Wilson[649] but also because of the characteristics that cause some kind of *personal trust*, identified in this dissertation as a feature of one type of information source characteristics which the participants hold important. Therefore, we may hypothesize that some of the participants are prone to mistake the quality of relationship with interpersonal information sources with the quality or credibility of information they provide. The participants value a caring and protective relationship, a close bond, and some common history, perceiving the interpersonal information sources as someone they can rely on which, in turn, makes them trust the source. We can argue that these characteristics may be valuable to young decision-makers, making them feel they can rely on certain people around them, but these characteristics alone are not and should not be the reasons for holding the information provided by these sources credible. From the perspective of making an informed decision, mistaking the quality of relationships with interpersonal information sources with the quality or credibility of information that they provide may lead young people to base their decisions on information that is not accurate, although given by people they trust. Furthermore, if young people value personal trust, based on the quality of a relationship, when assessing the credibility of information acquired to help with making everyday life decisions, then we can speculate whether non-human sources such as the internet, but also other mediated sources, can meet this criterion of evaluation of information quality. Some future research should focus on possibilities of mediated information sources, and especially those which provide information online, to provide information helpful in making everyday life decisions in a caring and supportive manner, which is very important to adolescents in making everyday life decisions. Some of the participants also showed accepting popularity of social networking sites and reputation in the user community (e.g. prised in user's comments and a high likes/dislikes ratio) and some not well-founded and elaborated believability (e.g. a decision-maker simply believes because it *seems realistic* and follows *some kind of instinct*) as the reasons for believing that some social networking sites provide credible information. Also, some of them offered reasons

[649] Cf. Wilson, Patrick. Second-Hand. P. 15.

for believing the information is credible simply because it makes sense and because it matches a decision maker's opinion (Table 23 – Criteria for credibility assessment, based on information source characteristics). It can be argued that these are not the proper criteria for holding the information credible. Finally, the results of the interviews showed that the participants often assess the credibility of information provided by one information source by comparing it with information gained from other sources, being especially suspicious toward information gained on social networking sites, such as *Facebook*, *YouTube*, *Instagram*, and blog. The college students from Rieh's study used the same information seeking strategy of comparing information from different sources to deal with the credibility issue.[650] These findings imply that the participants are not naive in assessing the credibility of information acquired from the internet-based information sources, and especially from social networking sites. They question the quality of the acquired information and use the strategy of comparing it with information acquired from other information sources to assess its credibility, which corresponds with Rieh and Hilligoss's findings.[651] Moreover, the participants showed that even when they do not consider these sources fully credible, they still find some value in the information they provide. The information acquired might not be taken very seriously but is still considered helpful as a form of opinion and advice, which is not decisive in the decision-making process but may help in some way.

To contribute to answering the third research question, the interview was also exploring who the participants' cognitive authorities are and what makes them worthy of authority. In this dissertation, cognitive authority refers to the phenomenon of giving trust to some information source to provide some useful information that may help in the decision-making process. Information sources that are considered cognitive authorities are thought worthy of belief and trusted to make a positive influence on adolescent decision making. For the study participants, the sources who are worthy of their trust, able to make some positive influence, and who actually influenced their decisions are mostly other people: their friends, parents, especially mothers, experts in the domain of a decision, such as physicians, teachers, and university students, as well as some *YouTubers*. Moreover, they give their trust to official university websites, a book borrowed from a library and a student employment agency (Table 24 – The participants' cognitive authorities). It seems that friends, parents and family members are the participants' cognitive authorities across diverse decision situations, while experts' authority is limited to the area of their expertise (Table 24.1 – Cognitive authorities and decisions which make the context of the authority). However, the participants seem to understand how cognitive authority is related to some specific area and that within the area of their expertise, the experts can be trusted more than other information sources. The reasons why the participants give their trust to specific information sources holding them cognitive authorities, or the bases of authority, were also identified. It can be expected that interpersonal information sources are considered deserving of cognitive authority if they are competent, experts in the field, knowledgeable, skilled and educated, if they are thought highly of, if they are trusted, perceived as competent or successful, experienced or reputable.[652] When it comes to impersonal information sources, such as websites or some institutions, we can expect that they are thought

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[650] Cf. Rieh, Soo Young; Hilligoss, Brian. College Students'. P. 64.
[651] Ibid.
[652] Cf. Wilson, Patrick. Second-Hand. P. 20-28; Rieh, Soo Y. Credibility. P. 1340.

worthy of authority if they are considered worthy of belief and credible. Many of the bases of authority, reported by the participants, align with a general understanding of the concept of cognitive authority, such as experience, knowledge, honesty, trusted, objective, disinclined to deceive (Table 24.2 – Bases of cognitive authority). However, some of the given reasons for holding someone or something worthy of authority include some new attributes, important to the participants: a person worthy of authority means well and wants what is best for a decision-maker, he or she gives support, is helpful and works to protect a decision-maker, and is in close relationship with a decision-maker, and, in the case of friends, that they are similar to a decision-maker and/or in the same decision situation, which makes them able to understand the situation and the position. These new attributes highlight the importance of quality of the relationship between a decision-maker and a person who is believed worthy of authority, in the construction of cognitive authority of the interpersonal information source. *YouTubers* and bloggers seem to influence decisions by providing encouragement and helpful information. However, surface ques, such as a good quality of a video that makes it look professional and convincing, and the fact that the *YouTuber* showed effective in some TV show, were reasons given for holding them worthy of authority. These answers open some new research topics which need to be addressed, considering the popularity of the *YouTube* channel, and social networking sites in general, among adolescents, and it's potential to influence adolescents' opinions. A book from a library is considered worthy of trust for traditional attributes of cognitive authority – it is trusted because it is believed that it provides accurate information. The data also revealed that when assessing cognitive authority of competing information sources that provide conflict information, the assessment is based on the same basis of authority: knowledge, experience, official, professionalism, education, objectivity, understanding, not being judgmental, being in a close relationship, in similar/different situation, having a lot in common with a decision-maker, and being well-meaning. In one case, more authority was given to a university webpage, than to a friend, because the page is an official institutional website which should provide verified information. Taking into consideration that the participants value close personal relationships with people as information sources, it would be interesting to explore under what conditions adolescents give more authority to mediated information sources, such as websites, than to people.

Finally, the participants reported getting two main types of help from the information sources they consulted. Julien's typology was used to differentiate *instrumental help*, which assists in gaining ideas, improving understanding, making plans and decisions, and *emotional help*, which motivates, provides reassurance, confirmation, and support, and makes the process calmer and easier.[653] The participants were gaining instrumental help by getting information and knowledge, by getting a second opinion and another perspective on the decision situation. Moreover, they were prompted to think deeper and rethink a decision, to broaden a horizon and consider other decision options, by opening new possibilities and offering more decision alternatives, or narrowing down the number of decision options. They were directed toward one of the decision options and were given help in sorting out the thoughts. The helpful information took the form of factual information, other people's experiences with the same or similar situation (when it comes to human sources), advice and opinion (Table 25 - Instrumental help

[653] Cf. Julien, Heidi. How does information. P. 89.; Julien, Heidi. Adolescent career. P. 377-378.; Julien, Heidi. How career information. P. 376.-378.

– summarized answers about type of help which the information sources provided, Appendix 5). Emotional help includes encouragement, motivation, support, assurance, comfort, and approval. It also helped the participants to calm down, inspired them, boosted self-confidence and made things easier and more relaxed (Table 25.1 - Emotional help – summarized answers about type of help which the information sources provided, Appendix 5). Just like adolescents from Julien's study, who needed both types of help when making career-related decisions, the participants showed that they need both instrumental and emotional help with their everyday life decisions. Having in mind the finding that the participants need emotional help with their decisions in the form of encouragement, motivation, support, assurance, comfort, and approval, we may speculate that this is why they often choose personal sources of information which are characterized by attributes such as being helpful, understanding, supportive, confidential, in close relationship to a decision-maker, being well-meaning, and alike. These characteristics of personal information sources may guarantee that the help which one would get might be of the emotional type. Likewise, this may be the reason why they value a personal relationship with interpersonal information sources when judging the information credibility and constructing cognitive authority.

Overall, it showed that the study participants consider the same characteristics of information sources when choosing which information sources to turn to for helpful information, for assessing the credibility of information source and for basing the trust in them as cognitive authorities. The information source characteristics that guarantee the provision of a good quality information, and are defined by the concepts of credibility and cognitive authority in library and information science literature, include attributes such as knowledgeable, competent, accurate, verified, current, precise, trustworthy, experienced, honest, objective, professional, official, reputable. In this dissertation, these characteristics are denoted as *the characteristics of credibility and cognitive authority*. These information source characteristics ensure that the acquired information is of good quality and may help and can contribute to making better decisions, providing deeper knowledge and understanding of the decision situation. On the other hand, the other three types of information source characteristics, that guide the selection of information sources, do not ensure the provision of good quality information that contributes to deeper knowledge and understanding, and therefore to making better decisions. These types of characteristics include *other personal characteristics*, such as being helpful, understanding, supportive, in close relationship to a decision-maker, being well-meaning, i.e. want what is the best for a decision-maker, and others, and induce some kind of personal trust, which a decision-maker puts in the consulted interpersonal source of information. However, the fact that one is trusted as a person means well and is in close relationship to a decision-maker, does not necessarily make the advice or opinion, i.e. the information he or she provides, supporting a better decision. Equally, *the accessibility characteristics*, including being easy, fast and simply accessible, convenient to access, and others, enable fast, simple and easy access to information, but do not guarantee its quality and therefore helpfulness in deepening the knowledge and understanding which would help in making a better decision. Finally, *the form characteristics*, such as visual, auditive and textual, and the interactive form of information make information objects appealing to adolescents and in some cases easier to comprehend but does not necessarily contribute to the knowledge that would result in better decisions.

The fourth research question aimed at revealing to what extent information serves as a basis in adolescent everyday life decision making. The descriptions of the decision making processes

in focus group interviews revealed that adolescents think decisions over, assess decision alternatives and their outcomes, consider the goal they want to achieve, as well as their priorities, benefits, and drawbacks that may come out of the decision. They also described sometimes intentionally seeking information that would help them in making everyday life decisions. Emotional states such as mood or feelings, and instinct also showed as important, and some of the participants believed that often they make decisions unconsciously. These results were further explored in a survey which sought for the participants' opinions about the importance of having appropriate information when making a decision. The participants expressed the belief that they need to think the decision over really well, and that they need to have appropriate information when making the most significant decision. When it comes to making a decision that is less significant, it seems that they are not sure whether they need appropriate information, or not. In individual interviews, the participants reported basing their decisions on the information they sought and acquired, thinking it over and making the decision afterward, and following instinct and emotions. Combining the results from all three research phases, we may conclude that the study participants are aware, to some extent, of the importance of information for making everyday life decisions, and sometimes intentionally seek information to facilitate the process. However, they also report basing their decisions on emotional states and instinct.

## 4.1. Discussion of the research design strengths and limitations

**Strengths of the research design**

The research design includes three-phase, sequential mixed methods research, and collection of both qualitative and quantitative data, which was considered best suited for the research purpose. Such a research design allowed elaborating on and expanding the findings of one method with another one, which proved beneficial.

In the first research phase, the focus group method as a qualitative data collection method was used to collect data on the research topic which is relatively unexamined and needs to be understood.[654] The use of *the personal disclosure strategy* and *the life centered line of questioning* elicited the data on adolescent information needs and accompanying information behavior, that are embedded in daily routines and problems.[655] This allowed the collection of wide-ranging data in a short period, taking advantage of group dynamics and intragroup stimulation and providing the initial insight into the research phenomena by identifying emerging themes, concepts, and issues that were further explored in the subsequent research phases. The focus group interviews provided a sharper research focus, which made them valuable. Moreover, they provided topics, concepts, and wording that are used in designing the survey.

In the second research phase, the use of survey enabled access to a larger number of adolescents and gathering a larger amount of data in a short period, which was beneficial in this quite extensive study. The survey results contributed to the overall research by adding to the

[654] Cf. Creswell, John W. Op. cit., p. 22.
[655] Cf. Shenton, Andrew K.; Dixon, Pat. Models. P. 7.

focus group results (e.g. data on the participants' perception of having decision-related information needs, their opinions on the importance of some information source characteristics in the selection of information sources) and by testing the speculation about the impact of perceived decision significance on the participants' information behavior and related opinions.

In the third research phase, individual semi-structured interviews allowed gathering rich data on the participants' experience, giving the researcher opportunity to devote the attention to one participant and ask for explanations. This provided rich data and a deeper understanding of the research phenomena, especially the understanding of how the participants select information sources based on information source characteristics, how they judge information credibility, and how they give their trust to the cognitive authorities.

All the research phases contributed to the result of the study. Focus group interviews provided clearer research focus, contributed to the development of the research instruments (i.e. the survey items and the individual interview guide questions). Perhaps the main contribution of the survey lies in the identification of the participants' perception of having decision-related information needs. Individual interviews can be considered as the most successful research phase which contributed to the research by confirming some previous findings (e.g. information behavior types), but also adding some new findings and enabling deeper understandings of some important topics (e.g. types of information source characteristics, credibility judgments, cognitive authority). This success may be attributed to the directions provided by the previous two research phases, especially the focus group interviews, which gave the researchers some valuable experience and enabled the design of the focused and efficient instrument.

**Limitations**

Although the focus groups generated rich data, the first phase of the study has several limitations. Firstly, although sampling aimed to include students of both gender and coming from three different types of high schools in Croatia, the data represents behaviors and opinions of twenty-two students who participated in discussions. Moreover, the participants were approached by gatekeepers and only those who were interested participated in the focus group discussions. Some other students might have given somehow different data on information needs and related information behavior for making decisions in everyday life. Secondly, the research made some trade-offs between minding the research ethics and pursuing the research goal, which ended up avoiding deeper discussions about some sensitive topics which occurred in the course of conversation (e.g. sexuality and drug misuse). This left some topics out of the researcher's reach, which might have reflected on the collected data. Thirdly, as some critics remark, the public nature of discussions in focus groups dictate the expression of views that are perceived as socially acceptable, while those which are not may stay unexpressed, with participants keeping socially unacceptable views for themselves.[656]

The limitation that is inherent to the survey method is that collected data are necessarily thin and do not allow for the deeper understanding and exploring of the respondents' answers.[657] The results on the participants' perception of information needs arising from everyday life

[656] Cf. Fergie, Gillian; Kate Hunt, Kate; Hilton; Shona. Op. cit., p. 592-593.
[657] Cf. Gillham, Bill. Op. cit., p. 10.

decisions, information sources they prefer using, characteristics of information sources they consider important and the opinion on the importance of having appropriate information when making everyday life decisions do not tell us about reasons that lay behind the expressed views. Some of them were pursued in the third research phase by individual interviews. Another inherent limitation relates to the question of how reliable the retrospective method of data collection, in this case, a survey, is. In this specific research, the survey showed certain deficiencies, even though it had been pre-tested. Although it was planned to take 15 – 20 minutes for participants to fill in the survey, for some of them it took much longer. Unlike those who volunteered to pre-test the survey, these participants might have been less eager to help and might have only passively agreed to participate which possibly reflected in their commitment to the task and affected the data collected by the survey. The suggestion for the future is that the survey should be shorter even if it implies that fewer topics would be covered. This would give participants an opportunity to complete the survey before their focus and patience run out. Few of the participants were quite restless, talking to each other and commented answers. This gave the researcher an impression that they were not completely ready to contribute - perhaps some of the students only passively agreed and did not pay the necessary attention to filling in the survey which might have reflected on data collection. Finally, the survey sample was purposive, formed to include students from three different types of high schools, and give less attention to possible gender-based differences. A weakness of the sample is that it is skewed predominantly female and for this reason, the survey results may tell us more about female participants' interaction with information in a decision-making context, than that of male participants.

Individual interviews give us a deeper insight and understanding of particular individuals who have been interviewed. The results are not representative of the general population. One of the limitations of the interview method is that people may be inaccurate. The interview method lays on the assumption that people know themselves and can give valid accounts of how they feel, how they typically behave and what they think and believe. Moreover, interviews give an insight into respondents' subjective world. Their statements about their behavior do not necessarily match how they actually behave, and what they state as their opinion does not necessarily match their actual opinion. As Gillham put it, "The relationship between beliefs, opinions, knowledge and actual *behavior* is not a straightforward one. What people say in an interview is not the whole picture; adequate research and, in particular, adequate *theorizing*, needs to take account of that".[658]

Apart from the limitations noted regarding the used data collection methods, some limitations of overall study need to be mentioned. Generalizability was not a goal for this study. The sampling was nonrepresentative and purposive, and therefore the study findings refer to only those adolescents who participated in the study. The adolescents who attend high school are rather easy to contact and were chosen to participate in this study. Some future work may be conducted among those adolescents who have chosen not to pursue secondary education, to explore their information behaviour in the context of making everyday life decisions. In addition, the findings may perhaps be transferable to other similar contexts. Some future study may perhaps replicate this study to test its findings in other contexts.

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[658] Cf. Gillham, Bill. Op. cit., p. 94.

The research design employed in this study was generally successful in fulfilling its role and in gathering data that allowed answering the posed research questions. However, the research was also quite challenging because of extensive data collection and time-intensive analysis of both textual and numeric data. Taking into consideration the deficiencies of the research design and the instruments used, focusing on fewer topics in a single study, as well as in a single research phase, could have resulted in better research instruments and easier data collection and analysis. Finally, choosing a school as the research site was beneficial in terms of access to adolescents. However, the existing adolescent student-adult power relations, which characterize the school environment, might have influenced the participants' answers and the research results. In future work, some attention should be given to this issue.

## 5. Conclusion

Adolescent information behavior as a part of the decision-making process is a relatively under-examined area in the library and information science field, both in the international context and in Croatia. What we know from the current research is that adolescents employ wide-ranging information behavior, including active and passive, when they deal with some life challenges such as everyday life concerns, problems, and decisions. In some cases, they are active and intentionally seek information, share information in peer groups and communities, or defer information seeking and avoid information for various reasons. They also employ passive behaviors such as passive search and passive attention and acquire information accidentally, while engaged in some other activity or without any intention of seeking information. Furthermore, the existing body of research shows adolescents' tendency toward using information sources which are familiar, accessible, credible, convenient, confidential and trustworthy. Established personal relationships, question topics and the location of information seeking are also among the factors that impact the selection of information sources they consult. Overall, adolescents favor consulting interpersonal sources of information, such as family members, friends and peers, and school employees, for information that would help them in dealing with such challenges. However, they enjoy advantages of online information acquisition, such as speed and convenience of access, access to information which otherwise might not be accessible, such as other people's personal experience on social media sites, and anonymous and hassle-free access to information. The internet is a widely used information source, and *Google* search engine the first choice in seeking information. The widespread use of personally owned mobile digital devices allows instant and easy access to information and quick and easy communication. Means of online communication, such as social networking sites, are used for supportive communication and advice exchange among youth on topics such as health, sexuality, and intimacy. However, adolescents also express some frustrations with communication overload which disputes with the concept of the digital natives and its simplistic view of today's youth as uniformly enthusiastic and skilled technology users. Generally, in challenging information environments, the ability of the young to adequately assess the quality and credibility of obtained information varies across the population and seems to depend on various factors, such as age-related abilities, social and cultural background and others. While some of them approach online information cautiously and employ various strategies to assess information credibility, there are also those with less ability to deal with its questionable quality and credibility. A substantial body of research tells us that attempts which youth make to assess the quality of acquired information seem seldom and modest. Behaviors such as superficial assessment of website quality and relevance, termination of the seeking process and accepting satisfying and *good enough* information, rather than seeking for information relevance, show that youth is somewhat lacking in the ability to effectively seek, manage and use the wealth of available information. Choosing credible information in an environment saturated with information is challenging for anyone, but especially for youth, who often lack the developmental abilities, general knowledge, and critical literacy skills that would allow them to determine the credibility of the information. Still, some studies show that some adolescents cope using various strategies, including starting search with the sources considered knowledgeable and trusted, verifying information accuracy by comparing it with prior knowledge and with information from different sources, evaluating websites by checking URLs, logos, organizations' information pages and language used, and verifying opinions and

personal experiences featured on social media websites by criteria such as author-related cues, argumentation, the tone, the number of views, 'likes' and 'dislikes' facilities, user-ratings, and other users' interaction which is seen as the regulatory function that a group of users together provide to create some kind of quality control over content. Finally, it should be noted that the existing body of research unanimously shows that adolescents do not think that helpful information can be found in a library. The purpose of this dissertation is to take a step further and enhance the understanding of the ways adolescents interact with information when making everyday life decisions: how they acquire and evaluate information that may help them in dealing with the decisions they make in everyday life.

Adolescents in Croatia live in a complex information environment, comprised of a plethora of information sources, starting with other people, such as family members, friends, peers, and professionals in some areas, traditional media, the global World Wide Web, which provides access to ideas, knowledge, and experiences around the globe, and others. Information plays an important role in making decisions by creating new knowledge and by enabling the development of a deeper understanding of a decision situation one is dealing with. How well adolescents navigate their information environments reflects on decisions that they make in everyday life. Therefore, the question of how adolescents interact with information, how they select information sources, and how they evaluate information quality, becomes exceptionally important. However, to the best of our knowledge, there has not yet been any research, which would seek to explore the information needs and information behavior in the context of making everyday life decisions among adolescents in Croatia. The described circumstances prompted this study which sought to reveal: (1) what are the adolescents' information needs that arise from everyday life decisions, (2) what types of information behavior accompany the information needs, (3) how adolescents select sources to acquire helpful information, (4) to what extent information serves as a basis in adolescent everyday life decision making. The study took a social phenomenology approach and was conducted in three research phases by combining qualitative and quantitative research methods: focus group interview in the first research phase, a survey in the second research phase, and semi-structured individual interview in the third research phase.

The research showed that **the participants' information needs originate from multitude of everyday life decisions** from diverse life areas: education, future and career, identity and personality development, relations to other people, social life and behavior, earning and money management, appearance, leisure time activities and entertainment, consumption of illegal and/or harmful substances – drugs and alcohol, purchase, food and diet, health, and others. They seem to be aware of only one type of information need, the one that originates from decisions related to higher education and career, understanding that new information would enhance their knowledge and understanding about the decision situation and, would help them make better and wiser decisions. The identified types of information needs correspond with many of those identified in previous research, which supports Agosto and Hughes-Hassell's claim that adolescents have similar information needs across socioeconomic, ethnic, cultural, and geographic boundaries.

**The participants acquire information which helps them in making everyday life decisions life by two main types of behavior: active and passive**. Active behavior includes intentional information seeking, information sharing, and information avoidance, while passive behavior includes passive monitoring of information and passive attention, which sometimes

result in an accidental acquisition of information. Intentional information seeking refers to one person seeking information to facilitate and support the decision-making process, while information sharing includes a two-way activity of people who give and receive information in the context of one decision with the mutual intention of getting informed. Most of the active information behavior was employed to facilitate making decisions regarding higher education and career, by engaging in intentional information seeking and information sharing. This does not come as surprise since this is perhaps the biggest decision that lies before adolescents after leaving school. However, not all active and intentional information behavior was directed towards the acquisition of information that would help in making some decisions. Information avoidance is intentional behavior that does not involve seeking information, but rather avoiding information for some reason. In the case from this study, information was avoided because of the belief that it may be a threat to pursuing the preferred decision option. Passive behavior includes passive monitoring behavior and passive attention. Passive monitoring behavior refers to the monitoring of everyday life information while *keeping an eye* on the environment and registering information mediated through various media, which resulted in the accidental acquisition of useful information. The information was acquired by monitoring social networking sites such as *Facebook*, *YouTube* and *Instagram*, and some magazines, and was helpful for decisions about relations to other people, higher education and career, appearance and diet, for getting a part-time job, a purchase decisions (e.g. *Facebook* add which resulted in some makeup purchase), some decisions about training and sport, and leisure time activities. Passive attention behavior refers to acquiring information in a passive and undirected manner by simply being aware, which also resulted in the accidental acquisition of useful information. The helpful information was acquired (1) from other people without asking for it because they assumed it would be useful to a decision-maker (a decision-maker was *being told*), (2) from other people who seek information on their behalf to help them with the decision, (3) in the course of conversation with others when useful information simply came up, and (4) generally from their environment. The participants are *being told* and acquire the information they did not seek from other people who assumed they might need information about higher education and career, school, harmful and risky behaviors such as smoking and consumption of alcohol and drugs, sexual behavior, school and education, and managing time and activities. The active agents who provide information in such a manner are usually teachers and other school employees, such as expert pedagogists and psychologists and parents. Moreover, they acquire information in a passive manner from people who seek information on their behalf, by encountering useful information in a conversation and from their environment, which helps them with decisions regarding appearance, diet, getting a job, purchase of some item, health, and higher education and career. Much of the reported information acquisition by passive attention behavior was to help with decisions about higher education and career, which does not come as surprise, assuming that people who have adolescents' best interest in mind, such as family members and educators, make efforts to get them informed about choices that will shape their future. Earlier studies also show that young people make endeavors to find information and employ intentional information seeking behavior to acquire information that would help them face life challenges, solve problems and help in making decisions, that they share information with others who might benefit from the information, that they often acquire information in an unintentional and passive manner, and sometimes avoid information for reasons such as believing that information is useless and unhelpful, relying on their own powers and capabilities to solve problems, believing that information is potentially threatening or

meaningless. It seems that across diverse decision situations, adolescents in this study, but also in a significant body of previous research, show to some extent an understanding of the importance of acquiring information (i.e. advice, opinion, encouragement, etc.), and endeavor to enhance the existing state of knowledge to eventually make better decisions, and therefore engage in intentional information seeking and information sharing to acquire the information that would help in making decisions and dealing with life challenges. Nevertheless, it seems that they are fully aware of this process only in the cases of the decisions about higher education and future career. They also accidentally acquire helpful information in a passive manner. However, on some occasions, they rather choose not to acquire new information and to avoid it.

Moreover, **the participants seek information from two main types of information sources: interpersonal sources of information, and sources that are available online, on the internet**. Traditional information sources, such as books, magazines, and newspapers, are rarely consulted, libraries especially. Interpersonal sources of information which the participants consult include family members (parents, siblings, and others), friends and peers, people with experience and knowledge in a domain of the decision (such as physicians, teachers, and university students), while the sources available on the Internet include the Internet in general, usually approached from *Google* search engine, specialized websites and social networking sites (such as forums, *YouTube*, *Instagram*, and *Facebook*). Moreover, the survey revealed the participants' high preference for interpersonal sources of information. Although the participants seek helpful information for making their everyday life decisions from a variety of information sources, they prefer seeking information (i.e. advice, opinion, support, etc.) from other people (family members, friends, people with experience and knowledge, etc.), which is not a novelty, but only confirms what is well known from earlier studies on youth information behavior. The survey results show a preference towards people who have knowledge and experience related to the decision, family members, and friends and peers as sources they would turn to when making everyday life decisions. They also show that overall, the participants do not think of social networking sites (forums, *YouTube*, *Facebook*, *Instagram*) as information sources that may provide helpful information, although they do seek information from these sources. Individual interviews add that although it may not always be completely trusted, the information acquired on social networking sites is considered somehow useful. Even though there are some studies that show ubiquitous use of the internet and digital mobile devices as a source of information and a means of communication among the youth, the participants from this study showed strong reliance on interpersonal information sources when seeking information that would help them in dealing with their everyday life decisions.

The study showed that **four types of information source characteristics serve as criteria (i.e. reasons) which the participants use when choosing where to seek information**. The first type includes (1) the characteristics related to credibility and cognitive authority, which guarantee that information provided is of a good quality (such as the source is knowledgeable and competent, is providing a good quality, accurate, verified, current and precise information, is trustworthy, is an authority, experienced, honest, objective, professional, official, reputable, verifiable, credible). The second type includes (2) other personal characteristics of interpersonal information sources which refer to a kind of personal trust, which does not exclusively refer to the trust in providing a good quality information, but more to some personal trust a decision-maker puts in the consulted interpersonal source of information, believing that he or she has a

decision-maker's best interest in mind and therefore wants to help (such as being helpful, understanding, supportive, confidential, in close relationship to a decision-maker, and well-meaning, i.e. wants what is the best for a decision-maker, having a lot in common with a decision-maker and/or being in the same situation, in terms of having the similar experience of making the same or similar decision themselves). This type of information source characteristics guarantees that the consulted interpersonal information source can understand a decision-maker, wants to help, offers confidentiality and has the best decision maker's interest in mind. Therefore, a decision-maker puts some personal trust in the source. In a considerable number of the answers, the participants named only this type of source characteristics as the reasons for consulting the specific information sources. The third type includes (3) the accessibility characteristics which enable fast, simple and easy access to information (such as being easy, fast and simply accessible, convenient to access, familiar, meaning that the participants have some experience in accessing information from a source, and informative, meaning the source offers access to a lot of information, of wide range). The fourth type includes (4) the form characteristics which enable that useful information comes in various formats which makes information appealing to the participants and easier to comprehend (the form is visual, auditive and textual, interactive). Family members, friends, and peers are consulted for helpful information that would facilitate the decision-making process because of the attached information source characteristics of credibility and cognitive authority because they are trusted to provide a good quality information, and because of some personal trust that the participants put in them, seeing them as helpful, well-meaning, etc. Experts within a domain of the decision, such as physicians and teachers, are usually approached for information because of the attached characteristics of credibility and cognitive authority and a belief that they would provide a piece of good quality information. On the other hand, the internet and websites are consulted for some understandable reasons – they allow simple, fast and easy access to a wide range of information, but also because of characteristics related to credibility and cognitive authority, in the cases of institutional websites, such as university websites. Social networking sites are also used for acquisition of information because they are available and accessible (i.e. access characteristics), and because they offer information in various forms (i.e. form characteristics): textual, audio and visual form, which makes information more appealing and somehow easier to comprehend. In some cases, YouTubers are considered credible sources, providing that the acquired information passed the assessment of features such as other users' comments and a high like/dislike ratio, and if the acquired information was verified by comparison with information obtained from other sources.

Generally, the participants believe that it is the most important to consult information sources that provide accurate information, and that is also important that information source is easy to access and easy to use, and that it allows quick acquisition of information. This is expected and in accordance with earlier studies that find that information quality and trustworthiness are of great importance to adolescents. The importance of availability and accessibility of information and information sources is also well known across the library and information science research. The value of some personal characteristics of interpersonal information sources, such as established good, trusting and friendly personal relationships with people who are perceived as being helpful, understanding, supportive, confidential, well-meaning, having a lot in common, etc. is expected, understandable and aligned with some previous studies. The value of trusted people who want only what is best for a decision-maker is a feature which extended through all the research phases and all the conversations that took place in this research. However, basing

decisions only on information provided by the sources that are consulted only because of their personal characteristics such as being in a close relationship or being well-meaning, without considering whether the source may be trusted to provide a good quality information, i.e. accurate, relevant, etc., does not necessarily contributes to making a well-informed decision. Acquiring information, i. e. advice and opinion, from those who adolescents see as close, well-meaning, understanding, helpful, supportive, etc., without considering other characteristics that would guarantee the quality of the information, does not make them better informed about decisions they are making. What is somehow surprising and not aligned with some previous studies is that information source characteristic of anonymity did not prove to be important to the participants since everyday life decisions often include decisions related to intimacy and it is possible that for such decisions young people want to acquire information, but stay anonymous. Overall, we may conclude that the participants consider four types of information source characteristics when consulting sources for information that would help them in making their everyday life decisions. The characteristics of credibility and cognitive authority ensure that the acquired information is of good quality, may help and can contribute to making better decisions, well-informed, based on deeper knowledge and understanding of the decision situation. Other three types of source characteristics – personal characteristics of interpersonal information sources, accessibility characteristics and form characteristics alone do not contribute to the quality and helpfulness of the acquired information. This means that if adolescents want to acquire information that would help in increasing their knowledge and in deepening the understanding of the decision situation they are facing, they would need to consult information sources characterized by the first type of information source characteristics, that which contribute to the credibility and cognitive authority of information source.

When it comes to the **judgment of the credibility of acquired information**, the participants from this study seem to assess the information mainly basing on the characteristics of the information sources which provided the information. The study shows that some of the criteria used for judgment about the credibility of information are the characteristics of information sources which correspond with two main components of credibility: competence in some area and trustworthiness, posited by P. Wilson. These characteristics are: experienced, honest, believable, authority, trustworthy, knowledgeable, providing accurate, verified and current information, reliable, professional, official, credible, respected, reputable and unbiased. The participants also base credibility judgments on some of the personal characteristics of interpersonal information sources which somehow stand out from what we usually see as credibility, such as being well-meaning, being familiar to a decision-maker, supportive, being in the same decision situation and being in a close relationship with a decision-maker, which makes an information source able to understand a decision-maker. They value a caring and protective relationship, a close bond, and some common history, perceiving the interpersonal information sources as someone they can rely on which, in turn, makes them trust the source. This gives us a reason to hypothesize that some of the participants are prone to mistake the quality of relationship with interpersonal information sources with the quality or credibility o information that they provide, which raises the question of whether mediated information sources, and especially those which provide information online, can provide information helpful in making everyday life decisions in a caring and supportive manner, which showed as very important to adolescents in making everyday life decisions. The credibility of information acquired on some social networking sites, such as *YouTube*, are based on characteristics such as popularity and reputation in the user community. This gives us reasons to conclude that

although the participant base credibility judgments on features of information source that may provide credible information (e.g. knowledge, expertise, experience, etc.), they are prone to holding an information provided by an interpersonal source credible for some personal characteristics of the source (e.g. being supportive, well-meaning, in close relationship with a decision-maker, etc), and the information acquired on social networking sites for its popularity and reputation in a community of anonymous users. However, relying on one's personal characteristics, which do not stem from knowledge, expertise, and other features that can be linked to the concept of credibility, and opinions of anonymous individuals expressed online, does not seem to be the proper way of judging credibility and does not guarantee the quality of acquired information. Consequently, the information acquired from an information source that does not guarantee information quality will not necessarily contribute to relevant knowledge about some decision situation and contribute to making a well-informed decision. Nevertheless, the study shows that the participants are not all that naive when receiving information from the internet-based information sources, and especially social networking sites. They tend to verify the accuracy of information by comparing information acquired from different information sources, which is the strategy identified among young people in some earlier studies, used for dealing with the credibility issues. What is interesting is that even if the information source is not considered fully credible, the acquired information may still have some value – it is not taken very seriously, but is still considered helpful as a form of opinion and advice, which is not decisive in the decision-making process, but may help in some way.

The findings show that the participants' **cognitive authorities include mostly their friends, parents, especially mothers, and experts in the domain of a decision, such as physicians, teachers, and university students, and in some cases some *YouTubers***. Moreover, information sources that are perceived as somehow official, such as student employment agency and university websites, as well as library books, are perceived as worthy of authority. The participants give their trust to these information sources, believing that they provide useful information that may help in the decision-making process, and make a positive influence on their decision-making process. Although friends, parents, and family are the participants' cognitive authorities across diverse decision situations, experts such as physicians and teachers, whose authority is limited to the area of their expertise, are more trusted when it comes to decisions within the area of their expertise. This suggests that the participants understand that cognitive authority is related to some specific area in which information source is competent, but also attach a certain degree of authority to friends and family members although they may not be competent in the area. Many of the identified bases of authority, such as experience, knowledge, honesty, trust, perceived objectivity and being disinclined to deceive, align with a general understanding of the concept of cognitive authority which describes information sources deserving of cognitive authority as competent, expert in the field, knowledgeable, skilled and educated, being thought highly of, being perceived as trusted, competent or successful, experienced or reputable, worthy of belief and credible. For interpersonal sources of information that present their cognitive authorities, the participants gave some new reasons for believing a source worthy of authority, which are obviously very important to them. These new bases of authority include meaning well and wants what is best for a decision-maker, giving support, being helpful and wanting to protect a decision-maker, being in a close relationship with a decision-maker, and, in the case of friends, that they are similar to a decision-maker and/or in the same decision situation, which makes them able to understand their situation and position. These new attributes highlight the importance of quality of the relationship between a

decision-maker and a person who is believed worthy of authority, in the construction of cognitive authority of the interpersonal information source. When it comes to bases of the authority of *YouTube* videos and their authors, surface cues such as as a good quality of a video which makes it look professional and convincing and their appearance in a television show, point out the necessity of addressing the issue of adolescent constructing digital media environment cognitive authorities in some future studies. Overall, we may conclude that when choosing which information source to consult for helpful information when making everyday life decisions, as well as when assessing information credibility and constructing cognitive authority, the participants see some personal characteristics of interpersonal information sources, such as that they mean well, want the best for them, are in close relationship and alike, as very important. The quality of personal relationships and the listed qualities of a person who provides information seem to be highly valued. However, we know that these characteristics alone cannot guarantee the provision of good quality information which would positively impact the decision making process by increasing a decision-maker's knowledge and allowing him or her to develop a better understanding and a clearer picture of the decision-making situation he or she deals with. The identified tendency to value personal information sources characterized by this personal characteristics warns us that some important characteristics of information sources that relate to credibility and cognitive authority of information, such as being experienced, honest, believable, authority, trustworthy, knowledgeable, providing accurate, verified and current information, reliable, and alike, should not be neglected for highly appreciated personal characteristics of interpersonal information sources. Finally, taking into consideration that the participants value close personal relationships with people as information sources, it would be interesting to explore under what conditions adolescents give more authority to mediated information sources, such as websites than to people.

**The participants need two types of help**, which facilitate their decision-making processes, from information, i.e. opinions and advice they acquire, which aligns with Julien's finding in the study on adolescent career-related decision making. **Instrumental help** assists in increasing knowledge and deepening understanding of the decision situations they deal with by giving information and knowledge, offering second opinion and another perspective on the situation, by encouraging to think deeper and rethink a decision, to broaden a horizon and consider another decision options, by opening of new possibilities and offering more decision alternatives or reducing the number of decision options, directing toward one of the decision options and helping in sorting out the thoughts. **Emotional help** includes encouragement, inspiration, motivation, support, assurance, comfort, and approval, boosting self-confidence, making things easier and relaxed, helping to calm down. We may speculate that adolescents value a personal relationship with interpersonal information sources and personal characteristics of information sources when choosing sources to turn to when judging the information credibility and constructing cognitive authority because this personal characteristics of information sources may guarantee that the help which one would get might be of the emotional type.

This study showed that generally, **the participants base their everyday life decisions on information to some extent**. They believe that they need appropriate information for making some everyday life decisions which would be of significance to them and intentionally engage in seeking helpful information in many decision-making situations. Overall, they seem to be

aware of the importance of having a piece of appropriate information when making a decision, but also base their decisions on other foundations, such as emotional states and instinct.

Finally, we may summarize some **key findings of this study**. For adolescents who participated in this study, decision-making situations, which come about in everyday life, are need-creating situations, in circumstances in which their initial state of knowledge about the decision is somehow lacking and insufficient, which induces decision-related information needs. For making a better and well-informed decision, adolescents from this study need some new information to increase their decision-related knowledge and develop a deeper understanding of the decision situation. Information behavior they employ when acquiring decision-related information includes both active and passive behaviors. The active behaviors which are employed with the goal of acquisition of decision-related, helpful information to support the decision-making process include intentional information seeking and information sharing. Information avoidance is a type of active and intentional behavior that is not conducted with the goal of information acquisition, but to avoid information acquisition because of the belief that it may be a threat to pursuing the desired decision option. Moreover, decision-related information is acquired in a passive manner as well. Passive ways of useful information acquisition are passive monitoring of information mediated through media, and passive attention. The participants accidentally acquire information from media, from their environment, and from other people who believe that the information may help adolescents with their decisions. When choosing where to seek helpful information, the participants take into consideration four types of information source characteristics. One type of source characteristics is related to credibility and cognitive authority and guarantees the provision of good quality information. The information acquired from sources with such characteristics may indeed contribute to making better and well-informed decisions. However, the sources characterized by other three types of source characteristics, those which relate to some personal characteristics of interpersonal information sources, to accessibility characteristics, and to form characteristics, without having characteristics which would guarantee information quality, does not necessarily provide helpful information, contribute to relevant knowledge about some decision situation and contribute to making better and well-informed decisions. The assessment of the credibility of information is also performed based on the characteristics of information sources. Some of the criteria used for credibility judgment correspond with competence in the area and trustworthiness, the two main components of credibility. However, acquired information provided by interpersonal information sources is sometimes held credible only because of some personal characteristics of the source, and the information acquired on social networking sites for its popularity and reputation in a community of anonymous users. The information source characteristics which do not steam from knowledge, expertise, and other features that can be linked to the concept of credibility, and opinions of anonymous individuals expressed online, does not seem to be the proper way of judging credibility and does not guarantee the quality of acquired information. Consequently, if the information acquired from an information source that does not guarantee information quality will not necessarily contribute to relevant knowledge about some decision situation and contribute to making a well-informed decision. Finally, the adolescents base their trust in their cognitive authorities on features such as experience and knowledge, which aligns with a general understanding of cognitive authority and characterize sources which can be trusted to make a positive influence on one's decision. Nevertheless, they also base their trust in the authorities on some characteristics which highlight the importance of quality of the relationship between a decision-

maker and a person who is believed worthy of authority, which seems important in the construction of the cognitive authority of the interpersonal information source. The reason for giving much value to personal relationships with interpersonal information sources and personal characteristics of information sources when choosing sources to turn to, when judging the information credibility and constructing cognitive authority maybe lies in an expectation that the sources would provide emotional help, which adolescents seem to need just like instrumental help when making decisions in everyday life.

Adolescents and information educators, who educate them to navigate today's complex information environment successfully, may benefit from an understanding of adolescents' decision-making processes. It is useful to understand that information that is used in making decisions is acquired both actively and passively, because it may increase the awareness that unintentionally acquired information (from advertisements, peers, etc.) may also influence decisions that young people make. Adolescents acquire plenty of information available in their information world. They are exposed to information, for example in the form of peer's opinions and experiences, advertisements etc., perhaps often without being aware of it. Surely, some of the information acquired in such a manner has an impact on their decisions. The finding that adolescents sometimes intentionally avoid information which might have been useful if acquired, may rise awareness about the behavior which diminishes one's chances to become well-informed, as well as his or her capacities to make sound decisions. Moreover, it is important to raise awareness about the difference among the characteristics of information sources that guarantee the provision of good quality information, such as domain-related knowledge, experience, trustworthiness etc., and those which do not. It is crucial that young people ask themselves: *Why do I trust this information source?* It is crucial that they are able to recognize the information source characteristics which do, or do not, serve as a true basis for putting one's trust into the source, and the characteristics which serve as true reasons for allowing the influence on his or her decisions. Information plays an important role by creating new knowledge and a deeper understanding of a decision situation one is dealing with. Only awareness of information acquisition processes and the capacity to evaluate the acquired information may lead to the use of good quality information that supports the decision-making process and helps adolescents in making better and well-informed decisions. Finally, it needs to be noted that generalizability was not a goal for this study and that the findings refer only to those adolescents who participated in the study. They may perhaps be transferable to other similar contexts and some future work may replicate this study to test its findings in other contexts.

## 5.1. Future research

This study deals with a problem that has not been given much of the research attention. The findings raise some new questions and call for further research on several research problems.

1. This study revealed that adolescents have information needs that arise from decisions they make related to health, food, and diet, relations to other people and social life, earning money and money management, purchase, etc. Future research should seek to reveal more details about their information needs and accompanying information behavior within the identified decision areas, such as food and diet decisions.
2. Information avoidance is identified as one type of interaction with information in the context of making everyday life decisions. Since avoiding information can potentially jeopardize

informed decision-making, some future research should focus on various reasons why adolescents avoid information. This would allow the design of instructions that would help adolescents understand the potentially harmful behavior and its consequences on decision-making.

3. The study revealed that the types of information behavior sometimes intertwine and that a piece of information acquired in an unintentional and imposed manner may prompt adolescents to start intentional information seeking activity. Further research on this matter in the web environment could identify how a piece of information acquired in an unintentional and imposed manner prompts adolescents to start new intentional information seeking activities (perhaps by making one aware of his or her information needs, by increasing the domain knowledge, by directing them to available information sources and showing the ways of using them, or in some other way). This might allow the development of aids that would help adolescents in seeking information in the web environment.
4. It was found that adolescents take into consideration four types of information source characteristics when choosing where to look for helpful information, i.e. what information source to use. These characteristics are (1) the characteristics of information sources that relate to credibility and cognitive authority, (2) other personal characteristics that the participants attach to personal information sources they tend to consult for helpful information, (3) the information source characteristics that relate to the accessibility of information sources, and (4) the information source characteristics that refer to the form in which information comes. This finding should be tested on a larger sample to identify the tendency of the larger population towards using each of the four information source characteristics when choosing information sources. This would help in developing information literacy instructions that would be useful in promoting informed decision-making.
5. The hypothesis that some adolescents are prone to mistake the quality of relationship with interpersonal information sources with the quality or credibility of information that they provide should be tested on a larger sample. The study found that adolescents value a caring and protective relationship, a close bond, and some common history, perceiving the interpersonal information sources as someone they can rely on, which in turn makes them trust the source. Testing the hypothesis would reveal to what extent information literacy and informed decision-making aids should focus on this potentially harmful phenomenon.
6. The study found that adolescents value personal trust, based on the quality of a relationship when assessing the credibility of information acquired from personal information sources for help with making everyday life decisions. This raises the question of whether non-human sources such as the internet, but also other mediated sources, can meet these criteria of evaluation of information credibility. Some future research could focus on the question of how they might judge the information provided by the internet or other mediated sources using this criterion. Additionally, it would be valuable to explore the possibilities of mediated information sources, and especially those which provide information online, to provide information helpful in making everyday life decisions in a caring and supportive manner, which is very important to adolescents in making everyday life decisions.
7. The study showed that the basis of authority or reasons why adolescents hold some personal information sources worthy of authority are some personal attributes such as source meaning well and wanting what is best for a decision-maker, giving support, being helpful, being in a close relationship with a decision-maker, and alike. This should be tested on a

larger sample to reveal to what extent adolescents give their trust to personal information sources basing on these attributes. The findings would be useful to practitioners in developing information literacy and informed decision-making aids.

8. Taking into consideration the widespread use of social media, it would be valuable to further explore how adolescents construct cognitive authority using this media.
9. Taking into consideration that the participants value close personal relationships with interpersonal information sources, it would be important to explore under what conditions adolescents give authority to mediated information sources, such as websites, over people. This would be valuable for designing web-based aids to help adolescents get informed and make informed everyday life decisions.
10. Adolescents need two types of help for making decisions in everyday life: instrumental help and emotional help. It would be valuable to reveal how this relates to their propensity towards interpersonal information sources that are characterized by attributes such as supportive, helpful, well-meaning, etc., toward credibility judgments based on the criteria of a caring and protective relationship, a close bond, and some common history, and construction of cognitive authority on bases such as some personal attributes such as source meaning well and wanting what is best for a decision-maker, giving support, being helpful, being in a close relationship with a decision-maker, and alike. It would be important to find out whether/to what extent the need for emotional help relates to these identified behaviors.
11. This study focused on information needs and information behavior for making everyday life decisions among high school students. Some future work needs to focus on those that do not attend secondary education - employed and NEET adolescent population (NEET meaning those that are not in education, employment, or training).

## 5.2. Implications for practice

This study carries some implications for librarians and other practitioners working with adolescents. The findings can be implemented in the instructional area of information literacy, the area which is increasingly important in the contemporary environment of rapid technological change and proliferating information sources and can also be considered for the development of aids for informed decision-making.

1. The study shows that adolescents are aware to a certain extent that some of their everyday life decisions should be based on information. An effort needs to be put into raising awareness about the concept of informed decision-making and the advantages of basing decisions on the information.
2. Adolescents acquire information that influences their everyday life decisions actively and passively. We need to increase their understanding of different ways in which they acquire information, raising the awareness that unintentionally acquired information (such as information mediated through advertisements, but also other types of information) influence their decisions. Likewise, adolescents need to be warned about how information avoidance, if employed, diminishes their chances to acquire important information and make well-informed decisions.
3. Adolescents need to be taught to understand the difference between the characteristics of information sources that guarantee the provision of good quality information (such as the source is accurate), and those which do not (such as the source means well). When choosing

which information source to use, as well as when judging the credibility of acquired information and giving the authority to someone or something to influence their decisions, adolescents need to be aware of the reasons for doing so. Only information gained from sources that can guarantee the quality of acquired information can contribute to making well-informed and sound decisions. Therefore, information literacy instructions should work to enhance their abilities to understand that information sources which allow fast, simple and easy access to information do not necessarily provide information of good quality and contribute to informed decision-making, and neither do those that are characterized by the attributes of interpersonal information sources such as being in a close relationship with a decision-maker, being well-meaning and alike and neither those sources that provide information in various formats, making it appealing and easier to comprehend (visual, auditive and textual, interactive formats). Only information sources that are characterized by knowledge, competence, and experience in the decision domain, accuracy, precision, professionally, and alike, guarantee the provision of quality information and may contribute to making a well-informed decision. Likewise, judgments about the credibility of acquired information need to be made by employing the criteria such as being experienced, knowledgeable, providing accurate, verified, and current information, reliable, professional, official, unbiased, and alike. Basing credibility judgments on some of the attributes of interpersonal information sources such as being well-meaning, being familiar to a decision-maker, supportive, being in the same decision situation and being in a close relationship with a decision-maker, may mislead young people to hold the acquired information credible, although they are not. Finally, giving authority to someone or something to influence adolescents' decisions should be based on competence, knowledge, and experience in the decision domain, objectivity, and the characteristic of being disinclined to deceive. It needs to be stressed that cognitive authority is related to a specific area and that someone or something can be trusted to influence one's decision within the area of the expertise, but that in other areas this might not be the case.

# 6. Literature


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# 7. Abstract

Although the topic of adolescent information behavior in the context of dealing with everyday life concerns and challenges has gotten some of the research attention, the adolescent information behavior as a part of the decision making process is still a relatively under-examined area in the library and information science field, both in the international context and in Croatia. Adolescence is a sensitive period of leaving the age of childhood, and gradually taking over the responsibility for managing one's own life, including taking over the burden of making one's own decisions. Starting with the assumption that being well-informed increases adolescents' ability to make some sound decisions, this dissertation sought to reveal: (1) what are the adolescents' information needs that arise from everyday life decisions, (2) what types of information behavior accompany the information needs, (3) how adolescents select sources to acquire helpful information, (4) to what extent information serves as a basis in adolescent everyday life decision making. The study took the social phenomenological approach and employed a three-phase, sequential mixed methods strategy to explore the phenomenon of interest. The methods used include focus group interview, a survey and a semi-structured individual interview. The study was conducted among high school students in the city of Rijeka, third-graders and fourth-graders coming from three types of high schools: grammar school, art school and vocational school. The focus group interviews sample consisted of 22 students, the survey sample included 270 students, and the semi-structured individual interview sample consisted of 18 students. The research was conducted from February 2018 to June 2020. The results show that the participants' information needs originate from a multitude of everyday life decisions in diverse areas of life: education, future and career, identity and personality development, relations to other people, social life and behavior, earning and money management, appearance, leisure time activities and entertainment, consumption of illegal and/or harmful substances – drugs and alcohol, purchase, food and diet, health, and others. However, they seem to be aware of only one type of information need, the one that originates from decisions related to higher education and career. Moreover, it showed that the participants acquire information which helps them in making everyday life decisions via two main types of behavior: active and passive. Active behavior includes intentional information seeking, information sharing, and information avoidance, while passive behavior includes passive monitoring of information and passive attention, which sometimes results in an accidental acquisition of some useful information. Two main types of information sources are consulted for information that might help in making decisions: interpersonal sources of information, and sources that are available online, on the Internet, while traditional information sources, such as books, magazines and newspapers, are rarely consulted, libraries especially. Interpersonal sources of information include family members, friends and peers, and people with experience and knowledge in the domain of the decision, while sources available on the Internet include the Internet in general, usually approached from the Google search engine, specialized websites and social networking sites. Overall, interpersonal sources of information are preferred sources of helpful information. Although it is believed that the information acquired from social networking sites cannot be completely trusted, it is considered useful to some extent. Four types of information source characteristics serve as criteria (i.e. reasons) which the participants use when choosing where to seek information: (1) the characteristics related to credibility and cognitive authority, which guarantee that the information provided is of good quality (e.g. source being knowledgeable, experienced, honest, etc.), (2) other personal characteristics of

interpersonal information sources which refer to a kind of personal trust, which does not exclusively refer to trust in providing information of good quality, but more to some personal trust the decision-maker puts in the consulted interpersonal source of information (e.g. source being helpful, understanding, supportive, in a close relationship to the decision-maker, etc.), (3) the accessibility characteristics which enable quick, simple and easy access to information (such as being easily and quickly accessible, convenient to access, etc.), and (4) the form characteristics which enable that useful information to come in various formats, which makes the information appealing to the participants and easier to comprehend (the form is visual, auditory and textual, interactive). Furthermore, the judgment of the credibility of the acquired information is mainly based on the characteristics of the information sources which provided the information. Some of the criteria used are the characteristics of information sources which correspond with two main components of credibility, competence in some area and trustworthiness (e.g. knowledgeable, experienced, honest, believable, etc.), but some others do not. These other information source characteristics, which are used for the credibility assessment, are some of the personal characteristics of interpersonal information sources (e.g. being familiar to the decision-maker, supportive, in a close relationship, etc), and popularity and reputation in the user community for social networking sites. As these information source characteristics do not stem from knowledge, expertise, and other features that can be linked to the concept of credibility, and include opinions of anonymous individuals expressed online, we may argue that they do not seem to be the proper way of judging credibility and do not guarantee the quality of acquired information. Nevertheless, some of the adolescents deal with the credibility issues by using the strategy for verifying the accuracy of information by comparing information acquired from different information sources. The findings show that the participants' cognitive authorities include mostly their friends, parents, especially mothers, and experts in the domain of the decision, such as physicians, teachers, university students, and in some cases some *YouTubers*. The adolescents base their trust in their cognitive authorities on features such as experience and knowledge, which aligns with the general understanding of cognitive authority and characterize sources which can be trusted to make a positive influence on one's decision. Nevertheless, they also base their trust in the authorities on some characteristics which highlight the importance of the quality of the relationship between the decision-maker and the person who is believed worthy of authority, which seems important in the construction of the cognitive authority of the interpersonal information source. Finally, it showed that the acquired information provides two types of help that facilitates the adolescents' decision making: instrumental help which assists in increasing the knowledge and deepening the understanding of the decision situations they deal with by providing some new knowledge, a second opinion, another perspective, etc., and emotional help which provides encouragement, inspiration, motivation, assurance, approval, and similar forms of support. This dissertation contributes to the library and information science by systematizing the existing body of knowledge on the research topic and reflect upon it from the view of the research findings, and by shedding new lights on an important area that has not been explored in Croatia yet and has been insufficiently explored in the international scholar community. It offers some valuable insights to adolescents and information educators, who educate them to navigate today's complex information environment successfully. It is expected that the results will contribute to the development of strategies and methods for teaching decision-making skills to adolescents, information literacy being one of them, to help them make well-informed decisions. Lastly, it offers the methodological framework and strategy, built for conducting the research among the

sensitive population of adolescents about their everyday life issues, to be used in some future studies.

**Keywords**: adolescents, decision making, information behaviour, information behaviour studies, research

## 7.1. Prošireni sažetak na hrvatskom jeziku

Informacijsko ponašanje adolescenata u kontekstu briga i izazova koje donosi svakodnevni život posljednjih desetljeća privlači pažnju istraživača. Unatoč tomu, informacijsko ponašanje adolescenata kao sastavni dio procesa donošenja odluka još je uvijek slabo istraženo područje informacijskih znanosti i u međunarodnom kontekstu i u Hrvatskoj. Istodobno, informacije imaju važnu ulogu u procesu donošenja odluka jer omogućuju stvaranje novog znanja i dublje razumijevanje situacije donošenja odluke u kojoj se pojedinac nalazi, pa sposobnost uspješnog snalaženja u vlastitom informacijskom okruženju utječe na odluke adolescenata u svakodnevnom životu. Zato su pitanja o načinu interakcije adolescenata s informacijama i o načinu na koji vrednuju kvalitetu stečenih informacija od iznimne važnosti. Informacije koje stječu i koriste utječu na ishode njihovih odluka te posljedično na njihove živote. Poznati pojam *informirane odluke* izražava uvjerenje da donošenje odluka treba zasnivati na relevantnom znanju i u skladu s vlastitim vrijednostima. Informacije na kojima se informirana odluka zasniva trebaju biti kvalitetne, odnosno točne, aktualne (engl. *current*), korisne i važne u kontekstu odluke koja se donosi. Istodobno, suvremeno informacijsko okruženje prezasićeno je informacijama, pa odgovarajuća informiranost o nekoj temi postaje pravi izazov, jednako kao i donošenje informiranih odluka. U suvremenom mrežnom okruženju brojne sadržaje stvaraju korisnici, stoga se informacije stvaraju i dijele izvan nekadašnjih tradicionalnih modela izdavaštva. Izvori informacija poput stranica za društveno umrežavanje sve se više koriste za praćenje novosti, a posebnu pažnju posljednjih godina privlači fenomen lažnih vijesti koji podsjeća kako lažne informacije u digitalnom okruženju mogu imati stvaran utjecaj na društvo. U svakodnevnoj komunikaciji dominiraju mobilni digitalni mediji prilagođeni prikazu na ekranu (engl. *screen media*), poput pametnih telefona, koji pružaju najbrži i najlakši način pristupanja informacijama. U takvim okolnostima posebno važnim postaje pitanje procjene kvalitete stečenih informacija. Knjižničari i ostali informacijski stručnjaci trebaju biti svjesni izazova ovakva informacijskog okruženja te prigrliti svoju tradicionalnu ulogu informacijskih edukatora u poučavanju kritičkog pristupa informacijama te njihovu vrednovanju. Korisnike informacija treba poučavati učinkovitu pristupu informacijama, ali i prepoznavanju vjerodostojnih informacija. Vještine informacijske pismenosti od ključne su za upravljanje vlastitim životima i postavljanje ciljeva, ali i za nastojanja da se oni ostvare, za donošenje odluka i rješavanje problema te sudjelovanje u procesima demokratskog društva. Sposobnost stjecanja, razumijevanja i vrednovanja informacija neophodna je za donošenje informiranih odluka, uključujući odluke povezane s obrazovanjem, profesionalnim razvojem, prehranom, zdravljem, glasanjem na izborima i druge, te za korištenje svih mogućnosti koje život pruža. Stoga je važno saznati više o tome kako se mladi ljudi snalaze u vlastitom informacijskom okruženju kada donose odluke iz različitih područja svakodnevnog života. Važno je znati kako adolescenti stječu informacije koje im pomažu u donošenju odluka, kako odabiru izvore informacija te kako vrednuju kvalitetu informacija. Dosadašnja saznanja govore da adolescenti

pokazuju različita aktivna i pasivna informacijska ponašanja pri suočavanju sa životnim izazovima, brigama i odlukama, da su skloni informacije tražiti od drugih ljudi, no i da se rado koriste prednostima pogodna i laka pristupa mrežnim izvorima informacija. Također je poznato da dijelovi populacije ulažu različite napore u vrednovanje informacija te da su ta nastojanja u brojnim slučajevima rijetka, skromna i nedovoljna. Stoga je potrebno saznati više o informacijskom ponašanju adolescenata i o načinima na koje se odnose prema informacijama da bismo im mogli pomoći u učenju kako bolje donositi odluke i kako donositi informirane odluke. Adolescenti u današnjoj Hrvatskoj žive u kompleksnom informacijskom okruženju zasićenom informacijskim izvorima, počevši od osobnih izvora poput članova obitelji, prijatelja i vršnjaka, ali i stručnjaka u pojedinim područjima, pa do tradicionalnih izvora informacija i globalne mreže, tj. interneta, koja pruža pristup idejama, znanju i iskustvima ljudi iz cijelog svijeta. Unatoč tomu, prema našim saznanjima, dosad u Hrvatskoj nije bilo istraživanja informacijskih potreba i informacijskog ponašanja adolescenata u kontekstu donošenja odluka u svakodnevnom životu. Adolescencija je razdoblje napuštanja djetinjstva i postupnog preuzimanja odgovornosti za upravljanje vlastitim životom, što uključuje i preuzimanje tereta samostalnog donošenja vlastitih odluka. U ovom radu polazi se od pretpostavke da dobra informiranost povećava sposobnost adolescenata za donošenje odluka i želi se utvrditi: (1) koje su to informacijske potrebe koje proizlaze iz odluka koje adolescenti donose u svakodnevnom životu; (2) koji oblici informacijskog ponašanja adolescenata prate njihove informacijske potrebe koje proizlaze iz odluka koje donose u svakodnevnom životu; (3) kako adolescenti odabiru izvore informacija kojima se obraćaju za stjecanje informacija koje im mogu pomoći; (4) u kojoj mjeri adolescenti temelje donošenje odluka u svakodnevnom životu na informacijama. Istraživanju se pristupa iz polazišta sociološke fenomenologije, u čemu se slijede znanstveni autoriteti u području informacijskog ponašanja ljudi T. Wilson i Savolainen, koji zagovaraju takav pristup. Istražuju se fenomeni informacijskih potreba adolescenata koje proizlaze iz njihovih odluka i povezano informacijsko ponašanje te se nastoji otkriti kako ih percipiraju i razumiju adolescenti koji sudjeluju u istraživanju. Metodološki je pristup dominantno induktivan i interpretativan, u skladu s pristupom sociološke fenomenologije, što određuje nacrt istraživanja i odabir istraživačkih metoda. Induktivni pristup također je odgovarajući za pristupanje istraživačkom problemu koji dosad nije istraživan u značajnoj mjeri. Primjereno induktivnom pristupu, istraživanje nije određeno strogim teorijskim okvirom, ali se oslanja i vodi nizom pojmova i teorija relevantnih za temu rada. Istraživanje se provodi u trima fazama, primjenjujući sekvencijalnu strategiju istraživanja koja uključuje kvalitativne i kvantitativne metode istraživanja. U prvoj fazi primjenjuje se kvalitativna istraživačka metoda, a rezultati se upotrebljavaju za daljnje planiranje druge i treće faze istraživanja. Metode istraživanja primijenjene u radu jesu intervju fokusnih grupa, anketni upitnik i polustrukturirani individualni intervju. Istraživanju informacijskih potreba i informacijskog ponašanja u prvoj i trećoj fazi istraživanja pristupa se primjenom strategije koju Shenton i Dixon nazivaju strategijom *osobnog razotkrivanja* (eng. *personal disclosure*), koja podrazumijeva primjenu tehnika kojima se podaci prikupljaju izravno od mladih ispitanika. Također se primjenjuje način ispitivanja koji oni označavaju kao *usmjeren na život* (engl. *life centered*), a kojim se sudionike ispituje o problemima i brigama iz kojih potiču informacijske potrebe. Nadalje, poznato je da se informacija može pojaviti u obliku savjeta te da informalni načini informiranja poput davanja savjeta ili usmjeravanja imaju informativnu vrijednost, što je prije više desetljeća ustvrdila Dervin. Stoga je pojam informacije tijekom istraživanja praćen frazom *dodatno znanje, savjet ili pomoć*. Julien i drugi autori također konceptualiziraju informaciju kao pomoć. Istraživanje

je provedeno u Rijeci među učenicima trećih i četvrtih razreda u trima tipovima srednjih škola: gimnazijama, umjetničkim školama i strukovnim školama. Uzorak za fokusne grupe sastojao se od 22 učenika, uzorak za anketu sastojao se od 270 učenika, a uzorak se za polustrukturirane individualne intervjue sastojao od 18 učenika. Istraživanje je provedeno između veljače 2018. i lipnja 2020. godine. Rezultati istraživanja pokazuju da informacijske potrebe ispitanika proizlaze iz mnoštva odluka koje donose u različitim područjima svakodnevnog života, a to su: obrazovanje i profesionalni razvoj, identitet i razvoj osobnosti, odnosi s drugim ljudima, društveni život i ponašanje, zarađivanje i upravljanje novcem, izgled, slobodno vrijeme i zabava, konzumiranje ilegalnih i/ili štetnih tvari poput droge i alkohola, kupovina, prehrana, zdravlje i druga područja. Istraživanje također pokazuje da su ispitanici svjesni samo onih informacijskih potreba koje proizlaze iz odluka u vezi s obrazovanjem i profesionalnim razvojem. Nadalje, istraživanje je pokazalo da ispitanici stječu informacije koje im pomažu u donošenju odluka u svakodnevnom životu pomoću dva tipa informacijskog ponašanja: aktivnog i pasivnog. Aktivno informacijsko ponašanje uključuje namjerno traženje, dijeljenje i izbjegavanje informacija, dok pasivno informacijsko ponašanje uključuje pasivno praćenje informacija i pasivnu pažnju, ponašanja koja ponekad završavaju slučajnim nailaženjem na korisne informacije. Namjerno traženje informacija ponašanje je kojim osoba traži informacije kako bi olakšala i poboljšala proces donošenja odluke, dok dijeljenje informacija podrazumijeva dvosmjernu aktivnost osoba koji pružaju i primaju informacije u kontekstu jedne odluke sa zajedničkim ciljem informiranja. Većina aktivnog informacijskog ponašanja, utvrđenog istraživanjem, odnosi se na odluke povezane s obrazovanjem i profesionalnim razvojem, što je razumljivo ako se uzme u obzir da su to vjerojatno najveće odluke s kojima se adolescenti susreću pri završetku srednjoškolskog obrazovanja. S druge se strane također pokazalo da neki adolescenti primjenjuju aktivno informacijsko ponašanje koje nije usmjereno na stjecanje informacija, već na izbjegavanje informacija, zbog uvjerenja da bi one mogle ugroziti ostvarenje opcije kojoj osoba daje prednost. Nadalje, pokazalo se da ispitanici slučajno nailaze na informacije pasivnim praćenjem medija za društveno umrežavanje (npr. Facebooka, YouTubeovih kanala i Instagrama) i časopisa. Također slučajno nailaze na informacije pasivnim obraćanjem pažnje i: (1) primanjem informacija od drugih ljudi koji smatraju da bi one bile korisne osobi koja donosi odluku, (2) primanjem informacija od ljudi koji sami traže informacije kako bi osobi koja donosi odluku pomogli, (3) stjecanjem informacija tijekom razgovora u kojem korisne informacije jednostavno iskrsnu te (4) općenito nailaženjem na korisne informacije u okruženju. Najviše primjera slučajnog nailaženja na informacije do kojeg je došlo pasivnim obraćanjem pažnje povezano je s odlukama o daljnjem obrazovanju i profesionalnom razvoju, što je i očekivano s obzirom na to da članovi obitelji, nastavnici i ostali odrasli koji brinu o njihovu interesu nastoje adolescente informirati i pripremiti za odluke koje utječu na njihovu budućnost. Nadalje, možemo razlikovati dva tipa informacijskih izvora kojima se obraćaju za pomoć u donošenju odluka: osobni izvori informacija i izvori koji su dostupni putem interneta, dok se tradicionalnim izvorima informacija poput knjiga, časopisa i novina koriste rjeđe. Posebno rijetko korišten tradicionalan izvor informacija jesu knjižnice. Osobni izvori informacija uključuju članove obitelji (roditelje, braću i sestre itd.), prijatelje i vršnjake te ljude koji imaju iskustvo i znanje iz područja odluke (primjerice liječnike, nastavnike i studente), a informacijski izvori dostupni putem interneta uključuju internet općenito, kojem se obično pristupa putem tražilice Google, te specijalizirana mrežna mjesta i stranice za društveno umrežavanje (primjerice, forume, YouTube, Instagram i Facebook). Istraživanje pokazuje da ispitanici preferiraju osobne izvore informacija za stjecanje

informacija koje im mogu pomoći u donošenju odluka u svakodnevnom životu. Usprkos iskazanom uvjerenju da ne mogu u potpunosti vjerovati informacijama dobivenim putem stranica za društveno umrežavanje, ispitanici ih ipak u određenoj mjeri smatraju korisnima. Nadalje, istraživanje pokazuje da ispitanici biraju izvore od kojih će tražiti informacije s obzirom na četiri tipa karakteristika informacijskih izvora: (1) karakteristike povezane s kredibilitetom i kognitivnim autoritetom, koji jamče kvalitetu dobivene informacije (npr. izvor posjeduje znanje, iskustvo, kompetentan je, pruža kvalitetne, točne, provjerene, svježe i precizne informacije, vrijedan je povjerenja, autoritet je, izvor je iskren, objektivan, profesionalan, služben, ugledan, kredibilan, pruža informacije koje se mogu provjeriti); (2) druge karakteristike osobnih izvora informacija koje se odnose na određeno osobno povjerenje koje donositelj odluke ima u osobni izvor informacija (npr. izvor je takav da uvijek pomaže, ima razumijevanja, pruža podršku, povjerljiv je, u bliskoj je vezi s osobom koja donosi odluku, želi ono što je najbolje za tu osobu, sličan joj je i/ili je u sličnoj je situaciji kao osoba koja donosi odluku) i koje nije nužno povezano s uvjerenjem da izvor pruža kvalitetne informacije; u određenom broju slučajeva takve su karakteristike bile jedini razlog odabira određene osobe za izvor informacija; (3) karakteristike povezane s pristupačnošću izvora informacija koje omogućuju brz, jednostavan i lak pristup informacijama (npr. izvoru je lako, brzo i jednostavno pristupiti; izvor je prikladan za pristupiti mu; izvor je poznat, pa donositelj odluka ima iskustvo u pristupanju izvoru; izvor pruža pristup širokom rasponu informacija, pa je informativan); (4) karakteristike povezane s formatom izvora informacija zbog kojih su informacije privlačne te lakše razumljive (formati u kojima se informacije pojavljuju vizualni su, auditivni, tekstualni i interaktivni). Istraživanje pokazuje da ispitanici vjeruju da je najvažnije tražiti informacije od izvora koji pružaju točne informacije te da je također važno da je izvoru informacija lako pristupiti, da je lako koristiti se njime te da izvor omogućuje brz pristup informacijama. Saznanje da veliku vrijednost pridaju kvaliteti bliskog i prijateljskog odnosa ispunjena povjerenjem s osobama od kojih traže informacije te karakteristikama poput onih da izvor informacija rado pomaže, može razumjeti, pruža podršku i sl. u skladu je s nekim prijašnjim istraživanjima. Unatoč tomu utemeljenje odluke na informacijama koje pruža izvor kojem se donositelj odluke obraća isključivo iz takvih razloga, zanemarujući karakteristike izvora koje jamče kvalitetu informacija, ne doprinose nužno donošenju informirane odluke. Nadalje, pokazalo se da ispitanici procjenjuju kredibilitet informacija uglavnom na temelju karakteristika izvora informacija od koji su informacije stekli. Neki od kriterija koje primjenjuju odnose se na karakteristike izvora informacija koje su povezane dvjema glavnim sastavnicama kredibiliteta, kompetentnošću u određenom području i pouzdanosti (engl. *trustworthiness*) (npr. izvor posjeduje znanje, iskustvo, iskren je, može mu se vjerovati, pruža točne, provjerene i svježe informacije, pouzdan je, profesionalan je, služben, ugledan, poštovan, nepristran, autoritet), no također primjenjuju i kriterije koji to nisu. Karakteristike izvora informacija koje nisu povezane s kompetentnošću u određenom području i pouzdanosti, a koriste se kao kriterij procjene kredibiliteta informacija, neke su od karakteristika osobnih izvora informacija (npr. izvor je poznat donositelju odluka, pruža podršku, u bliskoj je vezi s donositeljem odluka) zajedno s popularnošću i reputacijom u zajednici korisnika stranica za društveno umrežavanje. S obzirom na to da te karakteristike izvora informacija ne potječu iz znanja, ekspertize i drugih obilježja koje se mogu povezati s konceptom kredibiliteta te uključuju mišljenja anonimnih pojedinaca izražena mrežnim putem, može se reći da njihova primjena nije dobar način procjene kredibiliteta te ne jamči kvalitetu stečene informacije, stoga stečene informacije ne doprinose nužno informiranosti donositelja odluke. Ovo saznanje upozorava da neki adolescenti mogu

pogrešno zamijeniti kvalitetu odnosa s osobnim izvorima informacija s kvalitetom informacija koje su od njih dobili. Istraživanje je također pokazalo da neki adolescenti procjenjuju kredibilitet informacija primjenjujući strategiju uspoređivanja informacija dobivenih od različitih izvora za provjeru točnosti informacija. Kognitivni autoriteti koji utječu na odluke koje ispitanici donose u svakodnevnom životu jesu većinom njihovi prijatelji i roditelji, pogotovo majke, stručnjaci u području odluke poput liječnika, nastavnika i studenata, a u nekim slučajevima i YouTuberi. Izvori informacija koji su na neki način službeni, kao što su to sveučilišne mrežne stranice, također se smatraju kognitivnim autoritetom. Pokazalo se da razlozi zbog kojih ispitanici daju povjerenje svojim kognitivnim autoritetima jesu iskustvo i znanje koji autoritet posjeduje, što je u skladu s općenitim razumijevanjem pojma *kognitivnog autoriteta* te karakterizira izvore za koje se može vjerovati da čine pozitivni utjecaj na nečiju odluku. Međutim, rezultati također pokazuju da se povjerenje daje i zbog nekih drugih karakteristika koje ističu važnost kvalitete odnosa između osobe koja donosi odluku i osobe koja se smatra kognitivnim autoritetom te koje čine važne karakteristike osobnog izvora informacija koji je kognitivni autoritet (npr. izvor želi najbolje donositelju odluke, pruža mu podršku, pomaže mu, štiti ga, u bliskoj su vezi). Nadalje, pokazalo se da se kognitivni autoritet YouTubeovih videa i njihovih autora zasniva na izvanjskim značajkama, poput kvalitete sama videouratka, zbog koje djeluje profesionalno i uvjerljivo te zbog pojavljivanja autora u televizijskoj emisiji, što ukazuje na potrebu istraživanja načina na koji adolescenti stječu povjerenje u kognitivne autoritete u okruženju digitalnih medija. Može se zaključiti da su sudionicima istraživanja za odabir izvora informacija, procjenu kredibiliteta te davanje povjerenja kognitivnom autoritetu važne karakteristike osobnih izvora informacija poput dobronamjernosti, pružanje potpore te kvaliteta odnosa s izvorom. Međutim, takve osobine same po sebi ne jamče pružanje kvalitetnih informacija koje mogu pozitivno utjecati na proces donošenja odluka time što će proširiti znanje osobe koja donosi odluku i doprinijeti boljem razumijevanju situacije donošenja odluke. Saznanje da adolescenti cijene prepoznate karakteristike i kvalitetu odnosa s osobnim izvorima informacija upozoravaju da važne karakteristike izvora informacija koje su povezane s uobičajenim razumijevanjem kredibiliteta informacija i kognitivnog autoriteta, kao što su iskustvo, znanje, točnost i sl., ne smiju biti zanemarene. Naposljetku, stečene informacije pomažu u procesu donošenja odluka na dva načina: dajući instrumentalnu pomoć koja uključuje povećavanje znanja i razumijevanja određene situacije donošenja odluke pružajući novo znanje, drugo mišljenje, drugo gledište na situaciju i sl. te dajući emocionalnu pomoć tako što ohrabruju, inspiriraju, motiviraju, uvjeravaju, odobravaju te pružaju slične oblike podrške. Ovo istraživanje donosi vrijedne uvide koji mogu biti korisni adolescentima i informacijskim edukatorima koji im pomažu u uspješnom snalaženju u današnjem složenom informacijskom okruženju. Rad sistematizira dosadašnja saznanja o temi informacijskih potreba i informacijskog ponašanja adolescenata u kontekstu životnih izazova, briga i odluka te ih dovodi u vezu s rezultatima istraživanja. Nadalje, osvjetljava važno područje koje još nije istraživano u Hrvatskoj, dok je u široj znanstvenoj zajednici istraživano u drukčijem i ograničenom kontekstu, te postaviti nova pitanja za buduća istraživanja. Radom se također doprinosi razvoju strategija i metoda za poučavanje adolescenata informacijskoj pismenosti te pružanju podrške u donošenju informiranih odluka. Naposljetku, nudi se metodološki okvir i strategija za provođenje istraživanja među adolescentima o temama iz svakodnevnog života. Potrebno je istaknuti da generalizacija nije bila cilj ovog rada te da se rezultati odnose na adolescente koji su sudjelovali

u istraživanju. Buduće studije mogu ponoviti istraživanje te provjeriti rezultate rada u drugim kontekstima.

**Buduća istraživanja**

Rad se bavi problemom kojem dosad nije posvećeno puno pažnje, pa otvara brojna pitanja na koja treba tražiti odgovore u budućim istraživanjima:

1. Pokazalo se da informacijske potrebe adolescenta potječu iz odluka povezanih sa zdravljem, prehranom, odnosima s drugim ljudima, zarađivanjem i upravljanjem novcem, kupovinom itd. Buduća istraživanja treba usmjeriti prema otkrivanju specifičnih informacijskih potreba i pratećeg informacijskog ponašanja u prepoznatim područjima odluka, kao što su informacijske potrebe koje potječu iz odluka o prehrani i druge.

2. Izbjegavanje informacija je prepoznato kao jedan od načina na koje se adolescenti odnose prema informacijama pri donošenju odluka u svakodnevnom životu. Izbjegavanje informacija može ugroziti informirano donošenje odluka, stoga se buduća istraživanja trebaju usmjeriti prema otkrivanju razloga zašto adolescenti izbjegavaju informacije. Takva saznanja omogućila bi odgovarajuće poučavanje o mogućoj štetnosti izbjegavanja informacija te mogućih loših posljedica na donošenje odluka.

3. Pokazalo se da adolescenti uzimaju u obzir četiri tipa karakteristika izvora informacija kada odabiru izvor za pomoć u donošenju odluka. To su: (1) karakteristike izvora informacija povezane s kredibilitetom i kognitivnim autoritetom, (2) druge karakteristike osobnih izvora informacija zbog kojih se ispitanici njima obraćaju, (3) karakteristike izvora informacija povezane s pristupačnošću izvora informacija i (4) karakteristike izvora informacija povezane s formatom izvora informacija. Provjera ovog saznanja na većem uzorku utvrdila bi trendove među adolescentima u primjeni pojedinog tipa karakteristika kao kriterija pri odabiru izvora informacija, što bi doprinijelo osmišljavanju načina poučavanja informacijskoj pismenosti te pružanju pomoći u informiranom donošenju odluka.

4. Hipoteza da su neki adolescenti skloni pogrešno zamijeniti kvalitetu odnosa s osobnim izvorima informacija s kvalitetom ili kredibilitetom informacije koju izvor pruža treba provjeriti na većem uzorku. Istraživanje je pokazalo da adolescenti cijene brižan i zaštitnički odnos, snažnu povezanost i određenu zajedničku povijest, zbog čega smatraju da se na izvor mogu osloniti i da mu mogu vjerovati. Provjera te hipoteze otkrit će u kojoj se mjeri poučavanje informacijskoj pismenosti i informiranom donošenju odluka treba usmjeriti na ovaj potencijalno štetan fenomen.

5. Pokazalo se da adolescenti cijene osobno povjerenje utemeljeno na kvaliteti odnosa pri procjeni kredibiliteta informacije koju je pružio osobni izvor. Ovo saznanje postavlja pitanje kako bi adolescenti procjenjivali kredibilitet informacija koje pružaju internet i ostali izvori koji nisu osobni primjenjujući taj kriterij. Bilo bi također vrijedno istražiti kako izvori informacija koji nisu osobni mogu pružati informacije na podržavajući način i izražavajući određenu brigu s obzirom na to da se to pokazalo važnim adolescentima pri donošenju odluka.

6. Istraživanje ukazuje da neki adolescenti daju povjerenje kognitivnim autoritetima koji utječu na njihove odluke zbog nekih značajki koje ističu važnost kvalitete odnosa između

osobe koja donosi odluku i osobe koja se smatra kognitivnim autoritetom te koje čine važne karakteristike osobnog izvora informacija koji je kognitivni autoritet (npr. izvor želi najbolje donositelju odluke, pruža mu podršku, pomaže mu, štiti ga, u bliskoj su vezi). Ovo saznanje treba provjeriti na većem uzorku iz populacije te otkriti u kojoj su mjeri adolescenti skloni zasnivati povjerenje koje daju kognitivnim autoritetima s tim značajkama. Rezultat bi mogao pomoći u poučavanju informacijskoj pismenosti i pružanju pomoći u informiranom donošenju odluka.

7. Široka upotreba društvenih medija nameće potrebu za istraživanjem tko su kognitivni autoriteti adolescenata u tom kontekstu te kako oni postaju kognitivni autoriteti.

8. Uzimajući u obzir saznanje da adolescenti cijene blizak odnos s izvorom informacija, bilo bi dobro istražiti u kojim okolnostima ipak daju prednost mrežnim mjestima i ostalim izvorima koji nisu osobni namjesto osobnim izvorima informacija te zašto ih smatraju kognitivnim autoritetima. Takvo saznanje pomoglo bi u stvaranju alata za pružanje pomoći u donošenju informiranih odluka u mrežnom okruženju.

9. Provedeno istraživanje usmjereno je na informacijske potrebe i informacijsko ponašanje pri donošenju odluka učenika srednjih škola. Buduća istraživanja trebaju se usmjeriti na adolescente koji nisu u sustavu sekundarnog obrazovanja: zaposlene i NEET adolescente (NEET – osobe koje nisu u sustavu obrazovanja ili zaposlene, niti prolaze neki oblik obuke, engl. *not in education, employment, or training*).

**Implikacije u praksi**

Rezultati istraživanja mogu se primijeniti u praktičnom radu knjižničara i drugih stručnjaka koji se bave populacijom adolescenata. Posebno se mogu primijeniti u poučavanju informacijskoj pismenosti, koje postaje sve važnije u suvremenom okruženju obilježenom tehnološkim promjenama te porastom broja i oblika informacijskih izvora, a mogu i doprinijeti pružanju pomoći u informiranom donošenju odluka.

1. Istraživanje pokazuje da su adolescenti u određenoj mjeri svjesni da neke odluke koje donose treba zasnivati na informacijama. Potrebno je uložiti napore u upoznavanje adolescenata s konceptom informirane odluke te podizanje svijesti o prednostima zasnivanja odluka na informacijama.

2. Adolescenti stječu informacije koje utječu na njihove odluke aktivno i pasivno. Treba ih upoznati s različitim načinima na koje stječu informacije kako bi ih razumjeli i osvijestili da slučajno stečene informacije (kao što su informacije posredovane u reklamama, ali i drugim oblicima informiranja) utječu na njihove odluke. Nadalje, adolescente treba upoznati s pojmom izbjegavanja informacija te upozoriti da takvo ponašanje može umanjiti prilike za stjecanje informacija važnih za donošenje informiranih odluka.

3. Adolescente treba poučiti razumijevanju razlika između karakteristika izvora informacija koje jamče pružanje kvalitetnih informacija (kao što je točnost izvora) i onih koje to ne jamče (kao što je značajka da je izvor dobronamjeran). Nadalje, treba poraditi na osvješćivanju razloga obraćanja određenom izvoru informacija, razloga ili kriterija procjene kredibiliteta stečenih informacije te razloga zašto se izvor smatra kognitivnim autoritetom. Jedino izvor koji jamči kvalitetu stečene informacije može doprinijeti

informiranoj odluci. Poučavanje informacijskoj pismenosti treba stoga unaprijediti razumijevanje da izvori koji omogućuju brz, jednostavan i lak pristup informacijama te osobni izvori informacija s kojima su u bliskom odnosu, koji su dobronamjerni i sl., kao ni izvori koji nude informacije u privlačnim formatima (vizualnim, auditivnim, tekstualnim, interaktivnim) ne pružaju nužno kvalitetne informacije niti nužno doprinose donošenju informiranih odluka. Samo izvori koje odlikuje znanje, kompetencija i iskustvo u području odluke, točnost, preciznost, profesionalnost i sl. jamče da su informacije koje pružaju kvalitetne te da mogu doprinijeti informiranom donošenju odluka. Stoga se u procjenjivanju kredibiliteta stečenih informacija treba voditi kriterijima poput onih da je izvor iskusan, da posjeduje znanje, da pruža točne, potvrđene i aktualne (engl. *current*) informacije, da je pouzdan, profesionalan, služben, nepristran i sl. Procjenjivanje kredibiliteta na osnovi značajki osobnih izvora informacija poput onih da je izvor dobramjeran, u bliskom odnosu s osobom koja donosi odluku, pruža podršku i sl. može dovesti do pogrešnog uvjerenja da je stečena informacija kredibilna, iako nije. Naposljetku, pridavanje autoriteta izvoru informacija i prihvaćanje njegova utjecaja treba se temeljiti na značajkama kao što su kompetencija, znanje i iskustvo u području odluke, objektivnost i znanje da informacija nije pružena s namjerom da zavara. Također treba istaknuti da kognitivni autoritet treba biti povezan s određenim područjem, da se u izvor može pouzdati i da vrijedi prihvatiti njegov utjecaj u granicama njegove ekspertize, no da u drugim područjima izvor ne mora biti kognitivni autoritet.

**Ključne riječi:** adolescenti, donošenje odluka, informacijsko ponašanje, istraživanje, studije informacijskog ponašanja

# 8. Appendices

Appendix 1 – The focus group interview guide

Appendix 2 – The survey

Appendix 3 – Šercer's instrument for measuring the importance of characteristics of information sources that professional managers use in making business decisions

Appendix 4 – The interview guide

Appendix 5 – The individual interview results

Appendix 6 – The consent forms

Appendix 7 – Summaries of the focus group interviews' and the individual interviews' transcripts

Appendix 8 – The transcripts of the focus group interviews and the individual interviews – available in the printed version of the dissertation

Appendix 9 - Biography

## 1. Appendix 1 – The focus group interview guide

**The focus group interview guide (Croatian language)**

| Teme | Pitanja |
|---|---|
| Odluke | 1. Zanimaju me odluke koje ljudi vase dobi donose. Koje su to odluke, koje donosite u svakodnevnom životu?<br><br>Potpitanja (ako su potrebna)<br><br>a. Razmislite o različitim dijelovima svojeg života: idete u školu, imate neko slobodno vrijeme, u odnosima ste s drugim ljudima, možda u romantičnim vezama.<br>b. Nitko nije spomenuo (pitam za neki od primjera)<br>- školu, buduće zanimanje, fakultet, karijeru<br>- stil i izgled, frizuru, odijevanje<br>- kupovanje stvari, npr. mobitela<br>- društvo, izlasci, zabava<br>- hobi<br>- odnosi s drugim ljudima, npr. prijatelji, roditelji<br>- zdravlje |
| Informacijsko ponašanje | 2. Što činite kad donosite odluke koje ste naveli? Kako donosite te odluke?<br><br>Potpitanja (ako su potrebna)<br><br>a. Ima li nešto, s čime se vodite, što vas usmjerava, pomaže vam?<br>b. Tražite li kakvu pomoć, savjet, informaciju da si olakšate i da ishod bude bolji? |
| Izvori informacija | 3. Ako tražite pomoć, savjet ili informacije, gdje ih tražite? Zašto upravo tamo/od…? |

| | |
|---|---|
| Prepreke | 4. Ima li nešto što vam otežava da saznate više ili tražite pomoć, savjet ili vas sprečava da to činite? Što? |
| Informacija u procesu donošenja odluka | 5. Kad donosite odluke, što vam je najvažnije? Koliko su vam informacije i znanje o temi odluke važni, kad donosite odluku? |

**The focus group interview guide (English language)**

| Themes | Questions |
|---|---|
| Decisions | 1. I am interested in the decisions people your age make. What decisions do you make in your everyday life?<br><br>Probes (if necessary)<br><br>a. Think about different aspects of your life: you attend school, you have some free time, you are in relationships with other people, perhaps in romantic ones<br>b. Nobody mentioned (I ask some of the following examples)<br>- School, future profession, university, future career<br>- Appearance, hairstyle, clothing<br>- Buying things, e.g. mobile phone<br>- Social life, going out, ways of having fun<br>- Hobby<br>- Relations with other people, e.g. friends, parents<br>- Health |
| Information behavior | 6. What do you do when you make the decisions you have listed? How do you make these decisions?<br><br>Probes (if necessary)<br><br>a. Is there something that guides you, shows direction, helps?<br>b. Do you ever seek help, advice or information to ensure better decision outcome? |
| Information sources | 7. If you seek some help, advice or information, where do you look for it? Why from that particular source? |
| Barriers | 8. Is there anything that makes it difficult for you to find out more, seek advice or help, or something that prevents you from doing that? What is that? |
| Information in the decision-making process | 9. When you make decisions, what is most important to you? How much are information and knowledge about the decision topic important to you, when you make a decision? |

## 2. Appendix 2 – The survey (Croatian language, English translation)

Mladi ljudi svakodnevno donose brojne odluke. One mogu biti veće ili manje, poput odabira koji će film gledati ili odabira budućeg zanimanja. Neke odluke utječu na njihov sadašnji život, a neke i na budućnost. Kako bi si olakšali donošenje odluka, ponekad traže pomoć u obliku savjeta, informacija ili dodatnog znanja o tome što odabrati. Informacije traže iz različitih izvora: od ljudi u svojoj okolini, na internetu, u omiljenom časopisu ili negdje drugdje. Ponekad smatraju da im dodatne informacije nisu potrebne jer su o stvarima o kojima odlučuju već dovoljno čuli (od roditelja, u školi, od prijatelja ili na televiziji), pa imaju dovoljno znanja i iskustva za donošenje odluka koje su pred njima, ili zato što odluke temelje na nečem drugome (npr. emocijama, instinktu i sl.). Ponekad namjerno traže neke informacije.

1. Molim te da ocjenom od 1 do 5 ocijeniš **u kojoj se mjeri sljedeće tvrdnje odnose na tebe**. Pritom **ocjena 1 znači da se tvrdnja uopće ne odnosi na tebe, a ocjena 5 da se tvrdnja u potpunosti odnosi na tebe.** Zaokruži broj ispod tvog odgovora. Moguće je odabrati samo jedan odgovor.

| | Uopće se ne odnosi na mene. | Uglavnom se ne odnosi na mene. | Niti se odnosi, niti ne odnosi na mene. | Uglavnom se odnosi na mene. | U potpunosti se odnosi na mene. |
|---|---|---|---|---|---|
| a. Kada se nalazim u situaciji da donosim **odluku o odabiru fakulteta i/ili budućeg zanimanja, potrebne su mi dodatne informacije** u obliku novog znanja, savjeta ili pomoći. | 1 | 2 | 3 | 4 | 5 |
| b. Kada se nalazim u situaciji da donosim neku **odluku povezanu s učenjem i/ili domaćom zadaćom (npr. hoću li, što i koliko učiti, hoću li napisati zadaću i sl.), potrebne su mi dodatne informacije** u obliku novog znanja, savjeta ili pomoći. | 1 | 2 | 3 | 4 | 5 |
| c. Kada se nalazim u situaciji da donosim **odluku kako se ponašati i/ili što činiti u odnosima s drugim ljudima (npr. u odnosu s dečkom ili djevojkom, prijateljima, roditeljima), potrebne su mi dodatne informacije** u obliku novog znanja, savjeta ili pomoći. | 1 | 2 | 3 | 4 | 5 |
| d. Kada se nalazim u situaciji da donosim **odluku o tome kako se ponašati u nekom društvu, potrebne su mi dodatne informacije** u obliku novog znanja, savjeta ili pomoći. | 1 | 2 | 3 | 4 | 5 |
| e. Kada se nalazim u situaciji da donosim **odluku o tome kako ću provoditi slobodno vrijeme** (npr. baviti se hobijem, izlaziti s prijateljima i sl.), **potrebne su mi dodatne informacije** u obliku novog znanja, savjeta ili pomoći. | 1 | 2 | 3 | 4 | 5 |

f. Kada se nalazim u situaciji da donosim **odluku o vlastitom izgledu (npr. o odabiru odjeće, frizure i sl.), potrebne su mi dodatne informacije** u obliku novog znanja, savjeta ili pomoći.

| Uopće se ne odnosi na mene. | Uglavnom se ne odnosi na mene. | Niti se odnosi, niti ne odnosi na mene. | Uglavnom se odnosi na mene. | U potpunosti se odnosi na mene. |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |

g. Kada se nalazim u situaciji da donosim **odluku o upravljanju novcem (zarađivanju, trošenju i/ili štednji novca), potrebne su mi dodatne informacije** u obliku novog znanja, savjeta ili pomoći.

| Uopće se ne odnosi na mene. | Uglavnom se ne odnosi na mene. | Niti se odnosi, niti ne odnosi na mene. | Uglavnom se odnosi na mene. | U potpunosti se odnosi na mene. |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |

h. Kada se nalazim u situaciji da donosim **odluku povezanu sa zdravom prehranom, potrebne su mi dodatne informacije** u obliku novog znanja, savjeta ili pomoći.

| Uopće se ne odnosi na mene. | Uglavnom se ne odnosi na mene. | Niti se odnosi, niti ne odnosi na mene. | Uglavnom se odnosi na mene. | U potpunosti se odnosi na mene. |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |

i. Kada se nalazim u situaciji da donosim **odluku o činjenju ili nečinjenju nezakonitih ili štetnih radnji: konzumiranja alkoholnih pića, ili uzimanja droga, potrebne su mi dodatne informacije** u obliku novog znanja, savjeta ili pomoći.

| Uopće se ne odnosi na mene. | Uglavnom se ne odnosi na mene. | Niti se odnosi, niti ne odnosi na mene. | Uglavnom se odnosi na mene. | U potpunosti se odnosi na mene. |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |

j. Kada se nalazim u situaciji da donosim **odluku o zaštiti vlastitog zdravlja** (npr. spolnog zdravlja), **potrebne su mi dodatne informacije** u obliku novog znanja, savjeta ili pomoći.

| Uopće se ne odnosi na mene. | Uglavnom se ne odnosi na mene. | Niti se odnosi, niti ne odnosi na mene. | Uglavnom se odnosi na mene. | U potpunosti se odnosi na mene. |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |

k. Kada se nalazim u situaciji da donosim **odluku o kupovini (npr. odjeće, mobitela i dr.), potrebne su mi dodatne informacije** u obliku novog znanja, savjeta ili pomoći.

| Uopće se ne odnosi na mene. | Uglavnom se ne odnosi na mene. | Niti se odnosi, niti ne odnosi na mene. | Uglavnom se odnosi na mene. | U potpunosti se odnosi na mene. |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |

l. Kada se nalazim u situaciji da donosim **odluku povezanu s vlastitim identitetom (npr. tko sam, kakva osoba želim biti i kako želim da me drugi ljudi vide), potrebne su mi dodatne informacije** u obliku novog znanja, savjeta ili pomoći.

| Uopće se ne odnosi na mene. | Uglavnom se ne odnosi na mene. | Niti se odnosi, niti ne odnosi na mene. | Uglavnom se odnosi na mene. | U potpunosti se odnosi na mene. |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |

2. Molim te da zaokruživanjem broja u tablici označiš prema tvojoj procjeni **u kojoj su mjeri navedene odluke značajne za tvoj život.** Pritom 1 znači da uopće nisu značajne, a 5 da su jako značajne za tvoj život.

| | | **1 - uopće nije značajna za moj život** | **2 – uglavnom nije značajna za moj život** | **3 – niti je značajna, niti nije značajna za moj život** | **4 – uglavnom je značajna za moj život** | **5 – iznimno je značajna za moj život** |
|---|---|---|---|---|---|---|
| **a.** | Odluka o odabiru fakulteta i/ili budućeg zanimanja | 1 | 2 | 3 | 4 | 5 |
| **b.** | Odluka povezana s učenjem i/ili domaćom zadaćom (npr. hoću li, što i koliko učiti, hoću li napisati zadaću i sl.) | 1 | 2 | 3 | 4 | 5 |
| **c.** | Odluka kako se ponašati i/ili što činiti u odnosima s drugim ljudima (npr. u odnosu s dečkom ili djevojkom, prijateljima, roditeljima) | 1 | 2 | 3 | 4 | 5 |
| **d.** | Odluka o tome kako se ponašati u nekom društvu | 1 | 2 | 3 | 4 | 5 |
| **e.** | Odluka o odluku o tome kako ću provoditi slobodno vrijeme (npr. baviti se hobijem, izlaziti s prijateljima i sl.) | 1 | 2 | 3 | 4 | 5 |
| **f.** | Odluka o vlastitom izgledu (npr. o odabiru odjeće, frizure i sl.) | 1 | 2 | 3 | 4 | 5 |
| **g.** | Odluka o upravljanju novcem (zarađivanju, trošenju i/ili štednji novca) | 1 | 2 | 3 | 4 | 5 |
| **h.** | Odluka o činjenju ili nečinjenju nezakonitih ili štetnih radnji: konzmiranja alkoholnih pića, ili uzimanja droga | 1 | 2 | 3 | 4 | 5 |
| **i.** | Odluka povezana sa zdravom prehranom | 1 | 2 | 3 | 4 | 5 |
| **j.** | Odluka o zaštiti vlastitog zdravlja (npr. spolnog zdravlja) | 1 | 2 | 3 | 4 | 5 |
| **k.** | Odluka o kupovini (npr. odjeće, mobitela i dr.) | 1 | 2 | 3 | 4 | 5 |
| **l.** | Odluka povezana s vlastitim identitetom (npr. tko sam, što želim biti i kako želim da me drugi ljudi vide) | 1 | 2 | 3 | 4 | 5 |

3. Molim te da između odluka navedenih u tablici iz pitanja br. 2 odrediš jednu **koju smatraš najviše značajnom za svoj život.**

Od navedenih odluka, **NAJVIŠE JE ZNAČAJNA ZA MOJ ŽIVOT** odluka _____.

a. Kada donosimo odluke, ponekad tražimo informacije da bismo dobili dodatno znanje, savjet ili pomoć. Molim te da označiš **u kojoj se mjeri slažeš s navedenim tvrdnjama kada donosiš odluku za koju si naveo/navela da ju smatraš NAJVIŠE ZNAČAJNOM ZA TVOJ ŽIVOT.** Pritom 1 znači da se uopće ne slažeš, a 5 da se u potpunosti slažeš.

| | | 1 - uopće se ne slažem | 2 – uglavnom se ne slažem | 3 – niti se slažem, niti se ne slažem | 4 – uglavnom se slažem | 5 – u potpunosti se slažem |
|---|---|---|---|---|---|---|
| a. | Dobro je tražiti informacije od ljudi koji imaju znanje i iskustvo povezano s odlukom koju donosim. | 1 | 2 | 3 | 4 | 5 |
| b. | Dobro je tražiti informacije od članova vlastite obitelji. | 1 | 2 | 3 | 4 | 5 |
| c. | Dobro je tražiti informacije od prijatelja i vršnjaka. | 1 | 2 | 3 | 4 | 5 |
| d. | Dobro je tražiti informacije na internetu. | 1 | 2 | 3 | 4 | 5 |
| e. | Dobro je tražiti informacije na forumima i društvenim mrežama: YouTube, Facebook, Instagram i sl. | 1 | 2 | 3 | 4 | 5 |
| f. | Dobro je tražiti informacije u knjigama, novinama i/ili časopisima. | 1 | 2 | 3 | 4 | 5 |

b. Kada želimo proširiti svoje znanje i pronaći nove informacije kako bismo lakše donijeli neku odluku, trebamo **izabrati gdje ili od koga ćemo tražiti informacije** odnosno **izvor informacija**. Izvor informacija može biti **npr. knjiga, internet, prijatelji, roditelji** itd.

Označi **koliko ti je navedeno dolje važno ili nevažno** kada donosiš **odluku** koju smatraš **NAJVIŠE ZNAČAJNOM ZA SVOJ ŽIVOT** i **tražiš informacije**. Označi **zaokruživanjem** u tablici, pritom 1 znači potpuno nevažno, a 5 jako važno.

| | | **1 - potpuno mi je nevažno** | **2 - uglavnom mi je nevažno** | **3 - nije mi ni važno ni nevažno** | **4 - uglavnom mi je važno** | **5 - iznimno mi je važno** |
|---|---|---|---|---|---|---|
| **a.** | Lako je pristupiti **tom izvoru informacija**. | 1 | 2 | 3 | 4 | 5 |
| **b.** | Izvor je brz, **pa ću** brzo **doći do informacije**. | 1 | 2 | 3 | 4 | 5 |
| **c.** | Imam iskustvo **u korištenju tog izvora**. | 1 | 2 | 3 | 4 | 5 |
| **d.** | **Izvor informacija je** jednostavan za korištenje. | 1 | 2 | 3 | 4 | 5 |
| **e.** | **Izvor pruža** točne informacije. | 1 | 2 | 3 | 4 | 5 |
| **f.** | **Izvor informacija je takav da mi** omogućuje anonimnost. | 1 | 2 | 3 | 4 | 5 |

c. Molim te da zaokruživanjem broja označiš **u kojoj se mjeri navedene tvrdnje odnose na tebe** kada **donosiš odluku** za koju si naveo/navela da ju smatraš **NAJVIŠE ZNAČAJNOM ZA SVOJ ŽIVOT.** Pritom 1 znači da se tvrdnja uopće ne odnosi na tebe, a 5 da se tvrdnja u potpunosti odnosi na tebe.

| | | **1 – uopće se ne odnosi na mene** | **2 – uglavnom se ne odnosi na mene** | **3 – niti se ne odnosi, niti se ne odnosi na mene** | **4 – uglavnom se odnosi na mene** | **5 – u potpunosti se odnosi na mene** |
|---|---|---|---|---|---|---|
| **a.** | Kad donosim tu odluku, trebam imati odgovarajuće informacije kako bih znao/znala što više. | 1 | 2 | 3 | 4 | 5 |
| **b.** | Kad donosim tu odluku, trebam dobro razmisliti. | 1 | 2 | 3 | 4 | 5 |
| **c.** | Kad donosim tu odluku, trebam slijediti osjećaje i/ili raspoloženje. | 1 | 2 | 3 | 4 | 5 |
| **d.** | Kad donosim tu odluku, trebam slijediti intuiciju i/ili instinkt. | 1 | 2 | 3 | 4 | 5 |
| **e.** | Kad donosim tu odluku, često nisam svjestan/svjesna da to činim. | 1 | 2 | 3 | 4 | 5 |

4. Molim te da između odluka navedenih u tablici iz pitanja br. 2 odrediš jednu **koju smatraš najmanje značajnom za svoj život.**

   Od navedenih odluka, **NAJMANJE JE ZNAČAJNA ZA MOJ ŽIVOT** odluka _____.

a. Kada donosimo odluke, ponekad tražimo informacije da bismo dobili dodatno znanje, savjet ili pomoć. Molim te da označiš **u kojoj se mjeri slažeš s navedenim tvrdnjama kada donosiš odluku za koju si naveo/navela da ju smatraš NAJMANJE ZNAČAJNOM ZA TVOJ ŽIVOT.** Pritom 1 znači da se uopće ne slažeš, a 5 da se u potpunosti slažeš.

| | | **1 - uopće se ne slažem** | **2 – uglavnom se ne slažem** | **3 – niti se slažem, niti se ne slažem** | **4 – uglavnom se slažem** | **5 – u potpunosti se slažem** |
|---|---|---|---|---|---|---|
| **a.** | Dobro je tražiti informacije od ljudi koji imaju znanje i iskustvo povezano s odlukom koju donosim. | 1 | 2 | 3 | 4 | 5 |
| **b.** | Dobro je tražiti informacije od članova vlastite obitelji. | 1 | 2 | 3 | 4 | 5 |
| **c.** | Dobro je tražiti informacije od prijatelja i vršnjaka. | 1 | 2 | 3 | 4 | 5 |
| **d.** | Dobro je tražiti informacije na internetu. | 1 | 2 | 3 | 4 | 5 |
| **e.** | Dobro je tražiti informacije na forumima i društvenim mrežama: YouTube, Facebook, Instagram i sl. | 1 | 2 | 3 | 4 | 5 |
| **f.** | Dobro je tražiti informacije u knjigama, novinama i/ili časopisima. | 1 | 2 | 3 | 4 | 5 |

b. Kada želimo proširiti svoje znanje i pronaći nove informacije kako bismo lakše donijeli neku odluku, trebamo **izabrati gdje ili od koga ćemo tražiti informacije** odnosno **izvor informacija**. Izvor informacija može biti **npr. knjiga, internet, prijatelj, roditelji** itd.

Označi **koliko ti je navedeno dolje važno ili nevažno** kada donosiš **odluku** koju smatraš **NAJMANJE ZNAČAJNOM ZA SVOJ ŽIVOT** i **tražiš informacije**. Označi **zaokruživanjem** u tablici, pritom 1 znači potpuno nevažno, a 5 jako važno.

| | | **1 - potpuno mi je nevažno** | **2 - uglavnom mi je nevažno** | **3 - nije mi ni važno ni nevažno** | **4 - uglavnom mi je važno** | **5 - iznimno mi je važno** |
|---|---|---|---|---|---|---|
| **a.** | Lako je pristupiti **tom izvoru informacija**. | 1 | 2 | 3 | 4 | 5 |
| **b.** | Izvor je brz, **pa ću** brzo **doći do informacije**. | 1 | 2 | 3 | 4 | 5 |
| **c.** | Imam iskustvo **u korištenju tog izvora**. | 1 | 2 | 3 | 4 | 5 |
| **d.** | **Izvor informacija je** jednostavan za korištenje. | 1 | 2 | 3 | 4 | 5 |
| **e.** | **Izvor pruža** točne informacije. | 1 | 2 | 3 | 4 | 5 |
| **f.** | **Izvor informacija je takav da mi** omogućuje anonimnost. | 1 | 2 | 3 | 4 | 5 |

c. Molim te da zaokruživanjem broja označiš **u kojoj se mjeri navedene tvrdnje odnose na tebe** kada **donosiš odluku** za koju si naveo/navela da ju smatraš **NAJMANJE ZNAČAJNOM ZA SVOJ ŽIVOT.** Pritom 1 znači da se tvrdnja uopće ne odnosi na tebe, a 5 da se tvrdnja u potpunosti odnosi na tebe.

| | | **1 – uopće se ne odnosi na mene** | **2 – uglavnom se ne odnosi na mene** | **3 – niti se ne odnosi, niti se ne odnosi na mene** | **4 – uglavnom se odnosi na mene** | **5 – u potpunosti se odnosi na mene** |
|---|---|---|---|---|---|---|
| **a.** | Kad donosim tu odluku, trebam imati odgovarajuće informacije kako bih znao/znala što više. | 1 | 2 | 3 | 4 | 5 |
| **b.** | Kad donosim tu odluku, trebam dobro razmisliti. | 1 | 2 | 3 | 4 | 5 |
| **c.** | Kad donosim tu odluku, trebam slijediti osjećaje i/ili raspoloženje. | 1 | 2 | 3 | 4 | 5 |
| **d.** | Kad donosim tu odluku, trebam slijediti intuiciju i/ili instinkt. | 1 | 2 | 3 | 4 | 5 |
| **e.** | Kad donosim tu odluku, često nisam svjestan/svjesna da to činim. | 1 | 2 | 3 | 4 | 5 |

5. Slijedi još nekoliko informacija o tebi.

1. Spol: Ž M (Zaokruži odgovor.)

2. Godina rođenja: ..... (Upiši odgovor.)

3. Gdje živiš? (Upiši odgovor. Misli se na stalno prebivalište. Na primjer, ako si iz Fužina ili s Raba te si došao/došla u Rijeku privremeno zbog školovanja, upiši Fužine ili Rab.)

_____

4. U koju si srednju školu upisan/upisana? (Zaokruži slovo ispred odgovora.)
   a. srednju strukovnu školu
   b. gimnaziju
   c. umjetničku školu

5. S kojim si uspjehom završio/završila prethodni razred?
   a. nedovoljnim (1)
   b. dovoljnim (2)
   c. dobrim (3)
   d. vrlo dobrim (4)
   e. odličnim (5)

6. Najviša završena razina obrazovanja majke/starateljice? (Zaokruži jedan od ponuđenih odgovora.)
   a. osnovna škola
   b. srednja škola
   c. viša škola (dvogodišnji ili trogodišnji studij)
   d. visoka škola / fakultet
   e. magisterij ili doktorat znanosti

7. Najviša završena razina obrazovanja oca/staratelja? (Zaokruži jedan od ponuđenih odgovora.)
   a. osnovna škola
   b. srednja škola
   c. viša škola (dvogodišnji ili trogodišnji studij)
   d. visoka škola / fakultet
   e. magisterij ili doktorat znanosti

**Hvala na sudjelovanju i pomoći!**

**(translation to English language)**

Young people make many decisions every day. These decisions may be bigger or smaller, such as choosing what movie to see or choosing your future occupation. Some decisions impact their future life, and some their future. To make the process of making a decision easier, they sometimes seek help in the form of advice, information or

additional knowledge about what to choose. They seek information from various information sources: from people that surround them, on the Internet, in their favorite magazine or somewhere else. Sometimes they believe that they do not need new information because they have already heard enough about the things they are deciding about (from their parents, in school, from their friends or in a television program), and therefore have enough knowledge and experience to make the decisions they face, or because they base their decisions on something else (e.g. emotions, instinct, etc.). Sometimes they intentionally seek some information.

1. Using grades 1 to 5 please determine the level to which the following sentences apply to you. Grade 1 signifies the statement does not refer to you at all, and grade 5 signifies the statement completely refers to you.

   a. When I make a decision related to selecting a university or future occupation, I need additional information i.e. new knowledge, advice or help.

| Does not refer to me at all. | Mostly does not refer to me. | Neutral. | Mostly refers to me. | Completely refers to me. |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |

   b. When I make a decision related to studying and homework (e.g. whether to study, whether to write my homework), I need additional information i.e. new knowledge, advice or help.

| Does not refer to me at all. | Mostly does not refer to me. | Neutral. | Mostly refers to me. | Completely refers to me. |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |

   c. When I make a decision related to relationships with other people (e.g. my boyfriend or girlfriend, friends, parents), I need additional information i.e. new knowledge, advice or help.

| Does not refer to me at all. | Mostly does not refer to me. | Neutral. | Mostly refers to me. | Completely refers to me. |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |

   d. When I make a decision about how to behave among people, I need additional information i.e. new knowledge, advice or help.

| Does not refer to me at all. | Mostly does not refer to me. | Neutral. | Mostly refers to me. | Completely refers to me. |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |

   e. When I make a decision about what to do in my free time (e.g. engaging in hobbies, going out with friends, etc.), I need additional information i.e. new knowledge, advice or help.

| Does not refer to me at all. | Mostly does not refer to me. | Neutral. | Mostly refers to me. | Completely refers to me. |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |

   f. When I make a decision related to my appearance (e.g. selecting clothes, hairstyles, etc.), I need additional information i.e. new knowledge, advice or help.

| Does not refer to me at all. | Mostly does not refer to me. | Neutral. | Mostly refers to me. | Completely refers to me. |
|---|---|---|---|---|

| | | | | |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |

g. When I make a financial decision (earning, spending and/or saving some money), I need additional information i.e. new knowledge, advice or help.

| Does not refer to me at all. | Mostly does not refer to me. | Neutral. | Mostly refers to me. | Completely refers to me. |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |

h. When I make a decision related to a healthy diet, I need additional information i.e. new knowledge, advice or help.

| Does not refer to me at all. | Mostly does not refer to me. | Neutral. | Mostly refers to me. | Completely refers to me. |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |

i. When I make a decision related to illegal and/or harmful activities: alcohol and/or drug consumption, I need additional information i.e. new knowledge, advice or help.

| Does not refer to me at all. | Mostly does not refer to me. | Neutral. | Mostly refers to me. | Completely refers to me. |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |

j. When I make a decision related to my own health (e.g. sexual health), I need additional information i.e. new knowledge, advice or help.

| Does not refer to me at all. | Mostly does not refer to me. | Neutral. | Mostly refers to me. | Completely refers to me. |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |

k. When I make a decision to purchase certain items (e.g. clothes, mobile phones, etc.), I need additional information i.e. new knowledge, advice or help.

| Does not refer to me at all. | Mostly does not refer to me. | Neutral. | Mostly refers to me. | Completely refers to me. |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |

l. When I make some decision related to my own identity, e.g. who I am, what kind of a person I want to be and how I want to be seen by others, I need additional information i.e. new knowledge, advice or help.

| Does not refer to me at all. | Mostly does not refer to me. | Neutral. | Mostly refers to me. | Completely refers to me. |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |

2. Please circle the number that shows to what extent you consider the decision examples listed in the following table significant for you. No. 1 signifies that the decision is not at all significant for your life, and no. 5 that it is very significant for your life.

| | 1 - not significant for my life at all | 2 – mostly not significant for my life | 3 – neutral | 4 – mostly significant for my life | 5 – very significant for my life |
|---|---|---|---|---|---|
| Decisions on the selection of university or future occupation | 1 | 2 | 3 | 4 | 5 |
| Decisions on studying and homework | 1 | 2 | 3 | 4 | 5 |
| Decisions on relations with other people (e.g. boyfriend or girlfriend, friends, parents) | 1 | 2 | 3 | 4 | 5 |
| Decisions on how to behave in a specific situation among people | 1 | 2 | 3 | 4 | 5 |
| Decisions what to do in my free time (e.g. hobby, going out, etc.) | 1 | 2 | 3 | 4 | 5 |
| Decisions on appearance (e.g. choosing clothes, hairstyle, etc.) | 1 | 2 | 3 | 4 | 5 |
| Decisions on finance management (earning, spending and/or saving money) | 1 | 2 | 3 | 4 | 5 |
| Decisions on a healthy diet | 1 | 2 | 3 | 4 | 5 |
| Decisions on illegal and/or harmful activities: alcohol and drugs consumption | 1 | 2 | 3 | 4 | 5 |
| Decisions on health (e.g. sexual health) | 1 | 2 | 3 | 4 | 5 |
| Decisions on purchase (e.g. clothes, mobile phone etc.) | 1 | 2 | 3 | 4 | 5 |
| Decisions about identity, e.g. who I am, what kind of person I want to be and how I want to be seen by others | 1 | 2 | 3 | 4 | 5 |

3. Among the decisions listed in the table in the second question, please choose the one you consider of the greatest significance for your life.

Among the listed decisions, THE MOST SIGNIFICANT FOR MY LIFE is the decision about _____ (please fill in).

a. When making decisions, we sometimes seek additional information i.e. new knowledge, advice or help. Please circle the number to mark to what extent you agree with the claims listed below when you make the decision you chose as THE MOST SIGNIFICANT FOR YOUR LIFE. 1 signifies that you do not agree at all, and 5 that you fully agree with the claim.

| | 1 - completely disagree | 2 – mostly disagree | 3 – neither agree nor disagree | 4 – mostly Agree | 5 – completely agree |
|---|---|---|---|---|---|
| It is good to seek information from people who have knowledge and experience related to the decision I am making. | 1 | 2 | 3 | 4 | 5 |
| It is good to seek information from the members of my own family. | 1 | 2 | 3 | 4 | 5 |
| It is good to seek information from friends and peers. | 1 | 2 | 3 | 4 | 5 |
| It is good to seek information on the Internet. | 1 | 2 | 3 | 4 | 5 |

| | | | | | |
|---|---|---|---|---|---|
| It is good to seek information on forums and social networking sites: YouTube, Facebook, Instagram, etc. | 1 | 2 | 3 | 4 | 5 |
| It is good to seek information in books, newspapers and/or magazines. | 1 | 2 | 3 | 4 | 5 |

b. When you make that decision and want to expand your knowledge and are therefore about to seek some information, you need to choose where to look for information, i.e. your information source. The information source may be for example a book, the Internet, a friend, parents, etc. Please circle the number to mark to what extent you find what is listed important or unimportant when you make the decision you chose as THE MOST SIGNIFICANT FOR YOUR LIFE. 1 signifies the claim listed is not important, 5 signifies the claim listed is very important.

| | 1- completely unimportant | 2 - mostly not important | 3 - Neutral | 4 - mostly important | 5 - completely important |
|---|---|---|---|---|---|
| The source of information is easy to access. | 1 | 2 | 3 | 4 | 5 |
| The source of information is quick, and I will get the information quickly. | 1 | 2 | 3 | 4 | 5 |
| I have some experience in using the source. | 1 | 2 | 3 | 4 | 5 |
| The source of information is easy to use. | 1 | 2 | 3 | 4 | 5 |
| The source of information is accurate. | 1 | 2 | 3 | 4 | 5 |
| The source of information can be used anonymously. | 1 | 2 | 3 | 4 | 5 |

c. Circle the number to mark to what extent the following claims apply to you when you make the decision you chose as THE MOST SIGNIFICANT FOR YOUR LIFE. 1 signifies the claim does not refer to you at all, and 5 signifies the claim fully refers to you.

| | 1 – does not refer to me at all | 2 – mostly does not refer to me | 3 – neutral | 4 – mostly refers to me | 5 - fully refers to me |
|---|---|---|---|---|---|
| When I make this decision, I have to have the appropriate information to know as much as possible. | 1 | 2 | 3 | 4 | 5 |
| When I make this decision, I have to think it over really well. | 1 | 2 | 3 | 4 | 5 |
| When I make this decision, I have to follow my feelings and/or mood. | 1 | 2 | 3 | 4 | 5 |
| When I make this decision, I have to follow my intuition and/or instinct. | 1 | 2 | 3 | 4 | 5 |
| When I make this decision, I am often not aware that I am doing it. | 1 | 2 | 3 | 4 | 5 |

4. Among the decisions listed in the table in the second question, please choose the one you consider of least significance for your life.

Among the listed decisions, THE LEAST SIGNIFICANT FOR MY LIFE is the decision about _____ (please fill in).

a. When making decisions, we sometimes seek additional information i.e. new knowledge, advice or help. Please circle the number to mark to what extent you agree with the claims listed below when you make the decision you chose as THE LEAST SIGNIFICANT FOR

YOUR LIFE. 1 signifies that you do not agree with the claim at all, and 5 that you fully agree with the claim.

| | 1 - completely disagree | 2 – mostly disagree | 3 - neither agree nor disagree | 4 – mostly agree | 5 - completely agree |
|---|---|---|---|---|---|
| It is good to seek information from people who have knowledge and experience related to the decision I am making. | 1 | 2 | 3 | 4 | 5 |
| It is good to seek information from the members of my own family. | 1 | 2 | 3 | 4 | 5 |
| It is good to seek information from friends and peers. | 1 | 2 | 3 | 4 | 5 |
| It is good to seek information on the Internet. | 1 | 2 | 3 | 4 | 5 |
| It is good to seek information on forums and social networking sites: YouTube, Facebook, Instagram, etc. | 1 | 2 | 3 | 4 | 5 |
| It is good to seek information in books, newspapers and/or magazines. | 1 | 2 | 3 | 4 | 5 |

b. When you make that decision and want to expand your knowledge and are therefore about to seek some information, you need to choose where to look for information, i.e. your information source. The information source may be for example a book, the Internet, a friend, parents, etc. Please circle the number to mark to what extent you find what is listed important or unimportant when you make the decision you chose as THE LEAST SIGNIFICANT FOR YOUR LIFE. 1 signifies the claim listed is not important, 5 signifies the listed claim is very important.

| | 1- completely unimportant | 2 - mostly not important | 3 - neutral | 4 - mostly important | 5 - completely important |
|---|---|---|---|---|---|
| The source of information is easy to access. | 1 | 2 | 3 | 4 | 5 |
| The source of information is quick, and I will get the information quickly. | 1 | 2 | 3 | 4 | 5 |
| I have some experience in using the source. | 1 | 2 | 3 | 4 | 5 |
| The source of information is easy to use. | 1 | 2 | 3 | 4 | 5 |
| The source of information is accurate. | 1 | 2 | 3 | 4 | 5 |
| The source of information can be used anonymously. | 1 | 2 | 3 | 4 | 5 |

c. Circle the number to mark to what extent the listed claims apply to you when you make the decision you chose as THE LEAST SIGNIFICANT FOR YOUR LIFE. 1 signifies the claim does not refer to you at all, and 5 signifies the claim fully refers to you.

| | 1 – does not refer to me at all | 2 – mostly does not refer to me | 3 – neutral | 4 – mostly refers to me | 5 - fully refers to me |
|---|---|---|---|---|---|
| When I make this decision, I have to have the appropriate information to know as much as possible. | 1 | 2 | 3 | 4 | 5 |
| When I make this decision, I have to think it over really well. | 1 | 2 | 3 | 4 | 5 |

| | | | | | |
|---|---|---|---|---|---|
| When I make this decision, I have to follow my feelings and/or mood. | 1 | 2 | 3 | 4 | 5 |
| When I make this decision, I have to follow my intuition and/or instinct. | 1 | 2 | 3 | 4 | 5 |
| When I make this decision, I am often not aware that I am doing it. | 1 | 2 | 3 | 4 | 5 |

5. What follows is some information about you.
    1. Gender: F M (please circle the appropriate answer)
    2. Year of birth ……. (please fill in)
    3. Where do you live? (Please fill in. You should write down your permanent residence. If you come from another town and stay in Rijeka temporarily for school, fill in the name of your hometown). _____
    4. What school are you attending? (please circle the letter in front of the appropriate answer)
        a) Vocational school
        b) Grammar school
        c) Art school
    5. What was your average grade at the end of the previous school year? (please circle the letter in front of one appropriate answer)
        a) F
        b) D
        c) C
        d) B
        e) A
    6. What is your mother's level of education? (please circle the letter in front of one appropriate answer)
        a) elementary school or lower
        b) high school
        c) bachelor's degree
        d) master's degree
        e) postgraduate degree
    7. What is your father's level of education? (please circle the letter in front of one appropriate answer)
        a) elementary school or lower
        b) high school
        c) bachelor's degree
        d) master's degree
        e) postgraduate degree

# 3. Appendix 3 – Šercer's instrument for measuring the importance of characteristics of information sources that professional managers use in making business decisions

**Grupa B**

- Molimo Vas da ocjenom od jedan do pet ocijenite važnost **obilježja izvora informacija** koje koristite u donošenju poslovnih odluka.

| | (1 – potpuno nevažno, 5 – izrazito važno) | | | | |
|---|---|---|---|---|---|
| 1. Pristupačnost | 1 | 2 | 3 | 4 | 5 |
| 2. Dostupnost | 1 | 2 | 3 | 4 | 5 |
| 3. Tehnička kvaliteta | 1 | 2 | 3 | 4 | 5 |
| 4. Relevantnost | 1 | 2 | 3 | 4 | 5 |
| 5. Točnost | 1 | 2 | 3 | 4 | 5 |
| 6. Pouzdanost | 1 | 2 | 3 | 4 | 5 |
| 7. Lakoća korištenja | 1 | 2 | 3 | 4 | 5 |
| 8. Iskustvo s izvorom | 1 | 2 | 3 | 4 | 5 |
| 9. Troškovi korištenja | 1 | 2 | 3 | 4 | 5 |
| 10. Stručni žargon | 1 | 2 | 3 | 4 | 5 |
| 11. Vlastito iskustvo u korištenju izvora | 1 | 2 | 3 | 4 | 5 |
| 12. Brzina pribavljanja informacije | 1 | 2 | 3 | 4 | 5 |

# 4. Appendix 4 – The interview guide

Uvod:

Dobar dan, vjerojatno me se sjećaš – ja sam Alica Kolarić i provodim istraživanje kao dio doktorskog rada o tome kako mladi ljudi donose odluke.

Mladi ljudi svakodnevno donose brojne odluke. One mogu biti veće ili manje, poput odabira koji će film gledati ili odabira budućeg zanimanja. Neke odluke utječu na njihov sadašnji život, a neke i na budućnost. Kako bi si olakšali donošenje odluka, ponekad im trebaju neke informacije radi stjecanja dodatnog znanja koje im može pomoći u odlučivanju. Informacije traže iz različitih izvora: od ljudi u svojoj okolini, na internetu, u omiljenom časopisu ili negdje drugdje. Ponekad smatraju da im dodatne informacije nisu potrebne jer su o stvarima o kojima odlučuju već dovoljno čuli (od roditelja, u školi, od prijatelja ili na televiziji), pa imaju dovoljno znanja i iskustva za donošenje odluka koje su pred njima, ili zato što odluke temelje na nečem drugome (npr. emocijama, instinktu i sl.). Ponekad namjerno traže neke informacije. Ovaj naš razgovor pridonijet će mojem istraživanju pa te zato te molim da budeš opušten/a i otvoren/a.

| Teme i pitanja |
|---|
| Za početak, voljela bih te malo upoznati.<br>- Koliko godina imaš?<br>- Reci mi nešto o sebi, čime se baviš u slobodno vrijeme? |
| Odluka |
| 1. Prisjeti se nekih odluka koje si donio/la ove školske godine, ili donosio/la, a još nisi sasvim siguran/a. Mogu biti iz bilo kojeg područja – odnosa s prijateljima, vlastitog izgleda, učenja, budućeg zanimanja i posla, odlaska na neko obiteljsko događanje ili ne, to može biti odluka o kupovini nečega što je tebi važno, neka odluka vezane uz hobi, primjerice prestao si/la trenirati rukomet, ili na primjer neke odluke vezane uz zdravlje. Sjeti se neke tvoje takve odluke koju smatraš značajnom.<br>▪ Potpitanja (ako je potrebno i primjereno):<br>- Jesi li učinio/la neku promjenu u životu? Započeo s nečim novim – npr. hobijem, slobodnim aktivnostima, npr. brinuti o prehrani, trenirati?<br>- Jesi li se možda susreo s nekim problemom, većim ili manjim? Kako si odlučio na koji način ga riješiti?<br>- Imaš li možda neke planove – budućnost, hobi, slobodne aktivnosti, rekreacija, sport, zdravlje, prijatelji? Kako si donio te planove?<br>- Jesi li donio/donijela neku odluku vezanu uz budućnost? |
| 2. Kako si došao/došla do te odluke? Što te je vodilo to te odluke? |
| Informacijsko ponašanje |
| 3. Koja si pitanja imao/la u vezi te odluke, ako si imao uopće neka pitanja?<br>Kad si razmišljao/la o toj odluci, o čemu si razmišljao/la? Što te je brinulo?<br>Možeš li se prisjetiti kakvu si pomoć savjet, informaciju, dodatno znanje trebao/la za pomoć u donošenju odluke?<br>Što si učinio u vezi s time? Što je bilo dalje? |

a. Kako si dobio/la odgovore na ta pitanja? Na koji način si došao/la do nekog dodatnog znanja, savjeta i informacije koje si trebao?

b. Što je s traženjem informacija i/ili savjeta koji bi ti mogli pomoći u donošenju odluke, kakva su tvoja iskustva? Opiši mi.

c. Što je s razmjenjivanjem informacija s drugima, npr. prijateljima, vršnjacima, roditeljima i sl., na način da jedni drugima dajete informacije vezane uz tu odluku? (Kakva su tvoja iskustva?) Je li se slično tebi dogodilo? Opiši mi.

d. Od nekih učenika sam čula da redovno prate neke medije, npr. društvene mreže, internet, časopise, televiziju, i da su na taj način slučajno naišli na neke korisne informacije koje su im pomogle u donošenju odluke. Možeš se prisjetiti je li se tebi dogodilo nešto slično, znači da si slučajno naišao/la na korisne informacije ili savjete na (medij koji prate), koji ti pomažu u donošenju odluke? Opiši mi.

e. Od nekih učenika sam čula da su sasvim slučajno naišli na informacije koje su im bile korisne za donošenje odluke, iako ih sami nisu tražili. Možeš li se prisjetiti je li se tebi dogodilo nešto slično, znači da si sasvim slučajno naišao/la na korisne informacije, bez da si ih sam/sama tražio/la? Opiši mi kako se to dogodilo.

f. Od nekih učenika sam čula da neki drugi ljudi – članovi obitelji, prijatelji, prate i traže za njih, kako bi im pomogli. Kakva su tvoja iskustva, imaš li ti nekoga tko traži informacije za tebe? Opiši, objasni.

Izvori informacija

4. Gdje/od koga si dobio/la pomoć – savjet, informaciju, dodatno znanje?
5. Zašto si upravo od/u/na (izvor informacija) tražio/la informacije/savjet za pomoć pri donošenju odluke? / Možeš li mi objasniti razlog zašto su upravo tamo/od (izvor informacija) tražio informaciju/savjet za donošenje odluke? (varijacija)
    a. Jesi li pokušao dobiti informacije/savjet negdje drugdje?
6. Kako ti je to što si saznao od/u/na (izvor informacija) pomoglo u donošenju odluke? / Na koji način ti je to što si saznao/la pomoglo u donošenju odluke?
    a. Od svih izvora od kojih si dobio informaciju ili savjet, znači… (nabrojim izvore), tko ti je najviše pomogao u donošenju odluke? Zašto? Objasni.

Kredibilitet i kognitivni autoritet

7. Jesi li vjerovao/la da je to što si saznao/la točno i korisno i da ti može pomoći u donošenju odluke? Zašto si to mislio/la?
8. Vjeruješ li (izvoru informacija) da ti baš on/ona/ono može dati korisnu informaciju/savjet, koja će ti pomoći u donošenju odluke?

   Zašto to vjeruješ?
9. Koji od (izvora) je najviše utjecao na odluku? Zašto baš on/ona, a ne drugi? Zašto upravo on, više od ostalih? Čiji savjet/koju informaciju si uzeo najviše "zaozbiljno"?
10. Jesi li možda dobio/la informaciju ili savjet s različitih mjesta/izvora/osoba koje su na neki način suprotne, u suprotnosti su, ne slažu se, proturječne su?

    Što se dogodilo?

    Kako si znao/la u što vjerovati? Kako si znao/la kome vjerovati?
11. Jesi li možda naišao/la na neku informaciju ili savjet koji su u suprotnosti s onim što znaš otprije?

Što se dogodilo? Čemu si vjerovao/la više, novoj informaciji ili svojem dosadašnjem znanju i iskustvu?

Kako si znao/la čemu vjerovati, svojem dosadašnjem znanju ili novoj informaciji/savjetu? Zašto si tako mislio?

12. Jesi li možda naišao na neku informaciju koja ti se nije sviđala, koja nije bila u skladu s tvojim razmišljanjima o tvojoj odluci? Zašto ti se nije sviđala? / Jesi li možda dobio neki savjet koji ti se nije sviđao, koji nije bio u skladu s tvojim razmišljanjima o odluci? Zašto ti se nije sviđao?

    Što si učinio/la, jesi li ih uzeo u obzir pri donošenju tvoje odluke ili zanemario/la? Zašto si učino tako?

13. Na kraju, želiš li me nešto pitati? Zanima li te nešto o ovom mojem radu?

**(translation to English language)**

Hi, you probably remember me – my name is Alica Kolarić and I am doing a research about how young people make decisions.

Young people make many decisions every day. These decisions may be considered smaller or bigger, for example, what movie to see or what career to choose. Some decisions affect their current life, and some also affect their future. To make the decision-making process easier, sometimes they need some information to gain additional knowledge which may help in the process. They seek information from various sources: from people around them, on the Internet, in their favorite magazine or somewhere else. Sometimes young people believe that they do not need new information because they have heard enough about the things they are deciding about (from their parents, in school, from their friends or on the television, for example). They may believe that they already have enough knowledge and experience to make the decisions they are facing. Sometimes they believe that they may base their decisions on something else (for example emotions, instinct, etc.), but other times they might purposefully seek information.

Our conversation will help me with my research and I would like you to be relaxed and open.

| Themes and questions |
|---|
| In the beginning, I would like to get to know you a bit more.<br>- How old are you?<br>- Tell me something about yourself – what do you do in your free time? |
| Decision |
| 1. Can you recall some of the decisions you made or have been making during this school year, and are not completely sure about them? They can come from any area of your life – relationships with your friends, your appearance, schoolwork, future career, going to a family gathering or not, buying something of importance for you, hobby… Try to recall some of your decisions which you consider significant for your life, to a certain extent.<br>▪ Prompts<br>- Did you make any changes in your life? Did you start something new – e.g. a hobby, paying more attention to your diet, taking up a sport?<br>- Did you perhaps face a problem, smaller or bigger? How did you decide what to do about it?<br>- Do you have some plans – about your future, a hobby, free time, sport, your health, plans which involve friends or other people? How did you make these plans?<br>- Have you made some decisions related to your future? |

2. How did you arrive at this decision?

Information behavior

3. What were your main concerns about it, in case you had any? What kind of questions did you have in your mind? / Can you remember what kind of help, advice or information you needed to make the decision?

   What happened? What happened next?

   - How did you get the answers to your questions? / How did you gain some new knowledge, advice and information you needed?
   - What about seeking information or advice which might help, what is your experience? Please, describe it.
   - What about sharing information about (the decision topic) with other people, e.g. friends, peers, parents and alike, in a way that you exchange information, give information to each other? What is your experience? Please, describe it.
   - I've heard that some of the students follow some media, e.g. social networking sites, the Internet, some magazines or a television program. They reported coming across some useful information by doing that, although they did not look for it, and that it helped them in making the decision. What about you, have you had some similar experience? Please, describe it.
   - I have heard from some of the students that they have gotten some helpful information totally out of the blue, without looking or asking for it. Can you think of a recent time when you ran into some help or some good advice or information that you did not expect to find? / Have you found out something you wanted to know totally out of the blue, without looking or asking for it?
   - I have heard that some of the students have some other people, e.g. family and friends, on the lookout for things or information for them. Do you have anyone who does that for you?

Information sources

4. Where did you get the help you needed – some advice, information or additional knowledge?
5. Can you explain the reason you looked for information and advice from (this specific information source)? / Can you explain why you sought information from this specific source?
   - Have you tried looking for information elsewhere? / Have you tried looking for information from some other sources?
6. How did that help with making your decision, what have you found out? / How did this information help you with making your decision?
   - Which source provided the most helpful information (I am listing the sources the respondent mentioned)? Please, explain it.

Credibility and cognitive authority

7. Did you believe that the information/advice you gained was good, accurate and useful and that it might help you with the decision?

   What made you think so?
8. Do you believe that (information source) can give you useful information/advice that would help you with your decision? What makes you think so?
9. What or who, of (all the sources), influenced your decision the most? Which advice/information did you take most seriously? Why is that?
10. Have you ever gotten help, advice or information from different sources that were contradictory? What happened?

How did you know which one to believe and what to do?

11. Have you ever gotten help, information or advice which disagreed with your prior knowledge and experience? What happened? What did you believe, the new information or your prior knowledge and experience?

    How did you know what to believe, your prior knowledge or new information? Why is that?

12. Have you ever gotten some information which you did not like, and which was not in line with your opinion of your decision? Why did you dislike it? / Have you ever gotten some advice which you did not like, and which was not in line with your opinion of your decision? Why did you dislike it?

    What did you do?

    Did you take this information into consideration when making your decision or did you ignore it?

    Why is that?

13. Is there anything you would like to ask me? Perhaps something about my work?

# 5. Appendix 5 – The individual interview results

| Table 22.1 | | | |
|---|---|---|---|
| Quote | Summary | Information source characteristics | Category of information source characteristics |
| I: I vjeruješ li da su te informacije, za sestru si mi već rekla, za roditelje da su informacije koje dobiješ od njih točne i korisne i da ti mogu pomoći u odluci?<br>P1: Pa tada da, jer on će mi isto reći sto posto i sve provjerene informacije i sve to, a mama ne toliko jer ona svašta čuje i onda meni svašta kaže, a ne provjeri od koga je čula i što je točno čula, tako da mama ne toliko, ali tata da. | Gives accurate and verified information. (P1) | - provides accurate information (C)<br>- provides verified information (C) | - credibility and cognitive authority related characteristics (C) |
| I: Zašto se upravo sestri obraćaš za informacije ili savjete o toj odluci?<br>M4: Pa zato što je, isto kao i s mamom, puno mi je bliža i mogu računati na nju, opet, ista stvar, ne znam. | We are close, I can count on her. (M4) | - in close relationship (P) | - personal characteristics (P) |
| I: Ok, dobro. Spominjala si Petru. Zašto si se Petri obratila, upravo Petri?<br>M5: Ona mene po tom pitanju mislim da me najbolje zna jer je najviše opet kako u poslovnim stvarima, tako i u privatnim stvarima najviše sa mnom kroz, kroz najviše stvari sam prošla u zadnje četiri godine išto kao što sam i ja s njom, ovoga, zna mene, zna, može nekako realnije sagledati situaciju, znači nema zataškivanja, to je jednostavno onaj odnos u kojem se kaže sve što se misli, ali ova osoba zna da se time ništa loše ne misli. I jako cijenim takav odnos zato što je realan, nema uljepšavanja i onda to nekako dosta zna malo još otvoriti oči. | She knows me best, we have a really good relationship, we have been through a lot together, we always say what we think. (M5) | - knowledgeable (C)<br>- a close relationship (P)<br>- honest, trustworthy (C) | - credibility and cognitive authority related characteristics (C)<br>- personal characteristics (P) |
| I: Ok, reci mi zašto si se upravo prijateljima za koje si rekla da su negdje radila, je li tako, zašto si se upravo njima obratila za nekakvu informaciju?<br>G6: Pa oni su mi najbliži. Ne svi prijatelji, neki ljudi s kojima sam bliska, koje vidim često, njih mogu, jednostavno mi je njih pitati. Nađemo se negdje i samo ih pitam di su radili, kakva su im iskustva, da li preporučuju ili ne, kakva je plaća i sve to skupa. | They are closest to me and have experience, I can trust them, they are friends I trust, I have known them for quite a while, it is simple to ask them, they have never let me down. (G6) | - a close relationship (P)<br>- experienced (C)<br>- trustworthy (C)<br>- easy to access (A) | - personal characteristics (P)<br>- credibility and cognitive authority related characteristics (C)<br>- access characteristics (A) |

| | | | |
|---|---|---|---|
| I: Razumijem, ali me zanima recimo konkretno zašto si prijateljima, zašto si se baš njima obratio? Na primjer nisi se meni, ako me razumiješ.<br>P2: Pa ono, s njima se družim skoro pa svaki dan i to je više onako ono, odete s nekim van i uvijek je, svi jedni drugima pomažemo kao god znamo. I onda samo recimo smo na kavi i onda spomenemo neku temu i počnemo razgovarati o tome. | We hang out every day, we always help each other. (P2) | - easy to access (A)<br>- convenient (A) | - access characteristics (A) |
| I: Reci mi ovako, zašto si upravo od prijatelja tražila nekakve informacije za tu odluku?<br>P4: Najbolje mi je tražiti kod mojih vršnjaka zato što svi smo tu slični i smatram da mi oni ne bi predložili nešto što ja fizički ne mogu, ili psihički čak, tako da oni znam da svako se kreće u različitim društvima, ali smo svi jedno isto društvo i onda možda imaju, znaju nekog, nešto, tako da bi moglo meni možda odgovarati. | Friends and peers - we are alike, we have a lot in common (P4) | - similar, have a lot in common (P) | - personal characteristics (A) |
| I: Reci mi, zašto si upravo od tih nekih prijatlejica iz grupe tražila savjet za pomoć?<br>M3: Jer je ona isto, na primjer ta cura koja ide u Zagreb, iste probleme imala ko ja tako da smo bile na sličnom, sličnoj situaciji i obje smo imale slična razmišljanja jer nismo stizale i nekako mi je bilo prirodno nju pitati.<br>I: A zašto je to dobro, kad ste u sličnoj situaciji?<br>M3: Zato što neke stvari ne razumiješ ako nisi u toj situaciji i nije ti jasno koliko nekad je nešto teško, ako nisi nikad to doživio.<br>I: A u ovom slučaju onda?<br>M3: Jer ona je razumjela da je meni teško putovati i dolaziti na treninge jer je ona isto to doživljavala, isto je doživljavala to da nije toliko, na primjer, ne sjeća se toliko dobro koreografije koliko i druge cure koje uvijek idu na treninge i tako. Ona je mogla relate, kako se to kaže<br>I: povezati<br>M3: Povezati se sa mnom i razumjeti to što govorim. Tako da smo bile na sličnom | She understands me, is in the same or similar situation. (M3) | - understanding (P)<br>- similar, have a lot in common, similar decision situation (P) | - personal characteristics (P) |

| | | | |
|---|---|---|---|
| I: Ok, zašto si upravo tamo tražila informacije za pomoć?<br>G5: Jer mi je bilo najlakše i najbrže pristupiti informacijama i bilo mi je nekako najjednostavnije. Pogotovo za prvi korak, znači za naći one početne informacije bilo mi je najlakše samo upisati u tražilicu i onda kopati po tome. | The easiest and fastest way to access information, the simplest way. (G5) | - easily accessible (A)<br>- quickly accessible (A)<br>- easily accessible (A) | - access characteristics (A) |
| G1: Da, da. Evo iskreno ja sam vizualan tip i oni u videu baš ono vizualno objašnjavaju. Na primjer imate neke grafove koji pokazuju tu cijelu povezanost i to mi je nekako lakše shvatiti nego da ja pročitam sad hrpetinu teksta nekog i onda zapravo mi to brže uđe u glavu i prije shvatim.<br>I: Razumijem.<br>G1: I da se nadovežem na ovo zašto su ti YouTube videi dobri. Imate na primjer, nevezano uz ovo, na primjer kad čitam nešto o povijesti neke članke, imate na stranci piše neki tekst i onda je dolje u ovom videu korisnik ovaj i ovaj je izvrsno objasnio taj cijeli proces na primjer, cijeli taj ustroj egipatskog kraljevstva i kako su funkcionirali, kako je funkcioniralo to društvo ovo ono, na primjer. Tako da po tome isto se orijentiram.<br>I: To onda tebi odgovara, takav pristup.<br>G1: Da, da. | Videos are visual (e.g. graphs) and therefore easier to understand (such as in economy-related topics) - it is faster and easier to understand information visually presented than from large amounts of some text. (G1)<br>- | - visual (F)<br>- graphical (F) | - form characteristics (F) |
| I: Dobro, ok. Zašto si odabrala knjige iz knjižnice kad si pripremala tu tezu?<br>21:50<br>G5: Pa zato jer sam mislila da su dosta povjerljiv izvor, nije ko onako ovo je nešto za što je puno teže naći konkretne informacije iz povjerljivih izvora na internetu na primjer, za razliku od izbora faksa.<br>I: Zašto?<br>G5: Pa zato jer jako puno ljudi koji nisu stručni pričaju o tome i onda u moru informacija i svega puno je teže naći nešto čemu apsolutno vjerujem pa onda rađe uzmem knjigu iz knjižnice pa možda je isto je pristrana, ali je barem morala proći nekakve kontrole i nešto i ajmo reći da je koherentnije | The source is credible, it has been checked, the content is coherent, it is easier to receive such information from a book. (G5) | - credible (C)<br>- traditional textual book form (F) | - credibility and cognitive authority related characteristics (C)<br>- format characteristics (F) |

| | | | |
|---|---|---|---|
| sve napisano, onako lakše informacije, bar meni, onako puno mi je lakše primiti informacije iz knjige. | | | |

**Table 22.1 - Information sources and source characteristics which serve as criteria for source selection – quotes, summaries, information sources characteristics and identified categories of information source characteristics**

| **Table 23.1** | | |
|---|---|---|
| **Quotes** | **Summaries** | **Source characteristics – bases for credibility assessment** |
| I: Dobro, razumijem. Jesi li vjerovala da je to što ti je mama rekla dobro, dobar savjet, točno i da ti može pomoći u donošenju te tvoje odluke?<br>P6: Da.<br>I: Zašto?<br>P6: Pa kažem, mama je uvijek u pravu, mislim ima više iskustva nego ja i ne želi mi zlo. | mum is always right, she has more experience than me, does not want something bad to happen to me (P6) | - the source is experienced<br>- the source is well-meaning |
| I: Jesi li vjerovala da je to što si saznala od liječnika točno i korisno i da ti može pomoći u donošenju odluke?<br>P1: Da. Sto posto jer, opet, neće netko proći sve te škole da ništa ne zna i da ne zna svoj posao, a i znam za tog doktora da je dobar, i operirao je moju prijatlejicu tako da znam da zna šta radi. | has education, knowledge, experience (P1) | - the source is knowledgeable<br>- the source is experienced |
| I: Dobro, reci mi jesi li vjerovala da je to što si saznala točno i korisno i da ti može pomoći u donošenju odluke?<br>G5: Jesam, da, zato jer sam, mislim bila sam službenim stranicama od fakulteta tako da s obzirom da je bio izvor koji je dosta povjerljiv, sam odmah to uzimala kao legitimnu informaciju. | university website, official website is a trusted source and has accurate factual information (G5) | - the source is official<br>- the source is trustworthy<br>- the source provides accurate factual information |
| I: To što si pronašao na tim stranicama fakulteta, jesi vjerovao da je korisno i točno i da ti može pomoći?<br>G2: Mislim, stranice od zagrebačkog sveučilišta mislim da stvarno, nema tu polemike.<br>I: Razumijem, no bilo bi mi drago da mi objasniš zašto.<br>G2: Pa to su stranice od fakulteta, oni bi trebali informirati učenike i buduže učenike zašto i kako, što se traži, koje su mogućnosti i u stvari, onaj tko uređuje stranicu, valjda mu je posao da to napravi. I da se promoviraju, mislim, i da informiraju. | university websites - credibility is undisputed, it is their job to inform students (G2) | - the source is credible<br>- the source is professional |
| I: I u kojoj mjeri ti vjeruješ tome što oni govore, da je to točno i dobro? | travel vlog, these YouTubers seem open, when you see their experience and what they have been through, you simply believe | - the source is experienced<br>- the source is believable |

| | | |
|---|---|---|
| M3: Pa ovi na primjer, ove sve stvari koje se zovu kao vlogovi, i onda oni snimaju zapravo većinu svog života i onda nekako vidite kako je sve to. I onda, oni na primjer, imate različite. Neki koji ne stavljaju te loše stvari, to sam već rekla, ali ovi koje ja pratim stavljaju dosta i privatne stvari i to, mislim da su dosta otvoreni. Mislim, ja ne mogu znat 100 posto, ali mislim da nikome ne možete baš vjeorovati za neku informaciju da je 100 posto točna. Jer ne može netko reći da završit ćeš akademiju i dobiti posao jer ne znaju.<br>I: A kad bi trebala reći na temelju čega ti njima vjeruješ.<br>M3: Pa mislim samo na temelju njihovog iskustva i zato što oni to proživljavaju jednostavno pa nekako njima više vjeruješ.<br>I: Razumijem. A da li se je tvoje povjerenje u njih na neki način razvilo kroz vrijeme ili odmah si, u kojem momentu si shvatila da možeš s pouzdanjem vjerovati u to što oni iznose?<br>M3: Pa ne znam. Samo kad vidim da oni to rade, mislim, nekako taj instinkt vjerojatno, da oni to rade i, ne znam. | them, it is some kind of instinct (M3) | |
| I: Jesi li vjeorovala u to što su ti one rekle, kad si dobila od njih neko mišljenje, jesi li vjerovala da je to dobro mišljenje, da je to neko pozitivno, točno mišljenje i da ti ono može pomoći u donošenju odluke?<br>M4: Pa da.<br>I: Dobro, zašto?<br>M4: Zato što, ne znam, vjerujem da mi daju koristan savjet. Dobro, možda ja taj savjet neću skroz iskoristiti, ali opet vrijedi da, vrijedi njih pitati, njihovo mišljenje isto tako vrijedi u mom životu.<br>I: A što čini njihovo mišljenje vrijednim?<br>M4: Pa zato što su isto osobe koje su isto dosta dugo bile sa mnom i vjerujem da mi misle dobro isto kao što i ja njima, i mogu im vjerovati u takvoj situaciji. | I trust they give helpful advice, they want the best for me, I can trust them, they have been with me for a while (M4) | - the source is trustworthy<br>- the source is well-meaning |

**Table 23.1 - Criteria for credibility assessment, based on information source characteristics – quotes, summaries and sources characteristics that serve as bases for credibility assessment**

| Table 24.3 | | |
|---|---|---|
| Quotes | Paraphrased and summarized answers | Bases of authority |
| I: Vjeruješ li da ti upravo sestra može dati korisnu informaciju ili savjet koja će ti pomoći oko te odluke?<br>P1: Da, ona može jer je gore i studira, i može pitati, mislim pošto nije na istom faksu, ali zna ljude i može se raspitati i znam da mi neće vratiti nazad nepotpunu informaciju ili krivu informaciju, i da će stvarno istražiti to dobro i pričati s ljudima koji studiraju to i zvala je bila i školu, i sve to tako da sto posto sigurno da će mi ona dati točnu informaciju. (…)<br>I: Zanima me koji od ta dva mjesta ili izvora gdje si tražila informaciju je najviše odnosno više utjecao na tvoju odluku?<br>P1: Sestra.<br>I: Zašto?<br>P1: Jer je gore, zna kakva je situacija gore, zna koliko Hrvata dolazi, zna koliko ljudi dolazi u Dansku baš zato jer je besplatan faks, i gore je već pet godina pa znam da će mi dati dobre informacije, iskrene, a i sestra mi je pa znam da neće raditi protiv mene nego za mene. | she is there and attends university, she can ask someone, I'm sure she will put effort in looking for information and am 100 percent sure that she will give me accurate information (…) she knows how many people from Croatia comes there because the university is free of charge, she has been there for five years now, so I know that she will give me good information, that she will be honest, and she is also my sister and she does what is in my interest (P1) | - experience<br>- trust<br>- credible<br>- knowledge<br>- well-meaning<br>- honest |
| I: Ok, dobro. Vjeruješ li da je upravo ta prijateljica ona koja ti može dati točnu, korisnu, dobru informaciju ili savjet za tu konkretnu odluku?<br>G3: Da, da, smatram da da zato jer prošla je kroz to i sama zna kako je. | she has been through it herself and knows what it's like (G3) | - experience<br>- knowledge |
| I: A zašto vjeruješ da je to što će ti stranice reći sto postotna istina?<br>G5: Pa jer su to neke tehničke stvari koje bi trebale moći biti provjerljive, tako da ako su stavljene na stranicu pretpostavljam da je to nešto za što ih se drži odgovornima tako da bi trebalo biti ono, blizu istini. | university website, I take the information it offers as 100 percent accurate, I believe it should be accurate (G5) | - official<br>- trusted |

**Table 24.3 - Bases of cognitive authority – quotes, summaries, and bases of authority**

| Table 24.5 | | | |
|---|---|---|---|
| **Quotes** | **Competing information sources** | **Cognitive authority** | **Bases of authority** |
| I: Ok. Dobro. Jesi li možda dobila savjet s različitih mjesta koji bi bio suprotan?<br>M5: O apsolutno. Apsolutno, kao što sam rekla, puno osuda i puno ljudi koji ne podupiru taj odnos.<br>I: I kako si znala kome vjerovati i što učiniti?<br>M5: Ti koji osuđuju i ti koji ne podupiru, ako ne podupire, ok, njegov izbor, ali osude, po meni su nešto najdetinjastije što u tom trenutku može postojati. I taj, samim tim što osuđuje pokazuje to da jednostavno, ako nemaš razumijevanja, ako se ni ne trudiš ni | other people vs. other people | people who were with me, who know me and understand me, and do not judge | - a close relationship<br>- knowledge<br>- understanding<br>- not judgemental |

| | | | |
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| ne potrudiš razumijeti, a osuđuješ, ne, neću ja toj osobi vjerovati, nema šanse.<br>I: Ok. Kako si znala kome vjerovati?<br>M5: Ljudima koji su prije toga bili kraj mene. Jer oni me puno bolje znaju i oni razumiju zašto sam radila to što sam radila, to što radim, zašto radim, zašto ovo, zašto ono, i ne osuđuju. Zapravo u jednom momentu nisam baš, nisam znala kome vjerovati, ali se to na kraju uvijek s vremenom pokaže. Makar malo zaglibio u tome, ali pokaže se. Tako da ono. | | | |
| I: Dobro, e sad ovako. Jesi li možda dobila informaciju ili savjet s različitih mjesta, ili izvora ili osoba, koje su na neki način suprotni i međusobno se ne slažu, u vezi te odluke?<br>P1: U vezi ovoga ne. Ne. Ništa. Jedino polaganje za engleski su ljudi išli na različita mjesta iako je na stranici i ova agencija koja je bila tu su rekli točno taj ispit, ali jedna cura s kojom sam pričala je išla je na drugi ispit i svejedno je poslala aplikaciju i nije bilo problema tako da je to jedino ali, ja sam išla na taj test koji je pravi pa onda.<br>I: Kad si dobila te dvije informacije, s različitih mjesta, kako si znala u koju informaciju vjerovati?<br>P1: Vjerovala sam sestri i tome što je pisalo na internetu jer je moja sestra polagala taj test i znam da je upala na faks, tako da sam vjerovala da je taj test. Kad mi je rekla prijatlejica za drugi test, sam bila onako ok, mislim da je ovaj drugi, ona je rekla dobro i nisam njoj baš vjerovala. Mislim rekla samo joj možda ti je ovaj moj, ali.<br>I: A zašto?<br>P1: Pa jer želim da ona isto upadne, da ide na pravi test.<br>I: A zašto si vjerovala više s jedne strane sestri i internetskoj stranici i agenciji, nego prijatlejici?<br>P1: Pa baš zato jer mi je sestra išla na taj test i upala, i na stranici škole opet ne vjerujem da bi tako predstavljali svoju školu da nam lažne informacije daju, a i agencija ako već ide od škole do škole, trebali bi imati provjerene informacije.<br>I: Škola, misliš fakultet?<br>P1: Da, da, fakultet. | sister, university website, intermediary agency vs. a friend (P1) | sister, the university website, the intermediary agency | - experience (sister)<br>- official (university website)<br>- professional (intermediary agency |
| I: Sad mi reci jesi li možda dobila informacije oko te odluka, od različitih izvora ili s različitih mjesta, koje su na neki način bile suprotne, u međusobnoj suprotnosti? | physician vs. friend | Physician | - friend's situation is different from mine<br>- educated |

| | | | |
|---|---|---|---|
| P1: Pa prijateljica mi je rekla da je ona bila u anesteziji potpunoj, a doktor mi je rekao da ne treba. Mislim da je razlika u godinama, ona je bila puno mlađa, ja sam starija pa sam mogla biti na lokalnoj. To i da, netko mi je sa strane, sasvim nebitno rekao da će se uši vratiti nazad nakon nekog vremena što nije istina, pitala sam doktora, on je rekao da se neće vratiti, da će biti normalno, kako ih on napravi.<br>I: U ovom prvom slučaju, što se dogodilo? Dakle s jedne strane ti je prijateljica rekla jedno o anesteziji, s druge strane doktor. Kome si vjerovala i zašto?<br>P1: Vjerovala sam doktoru jer će on ipak operirati i on će napraviti operaciju i on opet nema mi zašto lagati, nema zašto ići protiv mene i mog zdravlja, a ona mislim rekla je iz svog primjera da je njoj trebalo nešto. Više sam vjerojvala doktoru.<br>I: Ako možeš samo reći zašto doktoru, a ne prijateljici?<br>P1: Zato jer on radi to svaki dan i ima tu diplomu na zidu i sve to i nekako je opet neutralan i više zna anatomiju svog tijela i više zna što je dobro za mene u mojim godinama, nego moja prijatlejica koja mi je rekla da, bit ćeš cijela u anesteziji, bit će ti tako i tako. A ona je bila puno mlađa niti ne sjeća se toliko je jer je imala mislim deset godina kad je išla na operaciju, a doktor je taj koji ipak to radi, ima neke godine iskustva i obrazovan je u tome.<br>I: A ovo što si saznala sa strane, a od doktora si saznala više? Kome si vjerovala i zašto?<br>P1: Opet doktoru jer opet radi to svaki dan i zna kako se uši ponašaju i zna jer mu ljudi dolaze nazad na kontrolu, zna da li će se pomaknuit, vidi kožu, kakva je koža, dal će se rastegnuti ili nešto tako da sam opet vjerovala njemu. | | | - objective<br>- experienced |
| P4: Pa imam, da. S obzirom da se jedna već isto moja jako dobra prijateljica je odustala od mažoretkinja i to me isto tako potaklo na razmišljanje da li da ja uopće ostanem, ali ovaj na kraju sam ostala, mislim, dijelila sam mišljenje i s ovom koja je ostala, i s ovom koja je otišla. Bila sam pola-pola zato što ja sama nisam bila sigurna da li da ostanem, dali da nastavim ili da odustanem.<br>I: I čije si tu riječi uzela ozbiljnije, ove koja je otišla ili ove koja je ostala, i zašto? | friend vs. friend | the friend who is more similar/has a lot in common, who thinks alike | - similar, we have a lot in common<br>- similar thinking |

| | | | |
|---|---|---|---|
| P4: Možda zato što ova koja je ostala, jer ona ima razlog zašto je ostala i zašto želi još ostati, a ova koja je otišla, ona više nije imala toliko volje koliko je imala na početku. I to su primijetile i ostale cure u timu. Znači, to je ona baš pokazala.<br>I: A zašto si bila shvatiti prihvatiti utjecaj ove koja je imala razlog da ostane nego ove koja je otišla jer je izgubila volju?<br>P4: Zato što smo ja i ova cura koja je ostala dosta slične i dosta imamo slična razmišljanja što se tiče mažoretkinja i mislim da bi, da mi je njeno mišljenje bilo korisnije.<br>I: Ok, jer je?<br>P4: Jer je ona ipak ostala, nije izgubila volju i nema te neke hirove.<br>I: A ti?<br>P4: Što ja?<br>I: U odnosu na nju.<br>P4: Ja sam bila nesigurna oko te svoje odluke da li da ostanem ili da odustanem, što sam na kraju krajeva odlučila ostati jer sam i sama shvatila da mije puno bolje da ostanem nego da odustanem zato što ovaj, na mažoretkinjama to je neka kako bi to rekla, to je neko novo društvo i više različitih cura različitih godina, s različitih područja, različitih i razmišljanja u jednom. I ovaj, i zapravo mi je jako lijepo tamo družiti se i plesati s njima i smatram da moja volja tad i sad nije bila jednaka. Sad da, evo sad kako razmišljam, nema šanse da se ispišem i da odustanem, a tad sam se premišljala. | | | |
| I: A ona i mama su imale suprotna stajališta?<br>P6: Da, zato što je majka uvijek više da te zaštiti, a prijateljica je uvijek ta koja pa probaj, ako ništa, pa nikad ne znaš. Majka ipak ima više iskustva i želi zaštititi svoje dijete jer se boji, normalno, da dijete ne krene u krivi put.<br>I: A reci mi kako procijeniš u toj konkretnoj situaciji čije ćeš riječi uzeti ozbiljnije i na neki način<br>P6: Više sam na majčinoj strani što se toga tiče kažem zbog iskustva, jer je starija i jer sam njezino dijete i ne želi mi zlo. | Mother vs. friend | Mother | - experience<br>- wants to protect<br>- well-meaning |

**Table 24.5 - Competing information sources, the source which was given more authority and the bases of its authority**

| **Table 25** | | |
|---|---|---|
| Decision situation | Type of help | Source |
| higher education and career | gave information | friend (godfather) |
| | gave a second opinion<br>opened new possibilities<br>made me think twice (G1) | friend (godfather) |
| | gave information (G1) | friend with experience |
| | help get an opinion (G1) | friend with experience |
| | gave information (G1) | YouTube video |
| | gave knowledge (G1) | YouTube video |
| | gave information<br>boosted me (G1) | family member (a relative who works at university of interest) |
| | get a picture (G2) | university students |
| health (tonsils surgery) | gave information (G3) | Physician |
| | gave information (G3) | friend with experience |
| | gave factual information (G3) | Google, websites |
| higher education and career | gave information (G4) | university student (experience) |
| higher education and career | gave information (G5) | university website |
| higher education and career | gave information which cannot be acquired from other sources (G5) | university student |
| higher education and career | gave information (G5) | teacher, high school |
| higher education and career | gave information (G5) | the Internet |
| food and diet | gave information (G5) | YouTube video |
| food and diet | gave information (G5) | documentary movies |
| job | gave information (G6) | friends with experience |
| job | gave information (G6) | Parents |
| job | gave information (G6) | student agency |
| job | gave information (G6) | Internet portal Moj posao |
| buying | gave information (M1) | YouTube video |
| buying | gave information (M1) | the Internet |
| higher education and career | offers more decision alternatives/options (M2) | Mother |
| higher education and career | gave information (M2) | university website |
| higher education and career | gave information in the form of opinion (M2) | friend with experience |
| leisure time activities | gave information (M2) | Instagram profile |
| training and sport | gave information (M3) | Mother |
| higher education and career | gave information (M3) | Parents |
| higher education and career | prompted me to rethink (M3) | Parents |
| higher education and career | prompted me to broaden my horizon (M3) | Parents |
| higher education and career | prompted me to consider other decision option/plan B (M3) | Parents |
| relations to other people | made me think deeper (M4) | friends with experience |
| relations to other people | made me rethink my decision (M4) | friends with experience |
| relations to other people | gave me other opinions (M4) | friends with experience |
| higher education and career | gave me another good reason for choosing one of the decision options (M5) | Friend |
| higher education and career | directed me toward one of the decision options (M5) | Friend |
| university and career | gave me another perspective on things (M5) | Friend |
| relation to other people | gave information (M5) | Mother |
| relation to other people | helped me organize my thoughts (M5) | Friend |
| higher education and career | gave information (M6) | academy website |
| higher education and career | gave information (M6) | teacher, music academy |
| higher education and career | made the process of making a decision easier by giving some useful information (M6) | Friend |
| higher education and career | gave information (P1) | Sister |
| higher education and career | gave information (P1) | university website |

| | | |
|---|---|---|
| appearance | gave information (P1) | Mother |
| appearance | made the process of making a decision easier by giving some useful information (P1) | Physician |
| appearance | gave information which cannot be acquired from other sources (P1) | Physician |
| job | gave information - referred to another source (P2) | Parents |
| job | gave information (P2) | family member, grandmother |
| job | gave information (P2) | teacher |
| school | broadened my horizons (P3) | teacher |
| school | gave information (P3) | teacher |
| school | gave knowledge (P3) | teacher |
| job | gave information (P4) | friend |
| Job | gave me a second opinion (P4) | parents |
| job | made me rethink (P4) | parents |
| job | narrowed down the number of decision options/alternatives (P4) | Facebook, Instagram |
| training and sport | gave information (P5) | physician |
| training and sport | gave information (P5) | parents |
| relations to other people | gave information (P6) | mother |
| relations to other people | gave me a second opinion (P6) | friend |

**Table 25 - Instrumental help – summarized answers about the type of help which the information sources provided**

| **Table 25.1** | | |
|---|---|---|
| Decision situation | Type of help | Source |
| higher education and career | they encouraged me (G1) | university students |
| higher education and career | he motivated me (G1) | family member (with experience) |
| health (tonsils surgery) | they provided support (G3) | parents |
| health (tonsils surgery) | she motivated me (G3) | friend (with experience) |
| health (tonsils surgery) | she provided assurance (G3) | friend (with experience) |
| higher education and career | she gave me her approval (M2) | mother |
| higher education and career | they provided assurance (M2) | friends |
| training and sport | she provided support (M3) | mother |
| training and sport | they provided support (M3) | friends |
| training and sport | she helped me to calm down (M3) | friend (in the same situation) |
| higher education and career | they provide comfort (M3) | YouTubers |
| higher education and career | they inspire (M3) | YouTubers, bloggers |
| higher education and career | they provide assurance (M3) | YouTubers, bloggers |
| higher education and career | they motivate (M3) | YouTubers, bloggers |
| relations to other people | she provided assurance (M4) | mother |
| relations to other people | she provided support (M4) | sister |
| higher education and career | they provided support (M5) | parents |
| higher education and career | they boosted my self-confidence (M5) | friends |
| higher education and career | they provided me with support (M5) | friends |
| relations to other people | she provided me with support (M5) | mother |
| relations to other people | she boosted my self-confidence (M5) | mother |
| relations to other people | she encouraged me (M5) | friend |
| higher education and career | he provided me with assurance (M6) | university student |
| higher education and career | she encouraged me (P1) | sister |
| higher education and career | she motivated me (P1) | sister |
| appearance | she provided me with support (P1) | mother |
| appearance | he provided me with assurance (P1) | physician |
| school | she encouraged me (P3) | teacher |
| school | she motivated me (P3) | teacher |
| school | they encouraged me (P3) | parents |
| school | they motivated me (P3) | parents |
| school | she made things easier and more relaxed (P3) | teacher |

| | | |
|---|---|---|
| training and sport | she provided me with support (P4) | mother |
| training and sport | they provided support (P5) | parents |
| training and sport | they motivated me (P5) | YouTubers |

**Table 25.1 - Emotional help – summarized answers about the type of help which the information sources provided**

# 6. Appendix 6 – The consent forms

**The parent's/caregiver's consent for the participation in the focus group interview and individual interview research**

Poštovani roditelji/staratelji,

provodim istraživanje među srednjoškolskim učenicima kao dio izrade doktorskog rada pod naslovom *Informacijsko ponašanje adolescenata iz aspekta uloge informacija u procesu donošenja odluka*. Cilj rada je istražiti kako mladi donose odluke, traže li informacije i kojim se izvorima služe. Očekuje se da će rezultati istraživanja pomoći nastavnicima, stručnim suradnicima i ostalima zainteresiranim za dobrobit djece da bolje razumiju njihovo ponašanje pri donošenju odluka te da će u konačnici pomoći unapređenju informiranja mladih o životno važnim temama.

U istraživavnju koristim metode fokusne grupe i intervjua te će razgovori će biti snimani diktafonom (samo zvuk). Audio zapise koristit ću isključivo u svrhu istraživanja i pisanja rada. Učenici će ostati anonimni te ću strogo paziti na zaštitu njihove privatnosti.

Za provedbu istraživanja među adolescentima dobila sam suglasnost Etičkog povjerenstva Sveučilišta u Zadru. Istraživanje će se provesti uz pridržavanje pravila Etičkog kodeksa Sveučilišta u Zadru i pravila struke.

Ako ste suglasni da vaše dijete sudjeluje kao ispitanik u ovom istraživanju, molim vas da to potvrdite potpisivanjem formulara koji slijedi.

Hvala i srdačan pozdrav,

Alica Kolarić, studentica doktorskog studija *Društvo znanja i prijenos informacija* Sveučilišta u Zadru

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**Izjava o suglasnosti**

Potvrđujem da sam suglasan/suglasna da moje dijete _____ sudjeluje u istraživanju u svrhu izrade doktorskog rada na temu *Informacijsko ponašanje adolescenata iz aspekta uloge informacija u procesu donošenja odluka*. Upoznat/sam sa ciljem istraživanja i metodologijom.

Ime i prezime roditelja Potpis

_____ _____

U _____(mjesto), _____ (datum)

**The parent's/caregiver's consent for the participation in the survey research**

Poštovani roditelji/staratelji,

provodim istraživanje među srednjoškolskim učenicima kao dio izrade doktorskog rada pod naslovom *Informacijsko ponašanje adolescenata iz aspekta uloge informacija u procesu donošenja odluka*. Cilj rada je istražiti kako mladi donose odluke, traže li informacije i kojim se izvorima služe. Očekuje se da će rezultati istraživanja pomoći nastavnicima, stručnim suradnicima i ostalima zainteresiranim za dobrobit djece da bolje razumiju njihovo ponašanje pri donošenju odluka te da će u konačnici pomoći unapređenju informiranja mladih o životno važnim temama.

U istraživanju koristim metodu ankete te će učenici ispunjavati anonimni anketni upitnik. Rezultati će biti korišteni isključivo u znanstvene svrhe te se neće iznositi rezultati pojedinih ispitanika nego isključivo zbirni rezultati svih ispitanika. Učenici će ostati anonimni te ću strogo paziti na zaštitu njihove privatnosti.

Za provedbu istraživanja među adolescentima dobila sam suglasnost Etičkog povjerenstva Sveučilišta u Zadru. Istraživanje će se provesti uz pridržavanje pravila Etičkog kodeksa Sveučilišta u Zadru i pravila struke.

Ako ste suglasni da vaše dijete sudjeluje kao ispitanik u ovom istraživanju, molim vas da to potvrdite potpisivanjem formulara koji slijedi.

Hvala i srdačan pozdrav,

Alica Kolarić, studentica doktorskog studija *Društvo znanja i prijenos informacija* Sveučilišta u Zadru

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**Izjava o suglasnosti**

Potvrđujem da sam suglasan/suglasna da moje dijete _____ sudjeluje u istraživanju u svrhu izrade doktorskog rada na temu *Informacijsko ponašanje adolescenata iz aspekta uloge informacija u procesu donošenja odluka*. Upoznat/sam sa ciljem istraživanja i metodologijom.

Ime i prezime roditelja Potpis

_____ _____

U _____(mjesto), _____ (datum)

**The parent's/caregiver's consent for the participation in the individual interview research**
Poštovani roditelji/staratelji,

provodim istraživanje među srednjoškolskim učenicima kao dio izrade doktorskog rada pod naslovom *Informacijsko ponašanje adolescenata iz aspekta uloge informacija u procesu donošenja odluka*. Cilj rada je istražiti kako mladi donose odluke, traže li informacije i kojim se izvorima služe. Očekuje se da će rezultati istraživanja pomoći nastavnicima, stručnim suradnicima i ostalima zainteresiranim za dobrobit djece da bolje razumiju njihovo ponašanje pri donošenju odluka te da će u konačnici pomoći unapređenju informiranja mladih o životno važnim temama.

U istraživavnju koristim metodu intervjua te će razgovori će biti snimani diktafonom (samo zvuk). Audio zapise koristit ću isključivo u svrhu istraživanja i pisanja rada. Učenici će ostati anonimni te ću strogo paziti na zaštitu njihove privatnosti.

Za provedbu istraživanja među adolescentima dobila sam suglasnost Etičkog povjerenstva Sveučilišta u Zadru. Istraživanje će se provesti uz pridržavanje pravila Etičkog kodeksa Sveučilišta u Zadru i pravila struke.

Ako ste suglasni da vaše dijete sudjeluje kao ispitanik u ovom istraživanju, molim vas da to potvrdite potpisivanjem formulara koji slijedi.

Hvala i srdačan pozdrav,

Alica Kolarić, studentica doktorskog studija *Društvo znanja i prijenos informacija* Sveučilišta u Zadru

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**Izjava o suglasnosti**

Potvrđujem da sam suglasan/suglasna da moje dijete _____ sudjeluje u istraživanju u svrhu izrade doktorskog rada na temu *Informacijsko ponašanje adolescenata iz aspekta uloge informacija u procesu donošenja odluka*. Upoznat/sam sa ciljem istraživanja i metodologijom.

Ime i prezime roditelja Potpis

_____ _____

U _____(mjesto), _____ (datum)

# 7. Appendix 7 – Summaries of the focus group interviews' and the individual interviews' transcripts

**The focus group interviews' summaries**

PRHG, 1st session

In the first session, the students watch two YouTube videos which are shown to introduce them to the research topic and to provoke the discussion. The participants list the decisions they make in everyday life, and then the discussion about the listed decision follows. They explain how they make the listed decisions. The discussion brings decision topics: purchase of some items, how to manage time and activities, management of relationships to other people, behavior in specific social situations, appearance, dieting, leisure time, including training and sport and entertainment, summer job, higher education, school activities, identity, and some other decisions which occur in everyday life, such as whether to get braces. Reported information behavior includes intentionally seeking information from various sources: mother, expert, YouTube videos, students' electronic report book, websites, and friends. In some of the answers, the participants problematize the issue of cognitive authority and comment that people who want what is best for them, such as parents, can be trusted. Descriptions of their ways of making decisions include seeking information, thinking it over, considering solutions and consequences, and following instinct.

PRHG, 2nd session

In the second session, the participants further elaborate on the everyday life decisions they make, and how they make them. They mention new decision topics: alcohol and drug consumption, smoking and sexuality. These topics were introduced rather indirectly while talking about information sources they consult for some specific topics. The participants report intentionally seeking information when making some of the decisions, information sharing, and passive monitoring of information. In their answers, the respondents offer reasons why they turn to some specific sources of information (i.e. information sources characteristics), such as that they have an open and close relationship with a person, a person has relevant knowledge, and is educated. The issue of cognitive authority emerges in the conversation, for example, who to trust more for advice about diet, a nutritionist or some YouTuber. In many of their comments, the respondents reported seeking information from interpersonal information sources: people with experience and knowledge in the decision-related domain, parents, siblings, friends and peers. They also mention seeking information on the Internet in general, and more specifically on websites, forums, social networking sites such as Instagram and YouTube, and using applications, installed on smartphones, for information which helps in managing physical activity and daily intake of calories and reading product declaration. In their comments, the participants were making a difference between bigger and more serious decisions, which affect their future, and smaller ones. One participant mentions the possibility that his parents would overreact in conversation about some topics, which prevents him from talking to them about some issues, and that was interpreted as a barrier.

PRHG, 3rd session

The participants continue discussions about decisions they make in everyday life, what they do when making decisions and how they arrive at the decisions. They comment that it is important to ask for a piece of advice from people they are close with, people who have decision-related knowledge and are professionally connected to the decision topic. They add that information is important, as well as one's own opinion, and that it is important to think a decision over and to consider the negative and positive sides. Another decision topic is added to the decisions they have mentioned so far, a health-related decision. They describe intentionally seeking information, accidentally acquiring information as a result of monitoring information by following social networking sites such as Facebook and Instagram (e.g. fashion influencers) and employing passive attention behavior (e.g. being told by friends). They doubt the credibility of information found on the Internet and raise the issue of acquisition of conflicting information provided by different information sources (e.g. two physicians give different advice about scoliosis). Moreover, their answers offer some basis of cognitive authority, such as experience and knowledge. This discussion does not add any new information source to those they already mentioned in the previous sessions.

GSIMR, 1st session

At the very beginning of the first session, after the introductory part, one girl started the discussion by explaining that when one faces some important decision that may influence his or her future life, the most important thing to do is to get informed. The group consisted of music school students and the decision about pursuing higher education at some music academy, after leaving high school, seems of great importance to them. A lively discussion followed and because of that the YouTube videos used to prompt the conversation were skipped and showed to the participants in the 3rd session. They add that it is important to think the decision over, to take some time, and suggest that it is good to seek advice from parents, friends, and people with experience and people they are in close relationship with. The participants list the decisions they make in everyday life. The discussion about the listed decision follows and brings out the following topics: managing daily activities, relations to other people, appearance, dieting, school-related activities, getting a summer job, money management, secondary education, purchase, alcohol consumption, smoking, leisure time and other decisions such as attending driving school. The participants reported intentionally seeking information, sharing information, and passively acquiring information from parents who seek information about music academy on their behalf. The participants question the parents' cognitive authority when it comes to the decision of what music academy to enrol in, in cases when their parents are not musicians themselves, which means they do not have domain-related knowledge and experience. In such cases, friends who are into music seem to be better information sources. From their comments, it is shown that they consult people with experience and knowledge, teachers, parents, friends, and peers, but also the Internet, for making their everyday life decisions. The discussion reveals that the participants differentiate between big and small decisions, as those which have a bigger or a smaller influence on their lives. The decision about the music academy which they would attend in a year seems to be very important to some of them.

GSIMR, 2nd session

The second session starts by watching YouTube videos, which were skipped in the first session. The participants problematize the issue of cognitive authority or who to trust, when commenting on diet pills situation from the video, and conclude that experts may be trusted more than peers and Google search results. They also criticize the uncritical stance towards information acquired on the Internet, which is, in their opinion, widespread among today's youth. The discussion developed around the decisions which were listed in the first session. The mentioned information behavior, related to the decisions, include intentional information seeking, passive monitoring of information, (e.g. subscribing and following YouTube channels), and passive attention which results in accidental information acquisition. Moreover, the participants add social networking sites such as forums and Instagram to the sources that were mentioned in the first session.

GSIMR, 3rd session

The third session does not add any new type of information behavior to those reported in the previous sessions. They discuss the credibility of information found online and conclude that one needs to be critical, think about the acquired information and evaluate it. Two girls explain that their music teachers are authorities not only because they are experts in the domain, have knowledge and experience, but also because they have a good and friendly relationship, which makes them trust the teachers even more. They mention the lack of courage, laziness, and poor webpage organization as barriers to information seeking. At the end of the session, the participants comment that they do not pay much attention to making decisions and that they do it unconsciously. However, some of them report being very aware of making the decision about attending a music academy, because it is very important to them.

PGSRI, 1st session

In the first session, the students watch two YouTube videos which are shown to introduce them into the research topic and to provoke the discussion. They explain what they would do if faced with the decisions from the videos. After that, they list the decisions they make in everyday life, and then the discussion about the listed decision follows. They explain that when making decisions, they get informed, think the decision over and consider possible decision outcomes. The discussion brings out decision topics of time management and daily activities, relations to other people, appearance, dieting, getting a job, money management, higher education and future life, purchase, alcohol consumption, training and sport, leisure time activities, and attending driving school. The reported information behavior includes intentional information seeking and passive attention which resulted in accidental information acquisition. They discuss the issue of information credibility and cognitive authority and explain why it is better to trust an expert than friends and peers, in some situations. Honesty is mentioned as the basis of cognitive authority. The mentioned information sources include experts and people with experience, parents,

friends, and also Google search engine (as the first-choice source). The participants make a difference between big and important decisions and those that are smaller and less important.

PGSRI, 2nd session

The discussion about the participants' everyday life decisions continues. The topic of drugs occurs in the conversation, as well as passive monitoring behavior (of media such as Facebook and newspapers), and passive attention, which resulted in accidental information acquisition. The participants question the credibility of online information. Honesty, being well-meaning, authority, age and wisdom appear as the basis of authority. They add newspapers and siblings, Facebook, Instagram, websites and the Internet in general to the list of information sources they consult for making decisions. The mentioned reason (barrier) for not seeking helpful information when making a decision about romantic relationships is not wanting anybody else to interfere in their relationships.

**The individual interviews' summaries**

PRHG, G1

When asked about the decision he made during this school year, the boy mentioned the decision of which university to enroll in after high school, since he is in his last year of high school. He had planned to attend the Faculty of Maritime Studies and sought information from his godfather and friend (one person). He advised him, i.e. gave him information that was in conflict with his preferred decision option. This somehow opened the students' horizons and made him rethink the decision. The participant reported intentionally seeking information, sharing information with peers in school, and accidental information acquisition which resulted from passive attention. He reported watching YouTube videos to learn more about another university, i.e. another decision option, and seeking information on university websites, from students who attend the university of interest and from his mother. The reasons he lists for choosing the information sources are being in a close relationship, trustfulness, being supportive, being realistic, being an official university website, being familiar. He also gives the criteria for credibility assessment, such as the source is perceived as believable and an authority, official, reputable, etc. His cognitive authorities in making the decision about higher education are his mother and godfather/friend, and the reasons why he gives them his trust, i.e. bases of authority, are being trusted, supportive, experienced, in a close relationship, and others. Finally, the boy reported gaining instrumental help, such as widening his horizons and opening up to new possibilities, and emotional help, such as motivation.

PRHG, G2

The second interview was also about the decision about which university to enrol in. This boy engaged in intentional information seeking to learn more about the university requirements, about some student dorms in the city of Zagreb, and to acquire other needed information, and he also employed the behavior of sharing information with other students who shared the same decision situation. He also accidentally acquired information by passively monitoring Facebook, and by passive attention when his mother and his girlfriend sent him the information they acquired on his behalf. He consulted the university website and some university students and reported information source characteristics which serve as criteria for credibility judgment such as honesty, objectivity, being unbiased, and others. When his mother sent him a piece of information that was in conflict with his prior knowledge and desired decision option, he just neglected the information because it seemed like something that cannot be true. Finally, he reported gaining instrumental help from the acquired information.

PRHG, G3

In the third interview, the girl reported making the decision about getting a tonsils surgery, explaining that it was her decision, and not her parents'. She intentionally sought information from a physician and her friend who had the same surgery last year, on the Internet, using Google search engine, and she discussed the decision with her parents. She also reported sharing information and acquiring information by passive monitoring, when her parents sought information on her behalf. Information source characteristics, which served as reasons why she consulted the specific information sources, include being trustworthy, knowledgeable, well-meaning, being in the same situation, familiar, fast and easily accessible, informative, and others. Similarly, the criteria for credibility judgment include being knowledgeable, experienced and well-meaning, and being in the same situation. Her cognitive authorities are the physician, her friend who already had the same surgery, and her parents, and the basis of authority she reports is being trusted, educated, knowledgeable, and experienced. From the acquired

information, she gained instrumental help by being informed, and emotional help by being motivated and assured, and by gaining support.

PRHG, G4

The student recalls two decisions, one he considers big, and the other small. The big decision is about what university to enroll in, and another about going to the gym, although he did not feel like it. He reports intentionally seeking information, sharing information with one friend, passively monitoring the information, which resulted in acquisition of information, which prompted him to intentionally seek information because it seemed very interesting, and accidentally acquiring information from passive attention, which took place during one workshop, when he learned that studying computer science in Rijeka might be interesting for him. He reported consulting a computer science magazine, his mother, and a student who attends the university of interest. He lists experience, being convenient, reputable, and providing current and precise information as source characteristics which are the reasons why he chooses the sources of information. The criteria for credibility judgment of the magazine, as a source of information, are the belief that it is respected and provides current information. He gained instrumental help from the acquired information.

PRHG, G5

In the fifth interview, a girl recalled making three decisions: a decision about which university to enrol in, she decided to stop eating meat and became a vegetarian, and she decided to end a friendship with someone she was close with for a long time. She was very enthusiastic about the interview and elaborated on two decisions, the one about the university, and the one about not eating meat. She reported employing information behavior of intentional information seeking, information sharing, passive monitoring of social networking sites, and accidental acquisition of information by passive attention. When she intentionally sought information, she consulted some documentary movies (when she was exploring the reasons to stop eating meat), one book she borrowed from the library, the Internet in general and university websites, her teacher, YouTube videos, and students who already study in Italy, where she wants to go as well. She listed many characteristics of information sources, which are the reasons for consulting them, such as being experienced and informative (university student), knowledgeable, easy and fast accessible (teacher), is easy, fast and simply accessible (the Internet), and others. The criteria for credibility judgment she mentioned are: the source is unbiased, trustful, official, provides accurate and factual information. Cognitive authorities that influenced her decisions are a teacher, university students, university websites and a book, and the bases of authorities are being experienced, being in a similar situation, and being official and trusted, and is believed to give accurate information. When she acquires conflicting information from different information sources, she seeks information from other information sources for verification. Instrumental help was the only type of help she gained when making her decisions.

PRHG, G6

This student elaborated on what summer job to take after she decided that she would work, rather than just rest. She has two options and is thinking about them at the moment. She decided to get informed about the job possibilities and intentionally sought information from her friends who have some experience of working, from her parents and also in a student employment agency. Moreover, she describes sharing information about getting a job among friends who have some experience and always say something useful. She accidentally acquired a piece of information by passive attention when her mother sought and found the information on her behalf. She gives reasons why she turns to the mentioned information sources for information i.e. source characteristics, such as being experienced, objective, knowledgeable, being in a close relationship with a source, trustworthy, easy to access, etc. Similarly, the criteria for credibility judgment are being trustworthy and official. Her cognitive authorities are parents and friends, and the bases of authority are knowledge, experience, being similar or having a lot in common, and able to understand. The information sources provided instrumental help for making her decision by giving some useful information about the places where they already worked.

GSIMR, M1

This student recalled making three decisions recently: he decided to buy a new laptop, to start again a romantic relationship with his ex-girlfriend, and what music academy to enrol in. What made him very open and helpful was his previous participation in the focus group discussions, which was a very good experience for him, as he stated in the last focus group session. He elaborated on two decisions, the one about buying a laptop and the one about starting a romantic relationship again. For the decision about what laptop to buy, he reported the following

information behaviors: intentional information seeking, accidental information acquisition which resulted from passive attention and then initiated intentional information seeking. The consulted information sources include the Internet in general, and more specifically forums, YouTube channel, and websites. The reasons why he sought information from these sources, i.e. information source characteristics, include being familiar and quickly accessible, being visual, available in auditive and textual form and interactive, which somehow makes information easier to comprehend since he does not enjoy reading that much. He describes judging the credibility of the acquired information by comparing it with other information, also found on the Internet. YouTubers were his cognitive authorities in the case of the purchase decision, based on the good quality of the videos, which made him feel he can trust the source, on perceived knowledge and professionalism, and on the fact that the videos were convincing. For this decision, he gained an instrumental type of help. He did not report employing any information behavior related to the decision about a romantic relationship.

GSMIR, M2

The participant was talking about her decision not to go to the entrance examination of the music academy in Ljubljana, and about the decision to go to a music festival in Budapest. Her reported information behavior includes intentional information seeking, sharing information with her friends - classmates in music school, in the case of the decision about the music academy, and accidental information acquisition of useful information which resulted from passive monitoring of the music festival Instagram. The sources she consulted were her mother, a teacher, friends, and the music academy website. The characteristics of information sources, which guided the source selection, were being knowledgeable, experience and authority, official and familiar. She judges the credibility of the acquired information from the characteristics of perceived trustworthiness, which is based on the prior experience with the source, on being well-meaning, and being official. Her authorities are her mother and friends, based on knowledge, being protective and well-meaning and in a close relationship with her, in the case of her mother, and being in the same situation, honest, trusted and well-meaning, in the case of her friends. Both types of help were provided by information sources, instrumental and emotional, and emotional help included getting approval and assurance from her mother and friends.

GSIMR, M3

The student talked about her decision to stop training dancing and about one decision she is still dealing with since she is indecisive. This second decision is about what to do after high school, whether to attend a music academy or to work and travel, which is something she really wants. For the decision to stop training dancing, she reports intentionally seeking information and sharing information with a friend who was in the same situation and had the same dilemma. The sources she consulted were her mother and friends. She intentionally sought information for the second decision as well, and she passively monitors information on YouTube channel, more specifically vloggers who publish their work and travel experiences, which she finds inspiring and encouraging. She also discussed this decision with her parents. The criteria for the credibility judgment, which she gives, include being trustworthy, supportive, well-meaning, in the case of her mother, and being experienced and believable (YouTubers). Her cognitive authorities are parents, friends, and YouTubers because she perceives them as supportive, well-meaning, trusted, knowledgeable, honest and being in close relationship with her (in the case of the parents), being in the same situation and able to understand, in close relationship with her (in the case of her friends), and being inspiring and encouraging (in the case of YouTubers).

GSIMR, M4

This student was talking about how she decided to change the group of people she was hanging out with. She intentionally sought some helpful advice, shared the information with her friends, and accidentally acquired a piece of useful information in the course of conversation with her sister. The characteristics that make her consult these sources include being helpful, knowledgeable, confidential and in a close relationship with her (the mother and the sister). The criteria for credibility judgment include being experienced and knowledgeable. Her mother, sister, and friends are her cognitive authorities because she perceives them as experienced, supportive and in a close relationship with her, and trusted. They gave her instrumental and emotional help by providing another opinion, assurance, and support.

GSIMR, M5

This student also participated in the focus group discussions and was already familiar with the researcher and the purpose of the study, which made her very communicative, enthusiastic, and willing to contribute. She talked

about two decisions. The first decision was the dilemma of whether to take a year off or to attend the music academy in Ljubljana immediately after leaving high school. For this decision, she intentionally sought some helpful information from her friend, who was also a music school student, and her parents. She shared information with her friends who were her classmates in the music school, shared the same decision situation and therefore were able to understand her. Another decision was whether to end a romantic relationship. She reported seeking helpful information to support this decision from some people she believed might help and who she trusted: her mother, her friends, and the romantic partner. She seeks information from these sources because of the following information source characteristics: being competent and understanding, experienced, knowledgeable, being in a close relationship with her, trustworthy and well-meaning, being honest, being similar and having a lot in common. Her cognitive authorities are her mother and her friends because they have experience and knowledge, can understand her, are honest and trusted, and they are in a close relationship with her. However, she states that her friend, who is a music school student as well, can better understand her position than her parents, who are not into music, and she influenced her decision more than they did. The consulted information sources provided her with both instrumental and emotional help.

GSIMR, M6

This music school student was talking about her decision to move to the city of Zagreb, to change high school and to attend a music production course. To make this decision, she intentionally sought information from a teacher from the academy where she would study music production, a former student who attended the academy, and from the academy website. The first information about this academy she acquired accidentally, from an advertisement. She got some useful information about possible accommodation in Zagreb from a family friend by acquiring information by passive attention (she was *being told*), because the family friend heard from her mother that she was about to move. It is very interesting that this student reported information avoidance behavior. Since she wanted to move far away from her home town (because of some bad event that took place in her family, as she explained briefly), she did not want to share this information with her classmates and friends because she assumed they would want to talk her out of her plan, by giving her some information against this decision option. Therefore, as she believed that this might be a threat to her intentions, she avoided talking about it and possibly getting some information that may not be in support of the preferred decision option. The cognitive authorities who influenced her decision are the academy teacher and the ex-student because they have knowledge and experience.

PGSRI, P1

In this interview, one girl talks about two decisions, one is to enroll at a university in Denmark, and another is to get a cosmetic ear surgery. For the first decision, she intentionally sought information from the university website and from her sister, who already studies in Denmark. She also accidentally acquired information, which resulted from passive monitoring of social networking sites and passive attention, when her parents and sister provided her with information (she was *being told*). For the decision about getting a cosmetic ear surgery, she intentionally sought information from a physician who was going to perform the surgery, from her mother, and a friend. The characteristics of the sources which made her consult them include being knowledgeable, experienced, trustworthy, providing accurate and verified information, being in a close relationship with her, honest and well-meaning. Similarly, she assessed the credibility of the acquired information by the criteria such as being knowledgeable, experienced, honest, official and reliable, providing accurate and verified information, being trustworthy and well-meaning. Her cognitive authorities include her parents, her friends, the physician and the university website, because they are perceived as honest, credible, well-meaning, trusted, experienced, etc. The information sources provided her with both instrumental and emotional help.

PGSRI, P2

In this interview, a boy talks about how he decided what summer job to do during the summer, which was also a part of obligatory practical student work. To make this decision, he intentionally sought information from family members, especially his grandmother who is a physician and familiar with places where he could find a job, and from friends and a teacher. The reasons why he sought information from these sources include being trustworthy (his parents), knowledgeable, experienced and in a close relationship with him (his grandmother), easy and convenient to access (the friends), and experienced (the teacher). He uses the characteristics of being trustworthy and experienced as criteria for credibility judgments. He holds his parents, grandmother, and teacher as cognitive authorities because of their experience and knowledge.

PGSRI, P3

This vocational school student recalled three decisions he had made recently: attending a student exchange program in Ireland, deciding to participate in this research and deciding to break up with his girlfriend. He talked more about the decision to attend the student exchange program. For this decision, he intentionally sought information from the teachers who were involved in the program and from his parents. He turns to these sources of information because they are knowledgeable, experienced, trustworthy, and in a close relationship with him. Similarly, the student judges the credibility of the acquired information on the source characteristics of being experienced, knowledgeable and well-meaning. However, the cognitive authorities in this specific decision situation are only teachers involved in the program, because they are approachable, honest, trusted, experienced, professional, and friendly, which he underlined as very important. The types of help which the sources provided were instrumental, e.g. informed him about what to expect, and emotional, e.g. encouraged him.

PGSRI, P4

This vocational school student recalled making the decision about a summer job, the decision whether to continue being a member of the majorettes group, making some decisions about going out with friends and some decisions on how to behave toward some people. She talked about the decision about getting a summer job and reported intentionally seeking information, sharing information with her friend who was also looking for a job, acquiring some useful information accidentally by monitoring information on social networking sites and by passive attention behavior. She consulted her parents and her friends and searched for useful information on the Internet, social networking sites such as Instagram, Facebook and forum, and on the website of a student employment agency. For another decision, the one about continuing to be a member of the majorettes group, she intentionally sought a piece of advice from her friends and her mother and shared information with her friend, also the group member, who had the same dilemma. She explained turning to the listed information sources because they are well-meaning and in a close relationship with her (her parents), because they are similar and have a lot in common (friends), because the source is official (the student employment agency website), because this is the fastest way of communication (Facebook), and because many people use the source for information, i.e. it is a reputable source (forum). The criteria for credibility assessment include being knowledgeable and well-meaning, trustworthy, able to understand and in the same situation, when it comes to human sources, and being trustworthy, experienced, verified, familiar when it comes to the website and Instagram page. Her cognitive authorities are parents, friends and student employment agency because they are perceived as experienced, trusted, similar and having a lot in common, etc., and official.

PGSRI, P 5

In this interview, the girl recalls deciding to train more in the gym, deciding to get some better grades and to earn some money working over the summer to buy a new computer. She talked about her decision to train more and reported intentionally seeking some advice from her physician since she has some health issues which need to be considered. She also talked with her parents and shared information and experience with her friends who are also working out. Moreover, she passively monitored media such as YouTube and acquired useful information. The girl explains that she turns to her parents for useful information because they are her support in everything she does (i.e. information source characteristics of supportive), she turns to the physician because she is knowledgeable, and to some YouTubers, because they are reputable as she heard that they are good in what they do. She uses the same information source characteristics for the criteria for credibility assessment. However, she mentions the physician as a cognitive authority because she has relevant knowledge. She gained instrumental help from her physician, which helped her in planning her training, and emotional help from her parents who provided support.

PGSRI, P6

In the last interview, the student recalled the decisions about attending the driving school, about a summer job, and her recent decision to stop hanging out with her friend who started doing drugs, which she elaborated. To make this decision, she intentionally sought information in conversation with her mother who gave her a piece of advice. She also mentioned passively monitoring information on the Internet, and more specifically YouTube channel, which sometimes resulted in the accidental acquisition of useful information about drugs in stories about other people's experiences. She explains that she turned to her mother because she always gives her good advice, she is experienced, understanding and wants what is best for her. Moreover, she mentions her mother and her best friend as her cognitive authorities who influence her decisions because they are supportive, helpful, well-meaning and in a close relationship with her.

# 8. Appendix 8 – The transcripts - available in the printed version of the dissertation

# 9. Biography

Alica Kolarić was born in 1974 in Varaždin, Croatia. In 1999 she earned her MA degree in philosophy and comparative literature at the Faculty of Humanities and Social Sciences, University of Zagreb, Croatia, and in 2000 an MA degree in LIS. Lifelong learning includes education *Reading and writing for critical thinking* and *Law in everyday life* by Forum for Freedom in Education, Croatia and *Training in debate club coaching* by Croatian Debate Society, and numerous courses organized by Professional Training Center for Librarians. In April 2014 she enrolled in the Postgraduate doctoral study programme *Knowledge Society and Information Transfer* at the University of Zadar, Croatia. Her work experience includes the position of the school librarian at Sveti Križ Začretje Elementary School (2000 – 2001) and Velika Gorica Grammar School (2001 – 2005), and the position of a librarian (2005 – 2011), the head of branch libraries (2011 – 2017), the head of library services (2017 - 2019) and the head of children's department (2019 – present) at Rijeka City Library. Since 2016 she has held the course *Reading promotion among children and young adults in the digital environment* at the Professional Training Center for Librarians. She is an active member of the professional community and a member of Children and Young Adults Library Services Committee at the Croatian Library Association, being the chair of the Committee from 2018. She is also a corresponding member of IFLA - Libraries for Children and Young Adults Section since 2019. She has attended numerous professional and several scholarly conferences and has published several professional and scholarly publications.

**Životopis**

Alica Kolarić rođena je 1974. godine u Varaždinu. Diplomirala je na Filozofskom fakultetu Sveučilišta u Zagrebu 1999. godine, gdje je prvo 1999. godine stekla zvanje profesora filozofije i diplomiranog komparatista književnosti, a potom 2000. godine i zvanje diplomiranog bibliotekara. Cjeloživotno se obrazuje pohađajući niz neformalnih oblika obrazovanja poput edukacija *Čitanje i pisanje za kritičko mišljenje* i *Pravo u svakodnevici* Foruma za slobodu odgoja, *Seminar za voditelja debatnog kluba* Hrvatskog debatnog društva te niza tečajeva Centra za stalno stručno usavršavanje knjižničara. U travnju 2014. godine upisuje poslijediplomski studij *Društvo znanja i prijenos informacija* na Sveučilištu u Zadru. Radno iskustvo uključuje radno mjesto školskog knjižničara u Osnovnoj školi Sveti Križ Začretje (2000. – 2001.) i Gimnaziji Velika Gorica (2001. – 2005.) te diplomiranog knjižničara (2005. – 2011.), voditelja poslovanja ogranaka (2011. – 2017.), koordinatora knjižničnih usluga (2017. – 2018.) i voditelja dječjeg odjela (2019. nadalje) u Gradskoj knjižnici Rijeka. Od 2016. godine pri Centru za stalno stručno usavršavanje knjižničara vodi tečaj *Poticanje čitanja među djecom i mladeži u digitalnom okruženju*. Aktivan je član stručne knjižničarske zajednice te je članica, a od 2018. godine i predsjednica Komisije za knjižnične usluge za djecu i mladež Hrvatskog knjižničarskog društva. Od 2019. godine dopisna je članica IFLA-ine Sekcije knjižnica za djecu i mladež. Sudjelovala je na brojnim stručnim i ponekim znanstvenim konferencijama te je objavila više stručnih i znanstvenih radova.