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SVEUČILIŠTE U SPLITU

MEDICINSKI FAKULTET

Filipa Markotić

Dijeljenje receptnih analgetika: percepcija rizika, učestalost i povezani čimbenici

Doktorska disertacija

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U Splitu, travanj 2018. godine

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2. POPIS OZNAKA I KRATICA

AS±SD	aritmetička sredina±standardna devijacija
BiH	Bosna i Hercegovina
DV	Davorka Vrdoljak
FM	Filipa Markotić
HDLB	Hrvatsko društvo za liječenje boli
IQR	interkvartilni raspon
LP	Livia Puljak
M	srednja vrijednost
MP	Marijana Puljiz
OTC	bezreceptni lijekovi (engl. *over-the-counter)*
SAD	Sjedinjene Američke Države
SD	standardna devijacija
sl.	slika

3. PREGLED OBJEDINJENIH RADOVA

Ova doktorska disertacija temelji se na objedinjenim sljedećim znanstvenim radovima:

1. „Risks associated with borrowing and sharing of prescription analgesics among patients observed by pain management physicians in Croatia: a qualitative study“ objavljen 30. studenoga 2016. godine u *J Pain Res*.
2. „Risk perception about medication sharing among patients: a focus group qualitative study on borrowing and lending of prescription analgesics“ objavljen 10. veljače 2017. godine u *J Pain Res*.
3. „Sharing of prescription analgesics amongst patients in family practice: Frequency and associated factors“ objavljeno 01. decembra 2017. godine u *Eur J Pain*.

3.1. UVOD

Promjena uloge pacijenta od pasivnog korisnika do aktivnog sudionika procesa liječenja utjecala je i na njihovu ulogu u donošenju odluka o svom liječenju uključujući i potencijalne štetnosti (1, 2). Sigurnost pacijenata u liječenju je ključna stavka u medicini. Jedna od potencijalnih prijetnji sigurnosti pacijenata je dijeljenje lijekova, što je oblik samo-liječenja (3-5). Dijeljenje (engl. *sharing*) lijekova podrazumijeva kada netko kome nije propisan lijek ga uzima (engl. *borrowing*) od druge osobe (engl. *lending*) (6). Ovi pojmovi bi trebali podrazumijevati da je lijek posuđen, međutim riječ je da se taj lijek uglavnom ne vraća prvotnom vlasniku (7). Također, ovi pojmovi podrazumijevaju da lijek nije zamijenjen/razmijenjen za novac ili neku drugu vrstu robe. Naime, postoje dvije vrste dijeljenja lijekova na recept: nerekreativno i rekreativno. Nerekreativno dijeljenje podrazumijeva davanje i uzimanje lijekova za samo-liječenje. Rekreativno dijeljenje je nezakonito davanje/prodavanje ili uzimanje/kupovanje lijekova za nemedicinsku svrhu. Većina dijeljenja lijekova su nerekreativna (8). Goldsworthy i suradnici su za davanje i uzimanje lijekova koji se dobivaju na recept utvrdili prevalenciju od 22-27% u jednogodišnjem istraživanju (4). U drugim istraživanjima provedenim u SAD-u navode prevalenciju od 5 do 35% te štetne zdravstvene prakse (1, 3, 4, 9-14). Istraživanje o suradljivosti bolesnika s kroničnom ne-malignom boli provedeno u BiH je pokazalo da 28% tih bolesnika svoje receptne analgetike daje drugim osobama (15).

Posljedice uzimanja i davanja receptnih lijekova mogu biti izrazito štetne: odgođeno traženje liječničke pomoći, povećan rizik od različitih nuspojava vezanih uz uzimanje lijekova, komplikacije vezane uz uzimanje neispravne doze lijeka, povećani rizik od razvoja rezistencije na antibiotike (zbog subdoziranja ili prijevremenog prekida uzimanja), interakcije s drugim lijekovima ili zlouporabe vezane uz adiktivna svojstva nekih lijekova (3, 4, 6). Prethodna istraživanja su pokazala

da su žene sklonije češće uzimati lijekove međutim nije bilo spolnih razlika u davanju lijekova (3, 4, 6). Prevalencija dijeljenja lijekova raste s dobi od 15 godina i počinje opadati u srednjim godinama (≥ 44 godine), a u ovu skupinu spadaju žene reproduktivne dobi; kod kojih postoji dodatni problem neplanirane i neprepoznate trudnoće i uzimanja teratogenih lijekova (6, 13). Ispitivanje koje je istraživalo davanje i uzimanje lijekova među adolescentima upozorava na teratogeni preparat izotretinoin za liječenje akni čija je upotreba u SAD-u od 1992. godine do 2000. godine porasla za 250% (16). Petersen i suradnici su našli da žene reproduktivne dobi (18-44 godine) najčešće daju i uzimaju lijekove za alergiju (antihistaminike) (43,8%) i analgetike (42,6%) (3). Drugo istraživanje je našlo da se u 25% slučaja dijeljeni lijekovi za alergiju; u 22% lijekovi za bol; te u 21% antibiotici (4). Žene koje su procjenjivale svoje zdravstveno stanje kao loše i koje koriste Internet za informacije o zdravlju su u istraživanju od Petersena i suradnika bile sklonije davanju i uzimanju lijekova (3). Dijeljenje lijekova može rezultirati polipragmazijom u osoba starije životne dobi te povećati rizik za nuspojave i neželjene interakcije (17, 18). Prema prethodnim istraživanjima starije osobe najčešće dijele lijekove za srčane bolesti, antidepresive, antihipertenzive, analgetike i antibiotike (7, 19, 20). OTC lijekove pacijenti sami odabiru i sami odlučuju upotrijebiti za liječenje stanja ili simptoma koje su sami prepoznali ili dijagnosticirali. Upotreba OTC lijekova nije u potpunosti sigurna, osobito u slučaju neodgovornog samoliječenja (21). Potencijalni rizici neodgovorne primjene tih lijekova su brojni, između ostalog: pogrešna dijagnoza, odgođeno traženje stručne pomoći, rijetke ali ozbiljne nuspojave, polipragmazija i opasne interakcije (21-23). Upotreba OTC lijekova u liječenju boli je česta (24). Istraživanje među pacijentima s artritisom je našlo da ih je 73% uzimalo receptne analgetike, a 77% je uzimalo bezreceptne analgetike (20). Gotovo trećina tih pacijenata je uzimala dva ili više preparata koji sadrže paracetamol, a 5% ih je uzimalo dva ili više preparata koji sadrže neki nesteroidni antireumatik (20). Pacijenti često ne prepoznaju aktivne tvari u preparatima koji sadrže kombinaciju aktivnih tvari ili samo jednu aktivnu tvar čime riskiraju nuspojave i predoziranje (20, 25).

Zadnjih desetljeća upotreba alternativne medicine (npr. biljni preparati, homeopatija, akupunktura) u razvijenim zemljama je postala uobičajena (26, 27). Otprilike svaka peta osoba u SAD-u koristi neki biljni lijek (28). Često je mišljenje da su biljni lijekovi prirodni i sigurni (29). Međutim, postoje brojni izvještaji o neželjenim učincima biljaka te o interakcijama između lijekova i biljnih preparata (29-31). Preparati alternativne medicine često nemaju priložena upozorenja o neželjenim učincima (32). U jednom istraživanju među ženama u Australiji su našli da alternativnu medicinu više koriste ispitanice iz ruralnog područja i one koje imaju više kroničnih bolesti (33).

Vrlo je malo istraživanja koja su ispitivala čimbenike koji doprinose davanju i uzimanju lijekova ili čak predviđaju takvo rizično zdravstveno ponašanje. Sustavni pregled koji su Beyene i

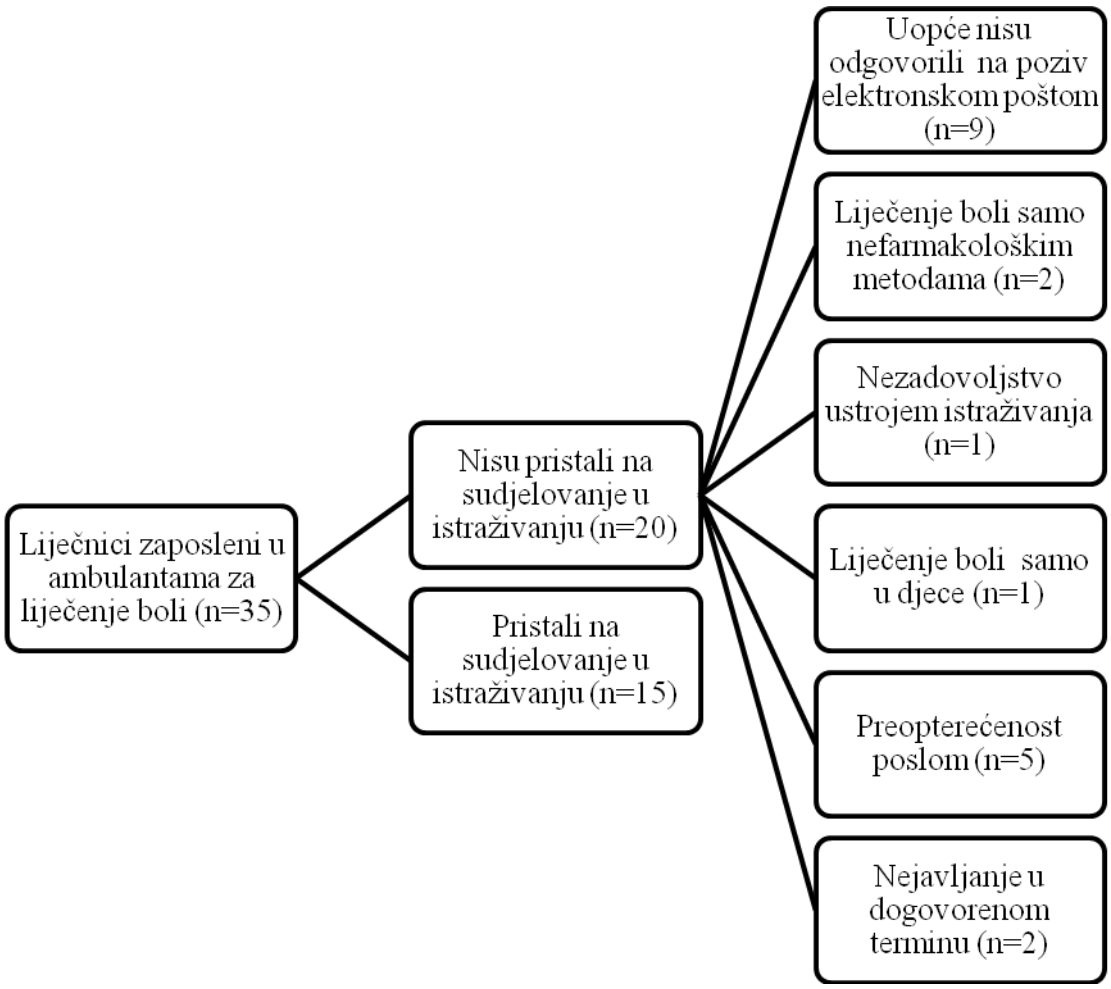
suradnici objavili u travnju 2014. i koji je uključio analizu literature objavljene do ožujka 2013. pokazao je da je do tad objavljeno svega 19 istraživanja o dijeljenju lijekova te da postoji nedovoljno podataka o razlozima zašto se lijekovi dijele, načinima kako pacijenti odlučuju dijeliti lijekove, jesu li pacijenti svjesni rizika dijeljenja lijekova i načinima na koji pacijenti procjenjuju važnost tih rizika (7).

U okviru projekta za ovu doktorsku disertaciju provedena su tri istraživanja koja čine povezanu cjelinu. Cilj projekta je bio analizirati sklonost davanju i/ili uzimanju receptnih analgetika u populaciji liječenoj u ordinaciji obiteljskog liječnika i ambulanti za liječenje boli, percepciju rizika vezanog za to ponašanje među pacijentima i liječnicima specijaliziranima za liječenje boli, kao i čimbenike povezane s tim nepoželjnim oblikom ponašanja. Prvi dio je bilo kvalitativno istraživanje među liječnicima, drugi dio kvalitativno istraživanje među pacijentima, a treći dio kvantitativno presječno istraživanje provedeno na uzorku od 1000 ispitanika u ordinacijama obiteljske prakse u Hrvatskoj. S obzirom da ne postoji preporučeni „zlatni standard“ za procjenu dijeljenja lijekova na recept proveli smo najprije dva kvalitativna istraživanja. Rezultate iz kvalitativnih istraživanja smo koristili za osmišljavanje ankete za naše presječno kvantitativno istraživanje. Intervjui sa stručnjacima i pacijentima važan su instrument za provođenje inovativnih istraživanja, uzimajući u obzir status osobe s kojom se razgovori provode, jer takva istraživanja omogućuju prikupljanje informacija o subjektivnim iskustvima i tumačenjima vezanim uz unaprijed određenu specifičnu temu. Korištenje forme polu-strukturiranog intervjua omogućuje ne samo usporedbu intervjua svih ispitanika, već i uključivanje tema koje nisu predviđene protokolom, ali se smatraju važnima. Usporedba rezultata ranijih istraživanja i rezultat ovog projekta je prikazana u Dodatku 5.1.

3.2. Pregled metodologije objedinjenih radova

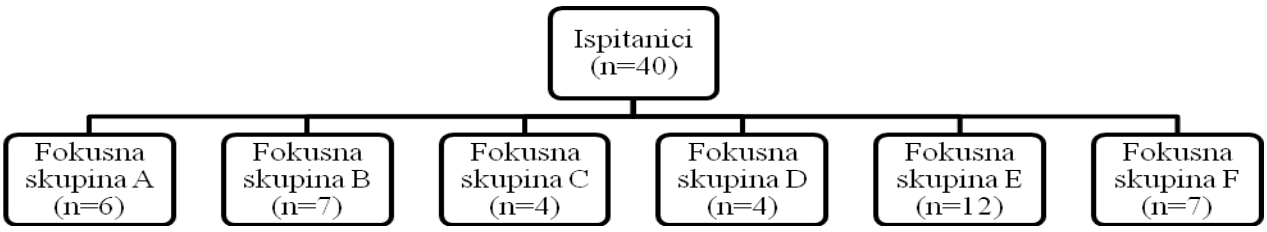
3.2.1. Ispitanici

U prvom kvalitativnom istraživanju su sudjelovala dva istraživača i 15 ispitanika (sl. 1.). Od 70-tak anesteziologa koji rade u ambulantama za liječenje boli u Hrvatskoj kontaktirali smo njih 35, a 15 ih je pristalo da sudjeluje istraživanju. Da bi bili uključeni u istraživanje, ispitanici su morali biti liječnik koji je trenutno zaposlen u jednoj od ambulanti za liječenje boli u Hrvatskoj. Većinu liječnika smo bili kontaktirali elektroničkim putem, a manjinu telefonom, u slučaju kada su željeli razgovarati o sudjelovanju putem telefona. Neke elektronske adrese i telefonski brojevi liječnika pronađene su putem HDLB web stranice, a preporukom nekih ispitanika iz istraživanja uključeno je nekoliko novih ispitanika (metoda snježne grude; engl. *snowballing*) ili pretraživanjem kontakata putem Interneta. U nekim su slučajevima korištene službene ili privatne e-adrese liječnika. U svrhu ovog istraživanja, liječnici su kodirani s prvih 15 slova engleske abecede (A-O) kako bi se sačuvala njihova anonimnost.



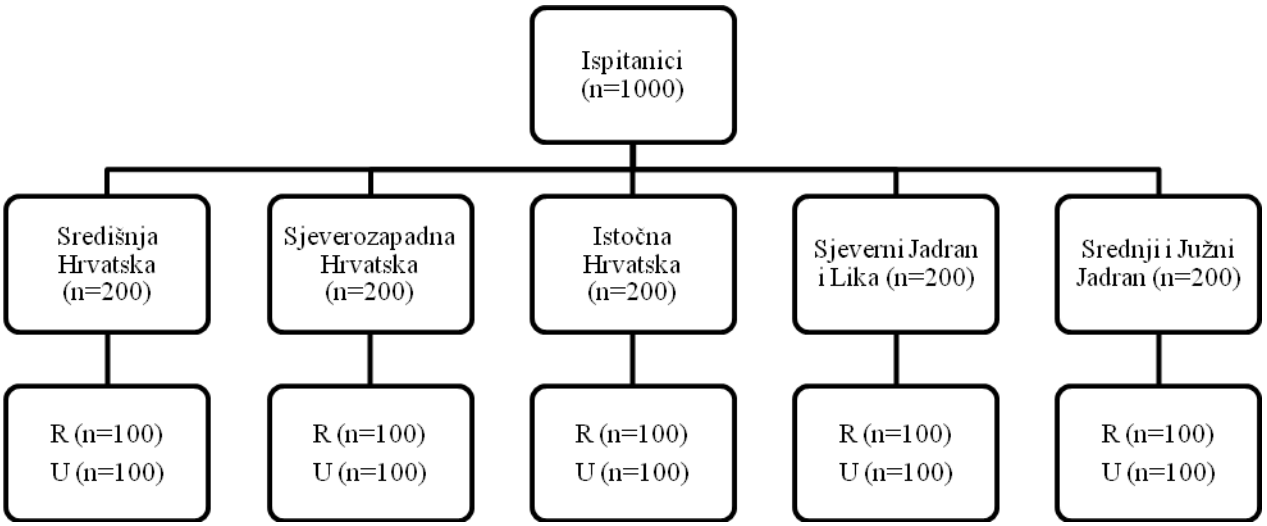
Slika 1. Kvalitativno istraživanje među liječnicima

Drugo kvalitativno istraživanje je uključilo 40 ispitanika u šest fokus skupina (sl. 2.). Broj ispitanika i fokusnih skupina bio je određen prema medijanu iz istraživanja o metodologiji istraživanja s fokusnim skupinama, u kojoj je medijan bio pet fokusnih skupina. Šesta fokusna skupina je uključena kako bi se postigao zacrtani broj ispitanika. Potencijalni ispitanici su prethodno provjereni od strane obiteljskog liječnika (DV, MP); i oni kojima je barem jednom u životu propisan analgetik bio je pozvan na sudjelovanje u istraživanju. Svaka fokusna skupina je imala od 4 do 12 ispitanika. U svrhu ovog istraživanja, kodirane su fokusne skupine pomoću prvih šest velikih slova abecede (A-F), i ispitanici su u svakoj fokusnoj skupini bili kodirani s prvih 4-12 malih slova abecede (a-l). Uključivani su ispitanici u dobi od ≥18 godina kojima je barem jednom u životu propisan receptni analgetik i koji govore hrvatski jezik. Kriteriji neuključivanja su bili mentalni zdravstveni problemi i nesposobnost verbalnog izražavanja.



Slika 2. Kvalitativno istraživanje među pacijentima

Sudionici iz presječnog kvantitativnog istraživanja su bili uključivani po redoslijedu kako su posjećivali ambulante obiteljske medicine u 5 hrvatskih regija: Središnja Hrvatska, Sjeverozapadna Hrvatska, Istočna Hrvatska, Sjeverni Jadran i Lika, Srednji i Južni Jadran (sl. 3.). U svakoj regiji su uključene dvije ambulante, jedna iz urbanog i jedna iz ruralnog područja. Kriteriji uključivanja bili su: odrasli, starosti ≥18 godina koji su najmanje jedanput u životu dobili analgetike na recept. Kriteriji neuključivanja bili su: kognitivni poremećaji i duševne bolesti koje bi spriječile sudionike da razumiju upitnik.



Slika 3. Kvantitativno istraživanje među pacijentima
R=ruralna sredina
U=urbana sredina

Potencijalni ispitanici iz ovog projekta su bili dobili pisane informacije s pojedinostima o istraživanju, timu, protokolu istraživanja, jamstvu za anonimnosti, i o namjeri autora da objave rezultate istraživanja u istraživačkom časopisu.

3.2.2. Postupci

U prvom dijelu istraživanje je provedeno metodom polu-strukturiranog intervjua među 15 liječnika koji rade u ambulantama za liječenje boli: a) razgovor sa stručnjakom (rasprava o rizicima povezanim s dijeljenjem receptnih analgetika među pacijentima, pri čemu se dijele lijekovi drugoj osobi kojoj nisu propisani); b) demografski podaci o liječniku (dob, spol, duljina staža rada kao anesteziologa, duljina rada u ambulanti za liječenje boli); c) informacije o broju bolesnika koji tjedno posjećuje ambulantu za liječenje boli u kojoj rade.

U drugom dijelu istraživanje je provedeno metodom polu-strukturiranog intervjua među 40 ispitanika iz 6 fokus skupina: a) upitnik sa sociodemografskim podacima (dob, spol, iskustvo s dijeljenje analgetika, percepcija rizika povezanog s dijeljenjem analgetika); b) razgovor unutar fokusne skupine (iskustva s dijeljenjem analgetika, stavovi o dijeljenju analgetika i percepcija rizika povezana sa dijeljenjem analgetika); c) upitnik s asocijacijama o stavovima prema rizicima povezanim s dijeljenjem analgetika.

U trećem dijelu istraživanja se koristio upitnik kojim su ispitane: a) sociodemografske značajke pacijenata (dob, spol, bračni status, stupanj obrazovanja, broj članova kućanstva, regija prebivališta, prebivalište u urbanoj ili ruralnoj sredini); b) značajke stanja (bolesti) pacijenta i liječenja (vrsta i duljina trajanja kronične bolesti, lijekovi); c) značajke pacijenata. Upitnikom koji se koristio u istraživanju ispitale su se navike čitanja papirnatih uputa uz lijek; sklonost uzimanja (multi)vitaminskih preparata; sklonost traženje informacija o zdravlju na Internetu; sklonost ispitanika korištenju usluga alternativne medicine; te osobna procjena svog zdravstvenog stanja; d) upitnik o davanju i/ili uzimanju lijekova. Ispitanici su izravno bili upitani da li daju i/ili uzimaju lijekove; potom, su trebali navesti koliko su to puta učinili i koji su razlozi za takvo ponašanje; e) upitnik o percepciji rizika vezanih uz dijeljenje lijekova.

Upitnici i teme za raspravu koji su korišteni u istraživanjima s pacijentima su bili prilagođen laicima i u njima nisu bili korišteni specijalizirani medicinski izrazi. Upitnici korišteni u ovom projektu priloženi su u Dodatak 5.2., Dodatak 5.3. i Dodatak 5.4. ove disertacije.

3.2.3. Statistička raščlamba

U oba kvalitativna istraživanja svi razgovori su bili snimljeni audio zapisima. Kako bi smo osigurali ujednačenost, cijele transkripte snimljenih razgovora pripremila je jedna osoba (FM), a zatim su bili provjereni od strane drugog člana istraživačkog tima (LP). Svakom ispitaniku bio je

dodijeljen kod, koji je također korišten za prezentaciju rezultata istraživanja. Transkripti su zatim analizirani korištenjem analize kvalitativnog sadržaja (engl. *qualitative content analysis*) (34). To je metoda za analizu polu-strukturiranih intervjui sa ispitanicima koja se koristi za kodiranje teksta u unaprijed određeno sustavno kodiranje koje se može uskladiti i dopuniti novim pitanjima koji mogu nastati tijekom intervjua. Unaprijed je definiran sustav kodiranja za ova istraživanja koji se temeljio je na kategorijama rizika koji su opisani u prethodno objavljenoj literaturi o dijeljenju lijekova. Kodiranje su napravila dva nezavisna istraživača (FM i LP). Posebni rizici podijeljeni su u odgovarajuće kategorije. Značajne jedinice (kompletne rečenice ili dijelovi rečenica) definirane su kao jedinica za analizu. Rezultati su uspoređeni među istraživačima. Mjera podudaranja je sračunata između dva istraživača koji su šifrirali odgovore. Uočena odstupanja između kategorizacije pojedinačnih jedinica za analizu među istraživačima je raspravljena do postizanja suglasja. Učestalost rizika navedena u raspravama i spontano spomenuti rizici su bili opisani deskriptivnom statistikom kako bi se naznačila njihova relativna važnost u pojedinim kategorijama rizika. Ako su ispitanici spomenuli mjere za rješavanje tih rizika i/ili bilo kakve dodatne komentare vezane uz temu istraživanja, ti odgovori su također bili kodirani, analizirani i prikazani. Za upitnike, odgovori su bili kodirani i prikazana je učestalost odgovora pomoću deskriptivne statistike. Autori istraživanja su proveli analizu i sintezu rezultata. Veličina uzorka u obadva kvalitativna istraživanja je bilo u skladu s preporukama (35).

Za presječno kvantitativno istraživanje izračunali smo da će odgovarajuća veličina uzorka biti 861 ispitanik za razinu značajnosti u razlikama u prevalenciji dijeljenja receptnih analgetika postavljenu na 0,05 i preciznost od 3%, očekujući prevalenciju od 28% kao u našem prethodnom istraživanju sa sličnim odrednicama. Ukupan broj uključenih sudionika bio je 1000 jer smo očekivali da će biti oko 10% nedostajućih podataka za svako pitanje. Učestalost i postotci, medijan i interkvartilni raspon (IQR) korišteni su u deskriptivnoj statistici (aritmetička sredina, medijan, raspon, standardna devijacija, postotak). Postotci manji od 10 su zaokruženi na jednu decimalu, a postotci veći od 10 zaokruženi su da budu bez decimale. Kolmogorov-Smirnov test je korišten za određivanje da li su podaci distribuirani normalno. Mann-Whitney U test i χ^2 test korišteni su za univarijatne analize. Ovi su statistički testovi su bili korišteni jer distribucija podataka nije bila normalna. Za analizu potencijalnih prediktora u dvije odvojene logističke regresije upotrijebljene su varijable za koje smo pronašli značajnu razliku između osoba koje daju ili uzimaju analgetike na recept i osoba koje ne dijele analgetike u univarijatnoj analizi. Jedna logistička regresijska analiza provedena je kako bi se identificirali prediktori ponašanja onih koji daju, a druga za ponašanje onih koji uzimaju. Kontinuirane varijable nisu pretvorene u kategorijske varijable. Zabilježen je kombinirani doprinos zavisne varijable kroz značajne prediktore (NagelkerkeR2). Analize su

provedene pomoću MedCalc statističkog softvera, v 15.2.1 (MedCalc Software bvba, Ostend, Belgija). Statistička značajnost je postavljena na $p < 0,05$.

3.3. Sažeti pregled rezultata objedinjenih radova

3.3.1. <u>Rad 1</u>: Rizici povezani sa davanjem i dijeljenjem analgetika na recept među pacijentima zapaženi od strane liječnika koji se bave liječenjem boli u Hrvatskoj: kvalitativno istraživanje

3.3.1.1. Ispitanici

U istraživanje je sudjelovalo 15 liječnika (13 žena i dva muškarca) od 35 kontaktiranih. Prosječna dob liječnika bila je 49 godina (raspon 37-61 godina). U prosjeku su radili 16 godina (raspon 5-25 godina) kao anesteziolozi i 7,7 godina (raspon 2-15 godina) u ambulantama za liječenje boli. U svrhu ovog istraživanja, liječnici su kodirani s prvih 15 slova engleske abecede (A-O) kako bi se sačuvala njihova anonimnost.

3.3.1.2. Zapažanja pacijenata koji dijele analgetike na recept s drugim pacijentima kojima recept nije namijenjen

Do početka razgovora, troje liječnika nije bilo svjesno da li njihovi pacijenti dijele analgetike, dok preostali liječnici su imali pacijente koji su im priznali takvo ponašanje. Što se tiče učestalosti takvog ponašanja, pet liječnica se bilo izjasnilo koliko se često susreću sa takvim pacijentima: jedna je bila rekla "često", dvije "ne tako često" i dvije "rijetko". "*Znaju ljudi, pogotovo mislim ženska, ženska populacija rađe onako u razgovoru si oni to ispred ambulanti, mijenjaju si mišljenja, iskustva i preporuke*" (A).

Prisjećajući se pojedinih slučajeva, liječnici su spomenuli pacijente koji dijele opioidne flastere (N), tramadol u kombinaciji s paracetamolom (N) i ovisnike o narkoticima koji dovode svoje roditelje u ambulantu tražeći opioidne analgetike za svoje roditelje (L). "*Desi se da pacijenti kažu da su uzeli analgetik od člana obitelji, analgetik koji im je nekada prije bio propisan ili su ga imali kući. Ponekad se uopće pacijenti ne pridržavaju preporuka liječnika već uzimaju i propisane analgetike zajedno s analgeticima koje imaju u svojoj kući u doziranju po svom. To je ponašanje karakterističnije za pacijente povratnike u ambulantu za liječenje boli. Ponekad uzmu propisani analgetik za neko drugo bolno stanje nego za što im je bio propisan*" (I).

Podijeljeno je mišljenje da su pacijenti sa kratkotrajnom akutnom boli skloniji dijeljenju receptnih analgetika od pacijenata sa kroničnom boli. "*Liječnici često ne pitaju pacijente o tome, ali pacijenti ponekad sami to reknu. Bude situacija kada kažu da su posudili neki lijek od nekoga ali im nije ili je djelovao.*" (O). Prijateljski odnos s pacijentom može pomoći u dobivanju takvih informacija. "*Jer oni neće reći ako ih upitate…. Tek iz nekog razgovora i kada postanete neka*

prijateljska linija oni se malo više otvore." (B). Moguće je da i razlike između različitih vrsta boli u pacijenata utječu na pojavu dijeljenja lijekova. "*Vjerojatno jer radim s pacijentima koji imaju malignu bol. Imam iskustva da pacijenti odbijaju analgetike, a nemam problema s dijeljenjem analgetika. Poseban su problem opioidni analgetici jer pod utjecajem obiteljskog liječnika pacijenti ih odbijaju uzimati. Boje se da ne postanu „narkomani“.*" (J).

Nitko od liječnika se nije susreo sa pacijentom koji je dao analgetike na recept.

3.3.1.3. Percepcija liječnika o dijeljenju analgetika na recept

Na pitanje o njihovoj percepciji dijeljenja analgetika na recept, liječnici su iskazali različita mišljenja. Neki liječnici su dijeljenje receptnih analgetika opisivali kao nešto negativno, označavajući ga kao neodgovorno ponašanje (B, C, D, F, H, K); znakom needuciranosti pacijenta (C); vrlo rizično (J); pogrešno i neprikladno (L). Neki liječnici su dijeljenje receptnih analgetika bili opisivali kao i nešto pozitivno (E); razumljivo (A, D, F, I) i dobronamjerno (A, I). "*Ako je to nešto kratkoročno, uzeti jedanput neki analgetik to ne bi bilo opasno. Uzimanje analgetika na duže vrijeme ako mu ga nije propisao liječnik nije uredu.*" (H). "*Nije definitivno dobro, ali se u određenoj situaciji ljudi se snalaze na različite načine.*" (N). "*Nisam oduševljen…. Oni to rade u dobroj namjeri, daju nekome nešto što je njima pomoglo.*" (O). Saznanje da pacijenti sudjeluju u takvom ponašanju pomaže jednom liječniku u odabiru analgetik koji će biti bolji za pacijenta. "*Stekli su iskustvo pa znaju da neki lijek ne podnose pa im ga neće propisati ili im je bio koristan pa će im ga lakše propisati...*" (D).

3.3.1.4. Dijeljenje analgetika na recept među pacijentima kao rizično ponašanje

Dvanaest liječnika je bilo smatralo da je dijeljenje analgetika na recept "rizično ponašanje", dok je troje takvo ponašanje opisali kao "potencijalno rizično" ili "pogrešno". Samo jedna liječnica nije bila smatrala da je takvo ponašanje rizično (I). Liječnici koji su bili naveli da je takvo ponašanje rizično istaknuli su da je to osobito vrijedi za opioide (E, K) i boje se da pacijenti nisu svjesni rizika. Bili su smatrali da je problem u tome što pacijenti ne poznaju indikacije, kontraindikacije i interakcije analgetika (A, J).

3.3.1.5. Potencijalni rizici dijeljenja analgetika na recept među pacijentima

Kada je zatraženo da navedu potencijalne rizike ili negativne, štetne posljedice, ukazali su na dva specifična problema: povraćanje kao moguću nuspojavu tramadola (A) i krvarenja radi interakcije varfarina i nesteroidnih antireumatika (A, B, I, L). Bili su istaknuli i alergije i neodgovarajuće doziranje kao potencijalne probleme. *"...alergije, ono,da pacijenti jedne drugog ne pitaju da li su alergični ili ne*" (A). Pacijenti koji su imali alergijsku reakciju na neki lijek prepoznaju ga samo pod tvorničkim nazivom dok vjerojatno njegovo generičko ime i druga

tvornička imena ne prepoznaje, a posebno ne prepoznaju prisutnost tog lijeka u nekim kombinacijama analgetika smatrale su dvije liječnice (B, D). "*Jedan kada dade drugome reče kako je on uzimao, u kojoj dozi, koja može biti neadekvatna, neodgovarajuća*." (B). U Dodatku 5. 5. su navedeni rizici povezani sa dijeljenjem analgetika na recept prepoznati od strane ispitanika istraživanja.

3.3.1.6. Percepcija potencijalne pozitivne strane dijeljenja analgetika na recept među pacijenata

Kada su upitani za potencijalnu pozitivnu stranu dijeljenja analgetika, pet liječnica se bilo izjasnilo da nema ništa pozitivno u vezi sa tim ponašanjem (C, F, G, H, M). Navedene potencijalno pozitivne strane su bile: dobre namjere (A); brže dobivanje analgetika (B); "*osim kada netko za neko svoje uobičajeno bolno stanje uzme od nekoga analgetik koji mu je inače propisan ali ga sada nema uza sebe*." (I); stjecanje iskustva (E, O); "*Da, ljudi stimuliraju jedni druge da uzmu analgetik i probaju. To vrijedi samo za analgetike s prvog stupnja ljestvice.*" (K); "*Jedino kod blagih bolova (npr. blaga zubobolja) ako uzme analgetik za ublažavanje dok ne dođu do svog stomatologa.*" (L); "*Ako to čini netko tko ima iskustva s analgeticima to onda i nije tako loše.*" (K); zgodnost "*Kada pacijent ima problema sa dostupnošću primarne zdravstvene zaštite to je razumljivo.*" (N). Jedna je liječnica bila rekla da bi moglo biti nešto pozitivno u vezi toga, ali nije ništa istakla (L). Četiri liječnika koji su odgovorili da postoji pozitivna strana dijeljenja analgetika istaknuli ali da rizik nadmašuje dobrobit (B, E, J, L). Dvoje od onih koji su izjavili da je pozitivno da pacijenti imaju više iskustva s različitim lijekovima obrazložili su da pacijentovo prethodno iskustvo s analgeticima, bilo pozitivo ili negativno, može im pomoći da donesu odluku o tome koje analgetike mogu preporučiti za daljnje liječenje boli (E, O). S obzirom na potencijalne nuspojave, predloženo je da bi bilo bolje da pacijenti dijele savjete o drugim intervencijama. "*Smatram da je više pozitivno razmjenjivanje međusobno iskustva o nefarmakološkom liječenju boli*." (M).

3.3.1.7. Potencijalne razlike između rizika dijeljenja analgetika ovisno o tome da li je analgetik na recept ili OTC

OTC analgetici su bili percipirani kao manje opasni od strane sedmero liječnika (C, E, G, H, I, O, L, N). Ostali su bili naveli da OTC lijekovi također mogu biti opasni (A, D, J, K, M) ili da nema razlike u riziku (B, F). "*Boje se da ti drugome lijek koji je propisan na recept.*" (B). Bilo je istaknuto da su opioidi posebno opasni u dijeljenju lijekova (G, K). "*Nema neke bitne razlike. Ljudi koji nekontrolirano uzima jedne uzima će i druge tako. S tim da je veća vjerojatnost za nekontrolirano uzimanje lijekova koji su lakše dostupni*." (M). Također je navedeno da OTC analgetici mogu biti problem ako pacijent ne pročita upute (H). "*Ne vidi razliku da li je netko kupio analgetik bez recepta ili ga posudio od susjede.*" (D).

3.3.1.8. Prevencija dijeljenja receptnih analgetika

Kada je zatraženo da predlože potencijalna rješenja, više liječnika je navelo da je problem izravno oglašavanje potrošačima. Dvije liječnice smatraju da pacijenti nisu dovoljno obrazovani da budu izloženi izravnom oglašavanju na televiziji i Internetu, jer takvi oglasi pružaju nedovoljne informacije o lijekovima, osobito u vezi s nuspojavama (L, K). "*Smatram da se treba zabraniti reklamirati analgetike. OTC analgetici mogu uzrokovati krvarenje, analgetsku nefropatiju, Reyeov sindrom, kardiovaskularne nuspojave.*" (L).

Neke populacije pacijenata i vrste lijekova su opažene kao problematičnije. "*Primjećujem da mlađa populacija uzima OTC analgetike uzima jako puno analgetika; te da šumeće analgetike smatraju bezopasnim.*" (L). "*Problem je ako netko uzme lijek koji nije dobio na recept i ne pročita up*ute." (H).

Edukacija pacijenata i akcija primarne zdravstvene zaštite predloženi su kao potencijalna rješenja. "*Imamo školu za pacijente, svaki dan dolaze kroz mjesec dana gdje ih educiraju o analgeticima i boli. Smatram da ti pacijenti stalni nisu skloni dijeljenju analgetika, a pacijenti koji dolaze sporadično vjerojatno jesu.*" (I). "*Trebala bi biti kontrola propisivanja lijekova u primarnoj zaštiti. Pretpostavljam da pacijenti imaju dosta lijekova u svojoj kućnoj ljekarni i dijele ih*." (N).

3.3.2. <u>Rad 2:</u> Percepcija rizika za dijeljenje lijekova među pacijentima: kvalitativno istraživanje sa fokus skupinama o uzimanju i davanju analgetika na recept

Istraživanje je uključivalo 40 ispitanika (25 žena i 15 muškaraca). Prosječna dob ispitanika je bila 56,3 godine (raspon 20-83 godina). Glavni pronalazak ovog istraživanja je bilo da je za većinu ispitanika dijeljenje receptnih analgetika bilo normalno ponašanje i nisu se mnogo brinuli o mogućim negativnim posljedicama takvog ponašanja. Pacijenti su bili više zainteresirani za smanjivanje patnje radi boli i održavanje dobrih međuljudskih odnosa od potencijalnih opasnosti. U svrhu ovog istraživanja, kodirane su fokusne skupine pomoću prvih šest velikih slova abecede (A-F), i ispitanici su u svakoj fokusnoj skupini bili kodirani s prvih 4-12 malih slova abecede (a-l).

3.3.2.1. Iskustva i mišljenja ispitanika o dijeljenju analgetika

Većina ispitanika je sudjelovala u dijeljenju analgetika. U Dodatku 5.6. prikazana je učestalost dijeljenja analgetika sudionika i svjesnost ispitanika o rizicima povezanim s dijeljenjem tih lijekova.

Davanje analgetika na recept (n=22, 55%) bilo je uobičajenije od davanja OTC analgetika (n=20, 50%). Petnaest (38%) ispitanika se izjasnilo da daje i receptne i OTC analgetike. Manje od polovice sudionika (n=17, 4343%) uzima lijekove protiv boli od drugih. Davanje analgetika bilo je češće od uzimanja; 31% (n=12) ispitanika izjasnilo se da daje OTC analgetike i uzima analgetike; 33% (n=13) ispitanika je davalo receptne analgetike i uzimalo analgetike; i 28% (n=11) ispitanika je izjavilo da uzima i OTC i receptne analgetike te daje analgetike. Bilo je 28% (n=11) ispitanika koji su se izjasnili da nikada ne daju i/ili uzimaju lijekove protiv boli. Analgetici su obično dijeljeni s užom obitelji/širom obitelji i/ili prijateljima i/ili susjedima, a rjeđe sa radnim kolegama i/ili poznanicima.

Kroz raspravu u fokus skupinama, više ispitanika (76%) je navelo da dijele receptne analgetike nego u prethodnom upitniku (55%). Vjerojatno, tijekom rasprava, su se neki ispitanici podsjetili na situaciju u kojoj dijele analgetike, potaknuti odgovorima drugih ispitanika. Neki ispitanici su kasnije rekli da nisu u potpunosti shvatili što znači dijeliti lijekove, na primjer, da treba izvijestiti i o dijeljenju lijekova sa supružnicima. Ispitanici su ukazali na da lijekove propisane bračnom partneru smatraju "zajedničkom imovinom" u kućanstvu. Dva ispitanika su bila rekla da dijele analgetike samo sa svojim supružnicima (Ae i Cd). Neki ispitanici su podijelili svoja iskustva i mišljenja o dijeljenju analgetika.

"*Ozbiljne lijekove se ne bih usudila dati. Osim što sam dala mojoj sestri, koja ima 93 godine, i sad je operirala natkoljenicu, imala sam Zaldiar i dala sam joj. Ona je imala jake bolove. Dala sam joj samo jednu tabletu. Druge nije htjela uzeti jer joj prva nije pomogla* " (Bd).

"*I uzimala sam i davala. I dici, i mužu, i susjedima, i kolegama s posla. Bilo je riječ o Aspirinu Bayer-ovom (napomena autora - generičko ime: acetilsalicilna kiselina). S njim sam spašavala ljude i oni su mene spašavali kada je trebalo. Pazila sam na datum; kada istekne bacim ga*." (Bf).

Jedan ispitanik iz fokusne skupine F je ispričao anegdotu iz svog djetinjstva, koja se dogodila prije otprilike 50 godina. Tada je susjed ukrao jednu tabletu analgetika iz kuće sudionika. Analgetik je propisao veterinar za ispitanikovu kravu. Sljedeći dan, susjed je to priznao majci ispitanika. Budući da je analgetik bio učinkovit za susjedove tegobe, majka ispitanika odlučila je dati susjedu još dvije tablete.

3.3.2.2. Razlozi za dijeljenje receptnih analgetika i način na koji pacijenti odlučuju dijeliti lijekove

Nepovjerenje u liječnika je navedeno kao jedan od razloga za sudjelovanje u dijeljenju lijekova.

"*Ako me boli ja bi uzela i zmiju prigristi, a ako me ne boli onda ne bih ništa. Više vjerujem drugome nego doktoru, iskreno. Više volim da mi priča pacijent s istim iskustvom nego doktor*." (Ac).

Nepogodnost kontaktiranja liječnika i prisutnost osobe u blizini koje imaju lijek na raspolaganju su razlozi za dijeljenje lijekova kod nekih sudionika.

"*Meni je to dobro jer omogućava preskakanje procedure odlaska liječniku i čekanja u redu. I dalje ću nastaviti davati i uzimati kada zatreba*." (Dd).

Dijeljenje lijekova može biti potaknuto neuobičajenim situacijama, kao kada netko nema pristup profesionalnoj zdravstvenoj skrbi ili pristupan lijeka u ljekarni, na primjer, tijekom planinarenja (Bd) ili obavljanja posla kapetan na brodu (Cb). Neki ispitanici su iskazali spremnost da dijele analgetike ako se netko nađe u hitnoj situaciji poput "intenzivne boli".

"*Jedino ako baš netko ima jaku bol onda mi je to uredu*." (Cd).

Ponekad su analgetici na recept bili nevoljko dijeljeni.

"*Davala sam Ibuprofen koji sam dobila preko recepta više puta svojoj susjedi. Nisam htjela i pokušavala sam je odgovoriti, ali ona je bila „napastna“*." (Ca).

Za mnoge ispitanike, dijeljenje lijekova bilo je nešto što je normalno i način održavanja dobrih odnosa sa pojedincima u njihovom životu. Ispitanik Bg, koji radi puno na terenu, izjavio je da njegove radne kolege često pate od boli i da se analgetici uobičajeno dijele među radnim kolegama. Ispitanik Ec je komentirao da u njegovom okruženju postoji mišljenje da ljudi koji imaju bol na istom mjestu mogu koristiti iste lijekove.

"*Pristajem na to samo radi održavanja dobrih susjedskih odnosa*." (Cc).

"*Lijekovi se dijele više iz potrebe nego iz ekonomskih razloga. Mi smo naviknuti na to. Navika, uopće ne razmišljam o tome*." (Da).

Dvoje ispitanika je naglasilo da oni daju samo analgetike koje dobro poznaju (Ee i Ek).

"*Mislim da je to normalno. Uvijek su se dijelili lijekovi i uvijek će se dijeliti*." (Ea).

"*Uredu je pomoći nekome kada ga boli. Ne treba uvijek gledati šta je u pozadini kada je u pitanju bol*." (Ed).

3.3.2.3. Svjesnost ispitanika o riziku povezanog s dijeljenjem analgetika na recept i načina na koji ispitanici procjenjuju potencijalni rizik

Većina ispitanika je smatrala da je riskantno uzeti analgetike od druge osobe. Kao moguće štetne opasnosti i posljedice, spominjali su nuspojave (Aa, Ab, Ae, Af, Ba, Bc, Bd, Cb, Cd, Ea, Ec, Fb i Fe), alergije (Ae, Bd, EE i Ff), strah (Da), ugrožavanje života (Eb i Fb), mogućnost da dati analgetik ne ublaži bol (Fd), mogućnost da se dogodi opasna kombinacija lijekova (Ed, Ee i Ej), potencijalnu neodgovarajuću uporabu lijekova (Ee i Ej) i gubitak vremena u liječenju (Cc). Tri ispitanika su se izjasnili da ne znaju ništa o rizicima povezanima za uzimanje lijekova (Ca, Fa i Fc). Jedan ispitanik je opisao iskustvo kada je njegov susjed imao ozbiljnu alergijsku reakciju na acetilsalicilnu kiselinu i naglasio:

"*Ako bi netko pita i zavijao od bolova ja bih rekao evo ti, ali na tvoju odgovornost. Meni je pomoglo, a hoće li ti pomoći ja ne znam*." (Ae).

Neki ispitanici su imali specifične savjete o korištenju lijekova.

"*Oni koji imaju problema s želucem bi trebali uzeti nešto na bazi Lekadola (*opaska autora: paracetamol*). Treba uvijek procijeniti koliko se može bol trpjeti, a rizik je rizik*." (Bf).

"*Znam da lijekovi za bolove djeluju na probavni trakt zato uvijek smanjim preporučenu dozu i trajanje uzimanja lijeka*." (Bd).

Tri ispitanika su izjavila da uvijek čitaju papirnate upute koje idu uz lijek pa stoga ne žele davati svoje lijekove drugima (Bb, Bd i Cd). Međutim, jedan ispitanik je komentirao:

"*Kada bih čitao nuspojave nikada nijedan ne bih uzeo, ima ih sto*..." (Ec).

Jedan ispitanik je rekao da tko god traži lijekove treba pročitati upute i samostalno odlučiti hoće li uzimati lijek (Fc). Neki ispitanici su rekli da više razmišljaju o tome kako ublažiti bol nego što misle o rizicima (Bg, Db, Dc, Dd i Ea).

Prema ispitanicima osoba koja daje svoj lijek može biti izložena sljedećim rizicima: grižnja savjesti/ moralna odgovornost (Aa, Ab, Ae, Bc, Bd, Bg, Cb, Cc, Cd, Ca, Da, Db, Ec, Ee, Ef, Eh, Ei, Ej, Ek, El, Fb, i Ff), pravna odgovornost (Dd, Ed, Ee, Ef, Ek i El), ostati bez vlastitih lijekova (Ca, Cc, Da, Eb, Ee, Eg, Ek i El), okrivljavanje (Ca) i žaljenje ako lijek ne bi pomogao (Fd i Fe). Dva ispitanika su smatrala da osoba koja daje svoje lijekove ne može biti pod rizicima koje navode drugi sudionici fokus skupina (Ea i Fc). Jedan ispitanik je izjavio:

"*Odgovornost postoji samo ako su u pitanju maloljetnici*." (Bf).

Jedna ispitanica je komentirala:

"*Ostala sam bez toga lijeka kada ga dam. Ne volim davati lijekove. Zato često kažem da nemam lijek iako ga imam. Ne znam ja kako neki lijek djeluje na nekoga. Ne bih htjela da se nekome nešto dogodi pa da kažu da sam je otrovala. Bojim se optužbi ako se nešto loše dogodi, ne želim slušati: jesu li lijekovi friški; tko zna što joj je dala... Ne volim ni pričati koje lijekove uzimam drugima da me ne bi pitali da im posudim. Neki ljudi vole nabrajati lijekove koje uzimaju i vole se raspitivati o tuđim lijekovima.*" (Ca).

Dok je druga ispitanica bila izjavila:

" ... *Ali smatram da je veći grijeh ne dati nekome lijek kada ga boli nego što je rizik da će se nešto dogoditi loše ako se dadne*" (Db).

Slično, je bila izjavila i ispitanica iz iste fokus skupine:

"*U prvom planu treba biti pomoć*." (Dc).

Bilo je 45% ispitanika koji su naznačili da je dijeljenje analgetika na recept rizičnije nego dijeljenja lijekova koji nisu na recept. Nekoliko ispitanika je izrazilo da ima više povjerenja u

lijekove koje su propisali njihovi liječnici nego u lijekove koje su sami sebi kupili (Bb, Ca, Cb, Cc, Ea, Ec, Ed i Eg). Njihovo objašnjenje je bilo da njihov liječnik bolje poznaje „bolove“ i odgovarajuće lijekove.

U drugom upitniku ispitanici su bili zamoljeni da daju asocijacije i otvorene odgovore povezane uz rizik od uzimanja analgetika od drugih osoba (Dodatak 5.7.), da ukažu kako bi opisali pojedince koji daju svoje lijekove drugima (Dodatak 5.8.) i pojedince koji uzimaju lijekove od drugih (Dodatak 5.9.). Većina ispitanika je odgovorila na ova pitanja, pokazujući odobravanje ponašanja koje uključuje dijeljenjem lijekova na recept ili neutralnog položaja ili njihovo neslaganje i osude.

Više od polovice ispitanika (n=22, 55%) imalo je negativne asocijacije povezane s rizikom od uzimanja lijekova za liječenje boli od drugih ljudi. Samo sedam ispitanika (18%) imalo je pozitivne i šest ispitanika imalo je neutralne asocijacije povezane s tim rizikom. Polovica ispitanika pojedince koji daju svoje lijekove na recept drugima opisuje pozitivno, dok ih 14 (35%) opisuju negativno. Pojedinci koji uzimaju lijekove na recept od drugih bili su opisani negativno od strane polovice ispitanika.

Velika većina ispitanika je navela da liječnici trebaju poduzeti mjere kako bi spriječili dijeljenje receptnih analgetika među pacijentima. Predložili su da liječnici trebaju upozoravati, savjetovati, uputiti, informirati i educirati pacijente o štetnim posljedicama dijeljenja lijekova na recept. Ispitanica iz fokusne skupine D komentirala je da je "nužno ubrzati postupke kod obiteljskog liječnika i dati recepte za lijekove prilagođene trenutnim potrebama i stanju pacijenta".

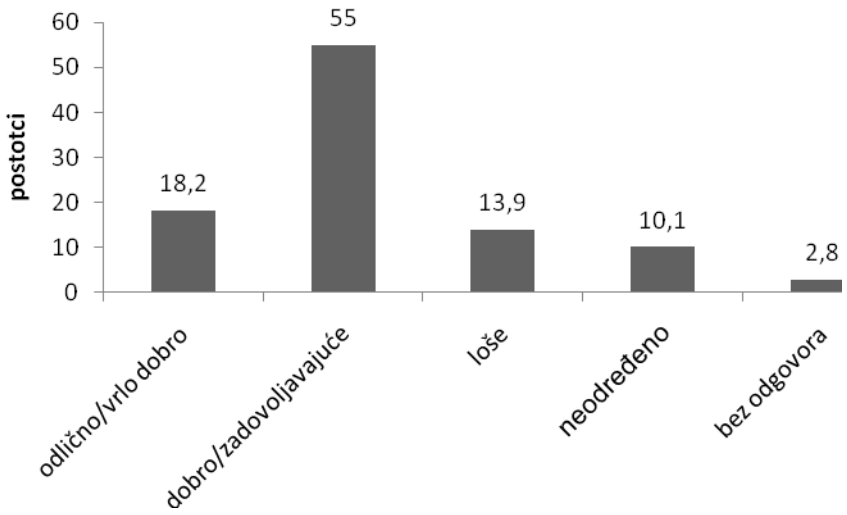
Kao moguću dobrobit davanja analgetika drugima, najčešći odgovori su bili olakšavanje boli i pomaganje drugoj osobi (21 ispitanika). Financijska ušteda i zahvalnosti spomenute su kao potencijalne dobrobiti od dijeljenja lijekova. Pet ispitanika nije vidjelo nikakvu dobrobit u dijeljenju analgetika na recept. Dva ispitanika su smatrala da je rizik veći od dobrobiti.

Trinaest ispitanika je smatralo da odbijanje davanja nekome analgetik nema štetnih posljedica. Ostali ispitanici su spomenuli sljedeće moguće štetne posljedice: bol/patnju (n=4), vlastitu grižnju savjesti (n=5) i strah od pogoršanja međuljudskih odnosa (n=5). Jedan ispitanika je napisao da bi drugi mogli pomisliti da je ona škrta ako bi ih odbila.

3.3.3. <u>Rad 3:</u> Dijeljenje analgetika na recept među pacijentima u ordinacijama obiteljske medicine: učestalost i povezani čimbenici

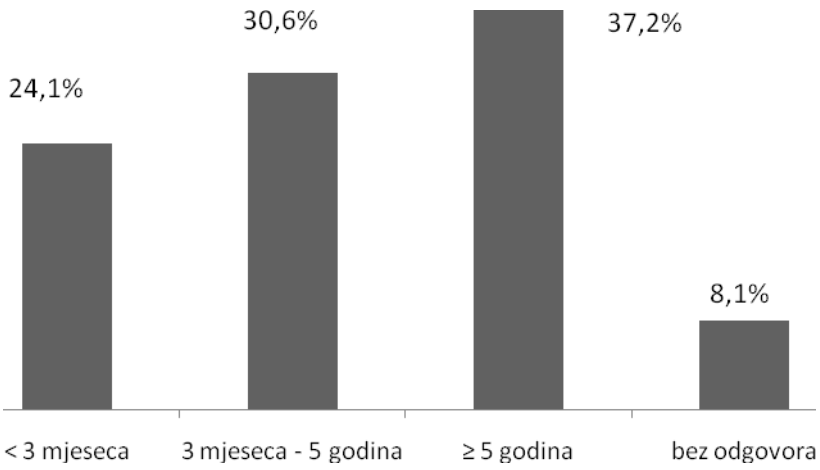
U ovom istraživanju sudjelovalo je 1000 ispitanika. U uzorku je bilo više žena (62%) nego muškaraca (36%). Medijan dobi ispitanika je bio 54 godine (raspon: 18-92 godine). Medijan broja

članova kućanstva bio je 3 (raspon: 1-13). Većina ispitanika je imala srednjoškolsko obrazovanje i bili su zaposleni. Najčešći su svoje zdravlje procjenjivali "zadovoljavajuće" (sl. 4.). Većina ispitanika je navela da ne koristi alternativnu medicinu i da ne smatraju da je to sigurnija i učinkovitija opcija u usporedbi s konvencionalnom medicinom. Gotovo polovica ispitanika tražila je medicinske informacije na Internetu; 44% ispitanika je uzimalo (multi)vitamine (Dodatak 5.10.).



Slika 4. Osobna procjena zdravstvenog stanja

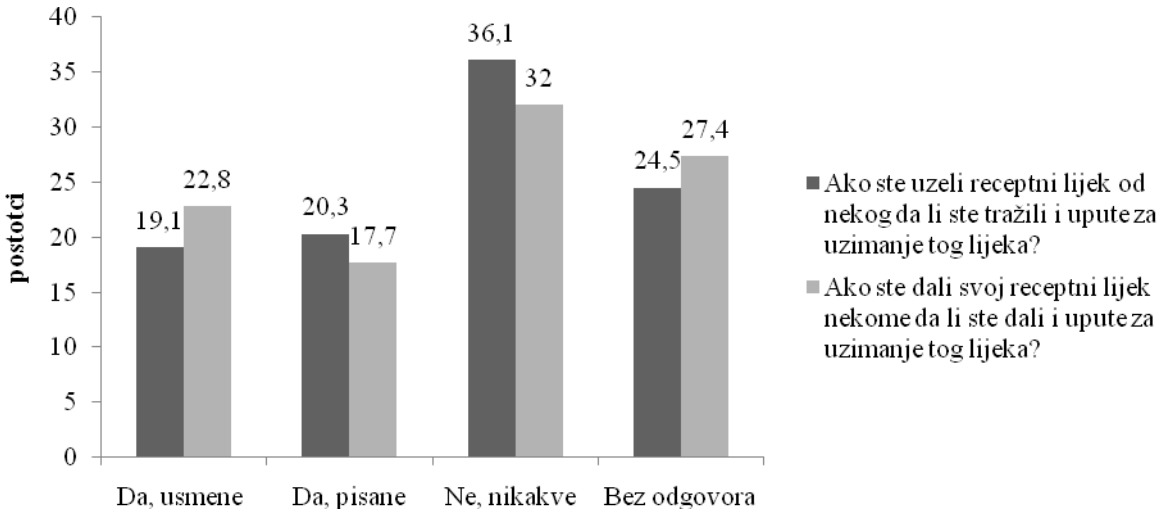
Šezdeset osam posto ispitanika je imalo kroničnu bol, a trideset i sedam posto ih je imalo kroničnu bol dulje od 5 godina (sl. 5. i Dodatak 5.10.). Ispitanici su imali prosječni intenzitet boli u prethodnim tjednima 4,8±2,5 na numeričkoj ljestvici od 1 do 10. U prosjeku, u vrijeme provođenja ankete, ispitanici su uzimali 1,5±0,7 analgetik. Najčešće korišteni neopioidni analgetik bio je ibuprofen (n=509; 51%), a među opioidima tramadol (n=205, 21%). Većina ispitanika je bila smatrala da su njihovi analgetici učinkoviti (Dodatak 5.10.).



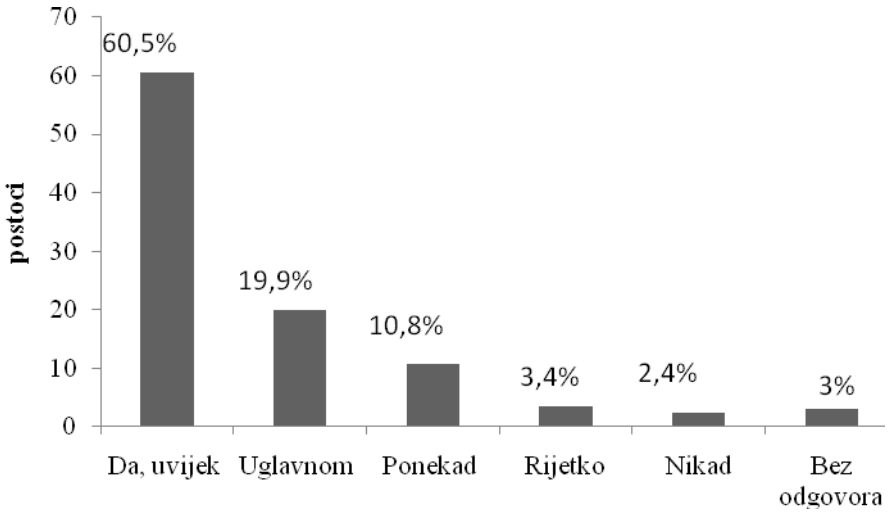
Slika 5. Trajanje boli u ispitanika

Receptne analgetike je dijelilo 61% (595/975) ispitanika, tj. davalo drugoj osobi i/ili uzimalo od druge osobe analgetik na recept. Stopa prevalencije za davanje drugim osobama je iznosila 42%, a 54% za uzimanje od drugih osoba. Bilo je 45% ispitanika koji su i davali drugoj osobi i uzimali od druge osobe receptne analgetike. Ispitanici su najčešće dijele analgetike sa članovima obitelji, a potom sa kolegama, prijateljima/poznanicima i susjedima (Dodatak 5.11.).

Trideset i šest posto ispitanika koji su uzimali analgetike od druge osobe nije zatražilo papirnate upute koje idu uz lijek (sl. 6.). Slično, 32% ispitanika koji su davali analgetike drugim osobama nisu dali i papirnate upute koje idu uz lijek. Ipak, većina ispitanika je naznačila da čita upute za lijek (sl. 7.). Šezdeset posto ispitanika navelo je da ih njihov liječnik nikada nije ispitivao o dijeljenju lijekova, a 64% njih nije obavijestilo svog liječnika o tom ponašanju (Dodatak 5.12.).



Slika 6. Ponašanja povezana s dijeljenjem receptnih analgetika

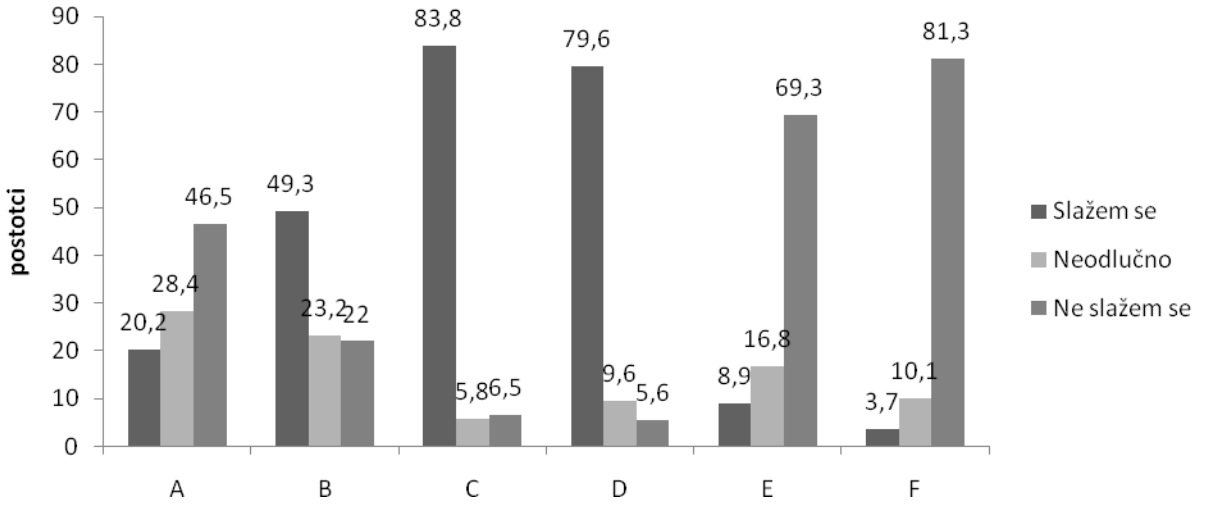


Slika 7. Navika čitanja uputa koje idu uz lijek

Ispitanici su bili procijenili rizik povezan s dijeljenjem analgetika korištenjem 10-brojčane ljestvice (1=nije vjerojatno, 10=vrlo vjerojatno). Srednja ocjena ispitanika za svaki predloženi potencijalni rizik je bila iznad 5,0, što ukazuje da su pacijenti u to ponašanje u prosjeku procijenili kao srednje ili vrlo rizično (Dodatak 5.13.).

Kada su bili analizirani stavovi prema lijekovima, našli smo da je većina ispitanika imala najviše povjerenja u lijekove propisane od strane obiteljskog liječnika/specijalista opće medicine (84%) i liječnika specijaliste (78%), dok je samo 8,9% imalo najviše povjerenja u lijekove preporučene od osobe koja ima iste tegobe. Petina ispitanika složila se sa tvrdnjom da su

bezreceptni lijekovi bezopasni. Gotovo polovica ispitanika se bila složila sa tvrdnjom da su receptni lijekovi učinkovitiji od lijekova koji se mogu kupiti bez recepta. Vrlo se mali broj ispitanika složio s tvrdnjom da ima najviše povjerenja u lijekove koji se reklamiraju preko medija (sl. 8. i Dodatak 5.14.).



Slika 8. Stavovi prema lijekovima

A=Lijekovi koji se mogu kupiti bez recepta su bezopasni.
B=Lijekovi na recept su učinkovitiji od lijekova koji se mogu kupiti bez recepta.
C=Imam najviše povjerenja u lijekove koje mi je propisao moj obiteljski liječnik.
D=Imam najviše povjerenja u lijekove koje mi je propisao specijalist.
E=Imam najviše povjerenja u lijekove koje su mi preporučile osobe s istim tegobama.
F=Imam najviše povjerenja u lijekove koji se reklamiraju preko medija (TV, novine).

Za analizu povezanosti dijeljenja lijekova sa nezavisnim varijablama iz ovog istraživanja, kategorizirali smo ispitanike u one koji uopće daju drugim osobama analgetike na recept i one koji uopće uzimaju od drugih osoba analgetike na recept. Prema rezultatima logističke regresije, neovisni pozitivni prediktori za davanje analgetika na recept drugim osobama su bili: anamneza dijeljenja lijekova na recept koji nisu analgetici (OR 2,56; 95%CI 1,12 do 5,86), pružanje informacija o lijekovima na recept koji idu uz taj lijek (usmene informacije OR 33,22; 95%CI 10,83 do 101,90; pismene informacije OR 16,80; 95%CI 4,99 do 56,59), ne čitanje uputa za lijek (OR 2,14; 95%CI 0,31 do 14,66), bolja subjektivna percepcija zdravlja (vrlo dobro OR 0,28; 95%CI 0,11 do 0,72; dobro OR 2,83; 95%CI 1,23 do 6,51) i smanjena svjesnost štetnosti povezane sa davanjem analgetika na recept drugoj osobi (OR 0,85; 95%CI 0,75 do 0,96) (Dodatak 5.15.). Model je objasnio 66% varijance (Nagelkerke R2=0,66).

Neovisni pozitivni prediktori za uzimanjem analgetika na recept od druge osobe su bili: mlađa životna dob (OR 0,96; 95%CI 0,92 do 0,99), priopćavanje pojedinosti o lijeku koji se daje (usmeno OR 9,88; 95%CI 3,51 do 27,80; pismeno OR 9,91; 95%CI 2,86 do 34,29), sklonost čitanju

uputa o lijeku (OR 4,76; 95%CI 2,14 do 10,58), bolja procjena osobnog zdravlja (OR 0,29; 95%CI 0,11 do 0,75) i percepcija da je alternativna medicina sigurnija opcija od konvencionalne medicine (OR 0,41; 95%CI 0,17 do 0,95) (Dodatak 5.16.). Modelom je objašnjeno 61% varijance (Nagelkerke R2=0,61).

3.4. RASPRAVA

Među liječnicima koji rade u Ambulantama za liječenje boli, njih 80% se susrelo sa pacijentima koji dijele analgetike na recept. U drugom kvalitativnom istraživanju među pacijentima, 55% ih se u upitniku koji je prethodio raspravi izjasnilo da dijeli analgetike na recept dok ih je potom 76% takvo ponašanje priznalo tijekom rasprava unutar fokus skupina. Presječno istraživanje je pokazalo da 61% pacijenata u ordinacijama obiteljske prakse u Hrvatskoj dijeli analgetike na recept. U prethodnim istraživanjima stopa dijeljenja lijekova je bila 5-66% (1-4, 6, 7, 9, 10, 13, 36-38).

Ne postoji preporučeni „zlatni standard“ za metode procjene dijeljenja lijekova. Neka istraživanja su tražili stopu dijeljenja lijekova za period od unatrag godinu dana, a ostala istraživanja za ikada u cijelom životu. U našem istraživanju smo pitali ispitanike za dijeljenje analgetika tijekom cijelog života. Za razliku od drugih istraživanja moguće odgovore na pitanja o dijeljenju analgetika na recept nismo ograničili na "da" ili "ne"; već smo ponudili sedam izbora kako bi precizirali dobivene odgovore. Prvih šest ponuđenih odgovora je upućivalo na specifične osobe kojima su dali ili od kojih su uzeli analgetik na recept: najuža obitelj, šira obitelj, prijatelji ili poznanici, kolege iz posla, susjedi i druge osobe. Vjerojatno je naš odabir ustroja ispitivanja dijeljenja lijekova doprinio nađenoj višoj stopi dijeljenja lijekova. Potvrdu takvog uvjerenja smo našli u rezultatima našeg drugog kvalitativnog istraživanja gdje ih se 55% u upitniku izjasnilo da dijeli analgetike na recept da bi ih potom 76% takvo ponašanje bilo priznalo u raspravi unutar fokus skupina. Smatramo da su se neki ispitanici, tijekom rasprave, podsjetili na situaciju u kojoj su dijelili analgetike, potaknuti odgovorima drugih ispitanika. Neki ispitanici su kasnije rekli da nisu bili u potpunosti shvatili što znači dijeliti lijekove, na primjer, da treba izvijestiti i o dijeljenju lijekova sa supružnicima. Ispitanici su ukazali da lijekove propisane bračnom partneru smatraju "zajedničkom imovinom" u kućanstvu. Različita ponašanja mogu biti povezana i s različitim vrstama lijekova. U našem projektu smo se usredotočili na analgetike. Znali smo prema rezultatima prethodnih istraživanja da su analgetici među najčešće dijeljenim receptnim lijekovima (3, 7, 9, 11).

U našem istraživanju liječnici su naveli da su susretali samo s pacijentima koji uzimaju analgetike na recept od druge osobe. U drugom kvalitativnom istraživanju davanje analgetika na recept drugoj osobi (n=22, 55%) bilo je uobičajenije od uzimanja (n=17, 44%). Dok je u našem presječnom kvantitativnom istraživanju stopa prevalencije za uzimanje receptnih analgetika od 54% bila viša od stope davanja receptnih analgetika drugim osobama koja je bila iznosila 42%. Prema sustavnom pregledu Beyene i suradnika, prevalencija davanja lijekova u različitim istraživanjima je bila 5%-52%, a za uzimanje receptnih lijekova 6%-23% (7). Uzimanje receptnih lijekova od drugih

osoba je bilo učestalije od davanja u nizu prethodnih istraživanja (3, 10, 11, 13, 36). Jedno od tih istraživanja je imalo slično visoku prevalenciju (52%) uzimanja receptnih lijekova (36).

U našem projektu, analgetici su bili najčešće dijeljeni sa članovima obitelji. Takav rezultat je u skladu sa prethodnim istraživanjima (7, 9, 37, 39). U nekim kulturama, dijeljenje lijekova je način na koji se izražava briga za bližnje (40). Istraživanje među adolescentima je pokazalo kako smatraju da je uredu dijeliti lijekove sa članovima obitelji (6).

Unatoč postojanju svijesti o riziku, većina pacijenata dijeli i smatra da je dijeljenje receptnih analgetika prihvatljivo ponašanje gdje prevladava korist. Za razliku od pacijenata liječnici su dijeljenje analgetika koji se dobiju na recept uglavnom doživljavali kao neželjeno ponašanje s potencijalnim negativnim posljedicama. Međutim, i neki od liječnika su smatrali da postoje i određeni pozitivni aspekti kao što su dobronamjerno ponašanje, pomoć pacijentima da dobiju lijek kada im je potreban i pomoći im da se lakše suočavaju sa boli. Jedan liječnik je čak smatrao da je to dobar način za pacijente da isprobaju različite analgetike kako bi to kasnije olakšalo donošenje kliničke odluke o izboru analgetika. Od potencijalnih rizika povezanih s takvim ponašanjem većina ispitanika je navodila nuspojave. Jedno je istraživanje pokazalo kako su oni koji su uzimali ili dijelili lijekove smatrali da imaju manji rizik od nuspojava ako uzimaju lijekove drugih ljudi (41). U drugom istraživanju, adolescenti su bili pretpostavljali da se lijekovi trebaju dijeliti s nekim tko je "imao isti problem" ili nekim tko "zna nešto" o lijekovima i u slučaju boli (6). Istraživanje Goldsworthy i suradnika je našlo da 37% onih koji su uzeli lijek od druge osobe prijavilo da je imalo nuspojave (1).

Liječnici su izrazili sumnju da pacijenti provjeravaju datume isteka valjanosti lijeka kada ih dijele. U istraživanju provedenom među studenticama u Maleziji, utvrđeno je da ih 29% uvijek kontrolira rok trajanja lijekova, ponekad kontrolira 54%, a samo 6,9% ih nije kontroliralo nikako (5). Literatura ukazuje na važnost percepcije rizika kao ključnog čimbenika koji utječe na sigurno medicinsko ponašanje. Međutim, malo se zna o mehanizmima koji utječu na percepciju rizika. U procjeni rizika ljudi koriste racionalnu i emocionalnu komponentu perspektive. Racionalni način procjenjivanja rizika uključuje vjerojatnost, ozbiljnost i korisnost. Jedno istraživanje je našlo da se radnici uglavnom oslanjaju na emocionalnu percepciju, a ne na racionalnu kalkulaciju rizika kada su u pitanju sigurna ponašanja (42). U drugom istraživanju, povjerenje u liječnika među pacijentima sa šećernom bolesti se pokazala korisnijom nego percepcija rizika za pozitivne promjene u ponašanju (prehrambene navike i vježbanje) i poboljšanje depresije (43). Potrebna su dodatna istraživanja za razumijevanje načina na koji se rizik procjenjuje i kako se ta saznanja mogu iskoristiti za intervencije vezane uz takvo ponašanje.

Jedan je liječnik u ovom istraživanju bio uvjeren da su žene sklonije davanju preporuka o lijekovima i dijeljenju lijekova. Međutim, naše kvantitativno istraživanje nije našlo povezanost dijeljenja analgetika sa spolom. Prethodna istraživanja nisu našla povezanost spola sa uzimanjem lijekova od drugih osoba (3, 4). Četiri istraživanja su našla da su žene sklonije davanju lijekova (3, 4, 6, 44), što nije potvrđeno u druga dva istraživanja (1, 36). Liječnici su bili mišljenja da pacijenti koji ne dolaze redovito u ambulantu za liječenje boli, koji imaju kratkotrajnu bol i nemaju malignu bolest su skloniji dijeljenju receptnih analgetika. Istraživanje o dijeljenju lijekova među adolescentima je našlo da tri četvrtine ispitanika uzima lijekove od druge osobe kako bi izbjegli posjetu zdravstvenoj ustanovi (1). Dok je istraživanje Sheu i suradnika našlo da su pacijenti s teškom kroničnom boli bili skloniji zloupotrebi lijekova na recept nego pacijenti bez jake kronične boli (45). U ovom istraživanju opisano je iskustvo s ovisnikom o narkoticima koji je doveo roditelje u ambulantu za liječenje boli tvrdeći da roditelji imaju problema s boli i da trebaju opioidne lijekove. Od ranije je poznato da problem s ovisnošću o drogama povećava rizik od uzimanja lijekova na recept od drugih osoba (46, 47). Dok je druga ispitanica istaknula problem s pacijentima koji odbijaju korištenje analgetika, osobito opioida. Strah od ovisnosti i nedostatka znanja su najčešće prepreke učinkovitom liječenju boli (48-50). Mlađa životna dob je bila neovisni prediktor uzimanja analgetika na recept od drugih osoba u našem istraživanju, što je u skladu s prethodnim istraživanjima (3, 13). Ta povezanost nije nađena u istraživanju Goldsworthy i Mayhorn (1).
U ovom istraživanju našli smo da je bolja percepcija osobnog zdravlja bila pozitivni prediktor i za uzimanje i za davanje receptnih analgetika. Međutim, jedno prethodno istraživanje je našlo da žene s lošijom percepcijom osobnog zdravlja češće uzimaju i posuđuju receptne lijekove (3). Razloge za te razlike treba ispitati u budućim istraživanjima.

Želja da se drugome umanje patnje i pomogne, posebno u situacijama otežane dostupnosti liječnika ili ljekarnika navedeno je kao od jedan razloga za dijeljenje analgetika na recept, slično kao u prethodnim istraživanjima (1, 41). U istraživanju Daniela i suradnika kao važan razlog za uzimanje lijekova od drugih osoba navedeno je ublažavanje boli (6). U tri ranija istraživanja, glavna situacija u kojoj se uzimao lijek od druge osobe se događala kada osoba koja već uzima lijek ostane bez njega ili u slučaju kada ima sličan medicinski problem kao osoba koja ima lijek (3-5). Takve razloge obično navode ispitanici koji dijele svoje lijekove sa supružnicima. Neki su ispitanici davali svoje analgetike koje više ne koriste. U prethodnim istraživanjima glavno objašnjenje za davanje lijekova drugoj osobi su bili preostali lijekovi nakon prestanka korištenja (3, 4).

Pisane upute za analgetike koji su dijeljeni nije preuzelo 65% onih koji uzimaju lijek od drugih, što je lošije od rezultata istraživanja gdje je polovica onih koji uzimaju lijek od drugih primalo pismene upute uz pakiranje lijeka (1). U jednom istraživanju, rezultati su pokazali da više

od 60% ispitanika nije pokušalo pročitati upute za lijek za njihove lijekove (51). Neki od ispitanika iz našeg istraživanja naveli su da namjerno koriste manju dozu propisanih lijekova. Jedno istraživanje je našlo da je nesuradljivost u farmakološkoj terapiji bila povezana s dijeljenjem analgetika (15).

U našoj anketi većina se nije složila sa tvrdnjom da su OTC analgetici bezopasni i iskazali su slabo povjerenje u lijekove koji se reklamiraju preko medija. Liječnici ispitanici su bili smatrali da je direktno oglašavanje pacijentima OTC analgetika opasno i da bi zabrana takvog oglašavanja smanjila dijeljenje receptnih analgetika. Oglašavanje lijekova može dati lažni osjećaj sigurnosti i pridonijeti povećanoj potrošnji tih lijekova (52).

Edukacija je predložena kao jedno od mogućih rješenja za smanjivanje pojave dijeljenja receptnih analgetika među pacijentima, kao i poticanje pacijenata da čitaju upute o lijekovima i poticanje liječnika opće prakse da pitaju pacijente za lijekove u kućnoj zalihi. Zabilježeno je da 10% pacijenata drži u svom domu lijekove za buduću uporabu (5). Sustavni pregled i meta-analiza s devet istraživanja pokazuju da je edukacija pacijenata o liječenju imala učinak u pacijenata sa migrenom (53). Međutim, jedno istraživanje je našlo da trening za liječenje boli zdravstvenih djelatnika nije odgovarajući (54). Fishman i suradnici su preporučili ranu edukaciju o tretmanu boli kako bi se izbjegla neusklađenost mišljenja studenata i stvarnosti s kojima će se suočavati u praksi (50). Zato je pažljivo razmatranje potencijalnih mjera za dijeljenje receptnih lijekova među pacijentima potrebno, a buduća istraživanja o toj temi bile bi dobrodošle.

Ovaj projekt je imao nekoliko nedostataka. Obadva kvalitativna istraživanja su imala mali broj ispitanika koji nisu činili reprezentativan uzorak. U kvalitativnom istraživanju s liječnicima imali smo veliku stopu onih koji nisu odgovorili na naš poziv za sudjelovanje u istraživanju ili su odbili sudjelovanje. Na rezultate drugog kvalitativnog istraživanja s pacijentima mogli su utjecati dominante osobe nametanjem svog mišljenja kao društveno prihvatljivog drugim ispitanicima. U trećem kvantitativnom istraživanju koristili smo anketu koju smo bili posebno osmislili za ovo istraživanje. Ne postoji zlatni standard za metode ovakvih istraživanja. U projektu nismo napravili razgraničenje rezultata prema opioidnim, neopioidnim, neklasičnim (antiepileptici, antidepresivi, lokalni anestetici, itd.) i OTC analgeticima zbog metodologije istraživanja. U trećem dijelu istraživanja ispitanicima je postavljeno pitanje koje analgetike uzimaju u tom trenutku, ali to pitanje se odnosilo samo na taj trenutak. Budući je lako moguće da ispitanici ne znaju ni ime lijeka kojeg trenutno uzimaju, pa ga zato nisu napisali, a isto tako da ne znaju ni koji lijek je receptni, a koji bezreceptni, ne bi bilo utemeljeno raditi nikakve analize prema vrstama lijekova koje su ispitanici uzimali u trenutku provedbe istraživanja.

3.5. ZAKLJUČCI

Dijeljenje analgetika na recept među pacijentima u ovom projektu je bilo vrlo učestalo. Prema pacijentima ispitanicima takvo ponašanje je normalno i ne zabrinjavaju se zbog mogućih štetnih posljedica. Smatraju da je smanjivanje patnje i održavanje dobrih međuljudskih odnosa važnije od moguće opasnosti. Za razliku od pacijenata, među liječnicima prevladava mišljenje da potencijalni rizik nadilazi dobrobit. Neovisni pozitivni prediktori za davanje analgetika na recept drugim osobama su bili: anamneza dijeljenja lijekova na recept koji nisu analgetici, pružanje informacija o lijekovima na recept koji idu uz taj lijek, ne čitanje uputa za lijek, bolja subjektivna percepcija zdravlja (vrlo dobra ili dobra) i smanjena svjesnost štetnosti povezane sa davanjem analgetika na recept drugoj osobi. Neovisni pozitivni prediktori za uzimanjem analgetika na recept od druge osobe su bili: mlađa životna dob, priopćavanje pojedinosti o lijeku koji se daje, sklonost čitanju uputa o lijeku, bolja procjena osobnog zdravlja (vrlo dobro) i percepcija da je alternativna medicina sigurnija opcija od konvencionalne medicine. Edukacija pacijenata i veća uključenost liječnika u prepoznavanju tog ponašanja navedeni su kao potencijalne mjere za prevenciju dijeljenja analgetika na recept. Uz liječnike i drugi zdravstveni djelatnici poput ljekarnika bi se mogli uključiti u strategije sprječavanja dijeljenja lijekova na recept. Izravno oglašavanje lijekova korisnicima liječnici su naveli kao čimbenik koji pridonosi takvom ponašanju te su sugerirali da se zabrani. Potrebna su daljnja istraživanja o učinkovitosti intervencija za sprječavanje dijeljenja lijekova na recept.

Znanstveni doprinos ovog projekta su prediktori za prepoznavanje rizičnih skupina pacijenata sklonih dijeljenju analgetika, podatak o visokoj učestalost takvog ponašanja te činjenica da pacijenti smatraju kako je smanjivanje patnje i održavanje dobrih međuljudskih odnosa važnije od moguće opasnosti dijeljenja. Svi ti podaci doprinose boljem razumijevanju zašto pacijenti dijele analgetike i kako se odlučuju na dijeljenje. Također, pomoću naših podataka mogu se osmisliti intervencije za osvješćivanje liječnika o potencijalno rizičnom ponašanju njihovih pacijenata, za prepoznavanje rizičnih skupina pacijenata, za edukaciju pacijenata i za smanjivanje učestalosti te rizične pojave. U strategije sprječavanja dijeljenja lijekova potrebno je uključiti i ljekarnike te ostale zdravstvene djelatnike. Buduća istraživanja o učinkovitosti intervencija za sprječavanje dijeljenja lijekova trebala bi procijeniti utjecaj izravnog oglašavanja lijekova korisnicima na njihova ponašanja povezana s lijekovima.

3.6. SAŽETAK

Uvod: Jedna od potencijalnih prijetnji sigurnosti pacijenata je dijeljenje lijekova, što je oblik samo-liječenja. Ovaj je projekt analizirao učestalost, percepciju rizika i čimbenike povezane s dijeljenjem analgetika na recept.

Metode: Proveli smo dva kvalitativna i jedno presječno kvantitativno istraživanje. Prvo kvalitativno istraživanje provedeno je polu-strukturiranim intervjuima među 15 liječnika zaposlenih u hrvatskim Ambulantama za liječenje boli. Drugo kvalitativno istraživanje je bilo provedeno u fokus skupnim raspravama s 40 ispitanika. Bili su uključeni odrasli u dobi od ≥18 godina koji su dobili recept za analgetik najmanje jednom u životu. Provedeno je šest zasebnih fokus skupina s kojima se raspravljalo o percepciji rizika povezanih s dijeljenjem receptnih analgetika među pacijentima. Osim toga, ispitanici su bili ispunili dva upitnika o demografskim podacima, osobnom ponašanju povezanim sa dijeljenjem analgetika i njihovim stavovima o rizicima povezanim s dijeljenjem analgetika na recept. Presječno kvantitativno istraživanje je bilo provedeno u 10 ordinacija obiteljske medicine u Hrvatskoj među 1000 pacijenata kojima su liječnici najmanje jednom u životu propisali analgetike. Upotrijebljen je upitnik za prikupljanje podataka o intenzitetu boli pacijenata, navikama dijeljenja analgetika na recept, čimbenicima koji su povezani s takvim ponašanjem, percepcijom rizika povezanih s tim ponašanjem i demografskim podacima. Logistička regresija provedena je kako bi se analizirali neovisni čimbenici povezani sa davanjem drugim osobama i uzimanjem od drugih osoba analgetika na recept.

Rezultati: Među liječnicima, dvanaestero ih se bilo susrelo s pacijentom koji dijele analgetike na recept s drugim pacijentima kojima nije namijenjen recepta. Većina liječnika smatra da je dijeljenje receptnih analgetika rizično i negativno ponašanje. U drugom kvalitativnom istraživanju u upitniku 55% ispitanika je bilo navelo da dijele receptne analgetike, a naknadno u raspravama fokusnih skupina 76% ih je bilo priznalo takvo ponašanje. Ispitanici su prepoznali određene rizike povezane s dijeljenjem analgetika na recept, spomenuli brojne razloge za uključivanje u takvo ponašanje i ukazali na određene pozitivne aspekte takvog ponašanja. U presječnom kvantitativnom istraživanju ustanovljeno je da 61% pacijenata iz ordinacije obiteljske medicine dijeli analgetike na recept, bilo da se radi o davanju drugoj osobi (42%) i/ili o uzimanju od druge osobe (54%). Neovisni pozitivni prediktori za davanje analgetika na recept drugim osobama su bili: anamneza dijeljenja lijekova na recept koji nisu analgetici, pružanje informacija o lijekovima na recept koji idu uz taj lijek, ne čitanje uputa za lijek, subjektivna percepcija zdravlja i smanjena svjesnost o štetnosti povezane sa davanjem analgetika na recept drugoj osobi. Neovisni pozitivni prediktori za uzimanjem analgetika na recept od druge osobe su bili: mlađa životna dob, priopćavanje pojedinosti o lijeku koji se daje,

sklonost čitanju uputa o lijeku, pristrana procjena osobnog zdravlja i percepcija da je alternativna medicina sigurnija opcija od konvencionalne medicine.

Zaključak: Dijeljenje receptnih analgetika vrlo je zastupljeno među pacijentima u obiteljskoj medicini. Edukacija pacijenta i veća uključenost liječnika u prepoznavanju tog ponašanja navedeni su kao potencijalne mjere za sprečavanje dijeljenja analgetika na recept. Potrebno je osmisliti i afirmirati preventivne intervencije.

3.7. SUMMARY

Sharing prescription analgesics: perception of risk, frequency and associated factors

Background: One of the potential threats to patient safety is the sharing of medication among patients, which is form of self-medication. This project analyzed frequency, perception of risks and factors associated with sharing prescription analgesics.

Methods: For this project we were conducted two qualitative and a cross-sectional research. The first qualitative study was conducted by semi-structured interviews among 15 PMPs employed in Croatian pain clinics. Second qualitative study was conducted by focus group discussions with 40 participants. Adults aged ≥18 years who had received a prescription for an analgesic at least once in a lifetime were included. Six separate focus groups were conducted to discuss participants' perception of risks associated with sharing of prescription analgesics among patients. Additionally, participants filled out two questionnaires on demographic data, their own behavior regarding sharing analgesics, and their attitudes about risks associated with sharing prescription analgesics. A cross-sectional study was conducted in 10 outpatient family medicine practices in Croatia amongst 1000 patients to whom their physicians have prescribed analgesics at least once in their lives. A questionnaire was used to collect data about patients' pain intensity, prescription analgesic sharing habits, factors associated with this behavior, perception of risks associated with the conduct and demographic data. Logistic regression was conducted to analyze independent factors associated with lending and borrowing prescription analgesics.

Results: Among PMPs, twelve have seen patients who share their prescription analgesics with other patients for whom prescription is not intended. Most PMPs consider prescription analgesics sharing a risky and negative behavior. In second qualitative study in a questionnaire, 55% of the participants indicated that they personally shared prescription analgesics, while subsequently in the focus group discussions, 76% confessed to such behavior. Participants recognized certain risks related to sharing of prescription analgesics, mentioned a number of reasons for engaging in such behavior, and indicated certain positive aspects of such behavior. In the cross-sectional research we found that 61% of patients in family medicine practices engage in sharing prescription analgesics, whether it was lending (42%) and/or borrowing (54%). Independent predictors of lending prescription analgesics were as follows: history of sharing prescription medication other than analgesics, providing information regarding the medication alongside the prescription medication itself, not reading package insert that accompanies medication, subjective perception of personal health and decreased awareness of personal harm associated with prescription analgesic sharing.

Independent predictors of prescription analgesic borrowing were as follows: younger age, communicating details regarding the medication that was given, scanning of package insert accompanying the medication, biased subjective perception of personal health and perceiving alternative medicine as a safer option over conventional medicine.

Conclusion: Sharing prescription analgesics is highly prevalent amongst patients in family medicine. Patient education and more involvement of physicians in identifying this behavior were cited as potential remedies for preventing sharing of prescription analgesics. Preventive interventions should be conceived and established.

3.8. ŽIVOTOPIS

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IZOBRAZBA

- Doktor medicine: 04. 09. 2003. godine Medicinski fakultet u Mostaru, diplomski rad: Rizični čimbenici u pacijenata sa karcinomom pluća i bronha.
- Poslijediplomski studij:
  a. 2006. g. – 2008. g.: Poslijediplomski znanstveni studij iz „Medicinska skrb i javno zdravstvo“; Medicinski fakultet, Sveučilište u Mostaru, BiH. 13. 03. 2012.: stekla akademski stupanj magistra znanosti u području biomedicine i zdravstva, polje temeljne medicinske znanosti, grana farmakologija i toksikologija. Magistarski rad: „(Ne)suradljivost bolesnika starijih od 65 godina u liječenju kronične nemaligne boli“.
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MATERINSKI JEZIK

- Hrvatski jezik

OSTALI JEZICI

- Engleski jezik
- Francuski jezik

OSTALE AKTIVNOSTI

Zaposlenja – napredovanje i dužnosti

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- 2018. g. – sada: direktorica Cochrane Bosna i Hercegovina

Radovi u časopisima

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4. RADOVI OBJEDINJENI U DISERTACIJI

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ORIGINAL RESEARCH

Risks associated with borrowing and sharing of prescription analgesics among patients observed by pain management physicians in Croatia: a qualitative study

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Background: Understanding and improving patient safety is a key issue in medicine. One of the potential threats to patient safety is the sharing of medication among patients, which is a form of self-medication. This study analyzed experiences and attitudes of pain management physicians (PMPs) about sharing prescription analgesics among patients.

Methods: This qualitative study was conducted by semi-structured interviews among PMPs employed in Croatian pain clinics. The study involved two researchers and 15 PMPs.

Results: Among PMPs, 80% have seen patients who share their prescription analgesics with other patients for whom prescription is not intended. Most PMPs consider prescription analgesics sharing a risky and negative behavior. Some of them, however, found certain positive aspects associated to it, such as being a benevolent behavior, helping patients to get medications when they need them, and helping them cope with pain.

Conclusion: The majority of physicians specialized in pain management encountered patients sharing prescription analgesics. Most of them considered this as risky behavior with a number of potential consequences. It has been noted that this problem is neglected and that physicians should inquire about medication sharing. Direct-to-consumers advertising was perceived as a factor contributing to such behavior. Patient education and more involvement of physicians in identifying this behavior were cited as potential remedies for preventing sharing of prescription analgesics.

Keywords: analgesics, sharing, lending, borrowing, risks

Introduction

Patients are prone to self-medication and self-treatment of acute and chronic conditions. Analgesics are particularly often used for self-medication, including nonsteroidal anti-inflammatory drugs (NSAIDs) and strong opioids. Understanding and improving patient safety is a key issue in medicine. One of the potential threats to patient safety is sharing of medication among patients, which is a form of self-medication.[1–5] Sharing prescription drugs is defined as giving one's own medication or taking others' medications in situations where the recipient of these drugs is not the person for whom the drugs are intended.[6] The term "lending" drugs would indicate that it was a temporary transfer of the drug on condition that the amount borrowed be returned; however, a person "borrowing" a drug usually does not give back the drug to the person who is "lending" it.[7]

It has been shown that analgesics are among the top three medications most often shared among patients.[1,2,8,9] In the study of Ward et al, 116 (18%) respondents declared that they borrowed prescription medication from others and 89 of them listed the names

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of medications received in this way; 42 respondents borrowed opioids and 25 NSAIDs.[10] Research among American veterans found that 16% of them shared prescription drugs to treat pain and that this behavior was associated with younger age, more mental health disorders, substance use disorders, more pain seriousness, and higher number of non-pain symptoms.[11] A previous study found that nonadherence to pharmacological treatment of chronic nonmalignant pain was associated with sharing analgesics.[12]

Literature about prescription drug sharing emphasizes negative consequences of such behavior (eg, unexpected side effects, incorrect use of drugs, interactions, delays in the use of professional help, addiction, drug abuse, warped perception of the ineffectiveness of the drug, overdose, and teratogenicity).[1,2,6,13] However, there has been no empirical research on the perception of risk among patients and physicians associated with prescription drug sharing.[7]

Very little is known about the phenomenon of sharing medications among patients, and there is a lack of awareness about this issue.[14] A systematic review of Beyene et al, published in April 2014, which analyzed literature published until March 2013, found only 19 published studies about drug sharing and concluded that there is insufficient data about the reasons why drugs are shared, of how patients decide to share drugs, whether patients were aware of the risks of sharing drugs, and the ways in which patients assess the importance of these risk factors.[7]

Currently, there is insufficient information on whether physicians are aware of the prescription drug sharing problem and whether they perceive this behavior as a problem in their clinical work with patients. This study analyzed experiences and attitudes of pain management physicians (PMPs) about sharing drugs among patients. PMPs were asked to assess the risk and the potential damage (potential negative consequences) that can occur if patients share prescription analgesics.

Materials and methods

Ethics

Based on the submitted research protocol, the Ethics Committee of the University of Split School of Medicine in Split, Croatia approved the study. The study was conducted according to the principles expressed in the Declaration of Helsinki. Informed consent, written and oral, was obtained from the participants.

Methods

This qualitative study was conducted by semi-structured interviews among PMPs employed in Croatian pain clinics. A pain clinic was defined as a health care facility, an outpatient hospital unit within public tertiary health care, where anesthesiologists specialized for pain management, with or without other physicians and health care workers, focus on diagnosis and management of pain. These clinics do not dispense medications; pain clinic physicians provide treatment recommendation, based on which family physicians write prescriptions.

The study involved two researchers and 15 participants (PMPs). The first interview was conducted on March 31, 2015, and the last on July 15, 2015. The questionnaire had two parts. In the first part of the questionnaire, PMPs answered questions about themselves. The second part of the questionnaire consisted of open-ended semi-structured questions to facilitate discussion about the risks associated with sharing analgesic drugs among patients (Table 1). The physicians were not specifically led to any answer. Consolidated criteria for reporting qualitative studies (COREQ) was used as a support tool for conducting and reporting the study.[15]

Research team and reflexivity

There were two researchers in the team. Prof LP (MD, PhD) is employed at the University of Split School of Medicine in Split, Croatia as a lecturer at the Department of Histology

Table 1 Study questionnaire

Part 1. (Physician's characteristics)
1. Age: _____ years
2. Gender: M F
3. How long have you been working as a physician anesthesiologist? _____ years
4. How many years have you been working in the pain clinic? _____ years
5. How many patients on average visit your pain clinic during a week? _____
Part 2. (Open-ended semi-structured questions)
1. Have you in your practice encountered patients who share their prescription pain medications with other people to whom they were not prescribed?
2. What is your opinion about such behavior among patients?
3. Do you think that sharing prescription pain medication among patients is risky behavior?
4. What are the potential risks or negative, harmful consequences of sharing prescription pain medication among patients?
5. Is there anything positive related to prescription analgesics sharing among patients?
6. Is there a difference between the risk of analgesics sharing depending on whether the analgesics is prescription-based or over-the-counter?

Abbreviations: M, male; F, female.

and Embryology and is a researcher in the Laboratory for Pain Research. She is also a member of the Croatian Society for Pain Treatment (cro. Hrvatsko drustvo za lijecenje boli, HDLB). FM (MD, MSc) is employed in the University Clinical Hospital Mostar, Bosnia and Herzegovina as a specialist of clinical pharmacology and toxicology and as a head of the Centre for Clinical Pharmacology.

LP met some of the participating PMPs via HDLB and had previous research collaborations with them. FM did not know any of the PMPs before the start of the study. Therefore, all potential study participants received an invitation from FM, who also conducted all the interviews.

The participants received detailed information about the study via e-mail. Study data sheet contained information about the research team (titles, positions, and contacts), a description of the research protocol, guarantee of anonymity, and information that the authors intend to publish the study results in a research journal.

Study design

For this qualitative study, semi-structured interviews were conducted with PMPs in order to detect risks recognizable as potential negative consequences of prescription analgesics sharing. Expert interviews are an important instrument for conducting innovative research, taking into consideration the status of the person with whom conversations are carried out, because such research enables the collection of information on subjective experiences and interpretations related to the predefined specialized topic. Semi-structured interview form allows not only a comparison of interviews, but also the inclusion of topics that are not anticipated, but are considered important.[16] For the purpose of this study, the physicians were coded with the first 15 English alphabets (A–O).

Inclusion criteria

To be eligible for inclusion in the study, participants had to be a physician currently employed in one of Croatian pain clinics. Most PMPs were contacted electronically and a minority was contacted via phone, when they wished to discuss participation via phone. Some PMPs' e-mail addresses and phone numbers were found via the HDLB website, and several participants were recommended for inclusion by the other study respondents (snowballing method) or by searching for contacts via the Internet.[17] In some cases, official/private e-mail addresses of PMPs were used.

Response rate

Of 35 contacted PMPs, 15 participated in the study. There were 10 PMPs who refused participation via e-mail and one PMP declined participation over phone. Some who refused participation were heads of a pain clinic who declared that the refusal applies to their entire medical team. These PMPs listed four reasons to explain refusal. Some declared that in their pain clinics patients are treated with non-pharmacological methods. Others excused themselves because of their work overload. One PMP was not satisfied with the study design, and another had only children being treated in the clinic. Two heads of pain clinics accepted to participate together with their physician team, but they did not respond to subsequent attempts to schedule the interview. There were nine PMPs who did not respond at all to the e-mail invitation for participation.

Conduct of interviews

Interviews were conducted by phone (N=13) or face-to-face (N=2). All conversations were recorded. The first face-to-face interview was conducted in the outpatient pain treatment clinic. During the interview, one researcher (FM) was alone with a PMP. The interview was conducted in a room with an open door leading to another room where a nurse of a pain clinic was available. The second face-to-face interview also involved one researcher (FM) and one PMP. The conversation was held in the room of the on-duty anesthetist, where no one else was present either in the room or nearby.

Face-to-face interviews were taped via an audio-recorder. The transcripts were prepared after the interviews in the absence of the respondents. Phone interviews lasted between 5 and 25 min. The interview was conducted individually with each PMP after they accepted to participate, at the time they indicated as convenient. The first e-mail invitation for participation in the study was sent on March 27, 2015, while the last invitation was sent on July 24, 2015.

Transcripts and recordings of interviews were not sent to the respondents for checking, commenting, and/or correction.

Data analysis and reporting

In order to ensure uniformity, the whole transcript of a recorded conversation was prepared by one person (FM) and then checked by the other member of the research team (LP). Each participant was assigned a code number, which was used also for the presentation of the study results. The transcripts were then analyzed by using qualitative content analysis, which is an analysis of semi-structured interviews with experts, because it is used to encode the text to a predetermined systematic coding that can be matched and supplemented with new issues that may arise during the interview. A predefined encoding system for this study was based on risk categories that were identified in previously

published literature about drug sharing. Coding was done by two independent researchers. Specific risks were divided into appropriate categories. Meaningful units (complete sentences or parts of sentences) were defined as the analysis unit. The results were compared among researchers. Measure of correspondence was calculated between the two researchers who coded the answers. Discrepancies identified between the categorization of individual units of analysis among researchers were discussed among the researchers until reaching consensus. The frequency of risk mentioned in the discussions, as well as spontaneously mentioned risks, was described as descriptive statistics to indicate their relative importance in the individual risk categories. If PMPs mentioned measures for dealing with these risks and/or any additional comments related to the topic of the survey, these responses were also coded, analyzed, and presented.

Results

Participants

The study included 15 PMPs (13 women and two men). The average age of PMPs was 49 years (range 37–61 years). On average, they practiced for 16 years (range 5–25 years) as anesthesiologists and worked in pain treatment clinics for 7.7 years (range 2–15 years).

Observing patients who share their prescription analgesics with other patients for whom prescription is not intended

Until the interview began, 20% of PMPs were not aware whether their patients share analgesics, while 80% of PMPs had patients who admitted to such behavior. Regarding frequency of such behavior, five physicians indicated how often they see such patients; one said "often," two "not so often," and two "seldom." "I noticed that especially women in the waiting room exchange opinions and give recommendations to each other about which analgesics they should take" (A).

Remembering particular instances, physicians mentioned having patients who shared opioid patches (N), tramadol in combination with acetaminophen (N), and seeing drug addicts bringing their parents to the clinic, asking for their parents' opioid analgesics (L). "Such behavior is more characteristic of patients who do not visit the pain clinic on a regular basis. Such patients consume analgesics that they find at home, belonging to their family members in addition to the prescribed analgesics, and they determine the dose themselves. Then they take old drugs for new painful conditions without consulting a physician" (I).

An opinion was shared that patients with short-term acute pain are better candidates for sharing prescription analgesics than patients with chronic pain. "I believe that physicians rarely ask patients about this issue, but patients themselves sometimes say that they engage in such behavior, usually when I wanted to prescribe a drug with which a patient has already had a bad experience" (O).

Being on friendly terms with a patient may help in receiving such information. "It is not easy for patients to tell their pain physician that they are sharing prescription drugs with others; and to get that information, first you need to make friends with them" (B).

There may be even differences between different types of pain patients. "I probably rarely encounter patients who share prescription analgesics because I work mainly with patients with malignant diseases, where the main problem is patients' rejecting the use of analgesics, especially opioids, who say that rejecting the use of analgesics is influenced by the family doctor, as patients and family physicians are afraid of addiction" (H).

None of the PMPs encountered a patient who was lending prescription analgesics.

Physicians' perception of prescription analgesic sharing behavior

When asked about their perception of prescription analgesic sharing behavior, the participating PMPs offered varied opinions. Some physicians indicated that they perceive sharing of prescription analgesics as something negative, calling it irresponsible behavior (B, F, H, K); irresponsible and an indication that patients are not educated (C); irresponsible, but understandable (D, F); very risky (J); wrong and inappropriate (L). Others believed this sharing tendency was something positive (E); reasonable and with good intentions (A, I). Some indicated long-term negative consequences, but also certain positive aspects. "Such behavior is not dangerous in the short-term, but in the long run it is not right" (M). "It is not positive, but helps people to cope with their pain" (N). "It is done with good intentions, but I am not thrilled about this behavior" (O).

Knowing that patients engage in such behavior helps one physician to choose which analgesic will work better for a patient. "Analgesics are very accessible, and previous negative experience of a patient with an analgesic, such as side effects, inefficiency, etc, or positive experience, such as the effectiveness in relieving pain, helps me decide which drug to prescribe to that patient" (E).

Prescription analgesics sharing among patients as a risky behavior

Twelve PMPs considered prescription analgesics sharing "risky behavior", while the others conferred that such behavior is "potentially risky" or "wrong." Nearly every physician, 14 of 15, considered sharing analgesics risky, if "wrong" and "potentially risky" are included. One physician believed that such behavior is not risky (I). Physicians who suggested that such behavior is risky pointed out that this is especially true for opioids (E, K) and feared that patients are not aware of the risks: "They do not know the indications, contraindications, and interactions of analgesics" (A, J).

Potential risks of prescription analgesics sharing among the patients

When asked to name potential risks or negative, harmful consequences, two specific problems were indicated: vomiting as a possible adverse reaction while taking tramadol (A) and bleeding as a result of the interaction of warfarin and NSAIDs (A, B, I, L).

The others listed allergies as a potential problem. "Patients who share analgesics do not ask for drug allergies" (A). "Patients who have had an allergic reaction to some medication recognize it only by the brand name while probably its generic name and other brand name are not recognized, and they especially do not recognize if this drug is present in some combination analgesics" (B, D). "The dose of analgesics prescribed for one patient can be inadequate for another patient" (B).

Table 2 lists potential negative consequences of prescription analgesics sharing perceived by the study participants.

Perception of potential positive side of prescription analgesics sharing among the patients

When asked for the potential positive side of sharing analgesics, five PMPs indicated that there is nothing positive about this behavior (C, F, G, H, M). The remaining PMPs stated that the positive aspects might be: good intentions (A); sharing could be a faster way to obtain analgesics (B); "patients borrow analgesics that are usually prescribed to them, but they ran out of it" (D); gaining experience (E, O); "it is positive if patients encourage each other to use analgesics belonging to the first level of the analgesic ladder according to WHO, such as NSAIDs and paracetamol" (I); "by engaging in sharing analgesics patients can relieve their pain until a visit to the doctor/dentist" (J); "it is positive when someone knows what he is doing" (K); it may be beneficial "when the patient has problems with the availability of primary health care" (N). One physician said that there might be something positive about it, but could not specify anything (L). Four physicians who responded that there is a positive side of analgesics sharing pointed out that they consider the risk more prevalent than benefit (B, E, J, L). Two of those who stated that it is posi-

Table 2 Potential risks associated with prescription analgesics sharing, identified by pain management physicians

Potential risks/negative consequences	Participants' code														
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
Adverse events			•	•	•	•	•	•	•	•				•	•
Vomiting	•														
Gastric problems/ulcer				•			•								
Bleeding from GIT	•														
Bleeding	•								•	•		•			
Respiratory depression										•					
Allergies	•	•		•			•							•	•
Interactions		•		•	•					•	•				
Overdose	•			•											
Drug abuse					•							•			
Addiction					•					•	•	•			•
Inappropriate dosage		•		•										•	
Inappropriate analgesic/ contraindications							•						•	•	
Polypragmasy												•			
Activation of comorbidity														•	
Delay in seeking professional help															•
Expiration date				•											

Abbreviation: GIT, gastrointestinal tract.

tive that a patient is getting more experience with different medications elaborated that "a patient's previous experience with analgesic, either positive or negative experience, can help them to make a decision about which analgesics can be recommended for pain treatment" (E, O). Considering potential adverse events, it was suggested that patients would be better-off to share advice about other interventions. "It would be more positive if patients would exchange experiences on non-pharmacological treatment of pain, such as acupuncture, than to engage in sharing analgesics" (L).

Potential differences between the risks of analgesics sharing depending on whether the analgesic is prescribed or bought over-the-counter (OTC)

OTC analgesics were perceived by some PMPs as less dangerous (C, I, O). Others indicated that OTC drugs may also be hazardous (A, D, J, K, M) or that there is no difference in risk (B, F). "Patients themselves are more afraid to share prescription analgesic than OTC" (B). Some considered that prescription analgesics are associated with a higher risk if shared (E, G, H, L, N) and that opioids are particularly dangerous (G, K). "OTC drugs are more accessible, but there is no significant difference in risk" (L). It was also said that OTC analgesics can be a problem if a patient does not read the instructions (M). "I see no difference in whether someone bought OTC analgesic or borrowed it from neighbors" (E).

Preventing sharing of prescription analgesics

When asked to suggest potential solutions, direct-to-consumers advertising was suggested as a problem by multiple physicians. "Patients are not educated enough to be exposed to direct-to-consumers advertising on television and the Internet because such advertisements provide insufficient information about drugs, especially regarding adverse events" (I, L). "The advertising of OTC analgesics should be completely prohibited because these drugs can cause many serious side effects, such as bleeding, analgesic nephropathy, Reye's syndrome, and cardiovascular side effects" (J, K).

Some populations and types of drugs were perceived as more problematic. "Especially younger people become prone to indiscriminate use of OTC analgesics. From my experience, in particular OTC analgesics in the form of effervescent tablets are seen by patients as harmless" (J). "The problem is not only availability and liberal consummation of OTC analgesics, but also not reading the instructions that come with the medicine" (M).

Education of patients and an action on behalf of primary care were suggested as the potential remedies. "My pain clinic organized a month-long school for patients where they educate them about the pain and analgesics. Adherence of patients who attended this school was much better than of patients who did not attend such education" (D). "Prescription analgesics should be controlled by primary health care, because I assume that patients have a large stock of medicines in their home pharmacy" (N).

Discussion

This study shows that physicians specialized in pain management perceive sharing of prescription analgesics among patients as a common phenomenon; 80% of those interviewed encountered patients who share prescription analgesics. These data cannot be used for making conclusions about the prevalence of such behavior among patients, but it is certainly an indication that this problem should be addressed more carefully. Most of the participating physicians considered sharing of prescription analgesics a negative behavior with a number of perceived risks, but there were also opinions about potential positive and well-meaning aspects of that behavior. Several potential risks associated with prescription analgesics sharing were identified, related mostly to side effects, drug abuse, and inadequate help for patients.

According to a systematic review by Beyene et al, the prevalence of borrowing medication in different studies was reported to be 5%–52%, and for lending medication 6%–22%.[7] Participants of this study stated that physicians should talk with their patients about sharing medications: "patients will tell you about it, if you ask them." It was also suggested that it is not enough to ask the patient about sharing medications, but that physicians should "befriend" their patients in order to get them to open up about such behavior. In a study of Ward et al, 72% respondents who confessed to engaging in borrowing medications reported that their physicians asked them questions about medications they were taking and 34% of them said that they inform their doctor about their borrowing medications.[10]

None of the PMPs came across a patient who was lending prescription analgesics, mentioning that patients are prone to borrowing an analgesic from someone when their doctor wants to prescribe them that analgesic. In some previous studies: lending medication appeared to be a rare phenomenon compared to borrowing.[1,2,6,9,18] Some doctors indicated that drug sharing can be considered positive because a patient's experience with an analgesic will facilitate the decision of whether the analgesic should be prescribed to them

or not. Some doctors have come across patients who shared opioid patches and tramadol in combination with acetaminophen, which may increase the chances for the development of adverse events, considering that some tramadol formulations already contain paracetamol.

One physician believed that women are more likely to engage in giving recommendations about drugs and sharing medications. Previous studies have not found gender differences in lending medications, but four studies have found that women are more likely to engage in borrowing of medications, which has not been confirmed in two other studies.[1,2,6,8,18,19]

It was suggested that patients who do not come on a regular basis to a pain clinic are more inclined to engage in sharing of prescription analgesics. Research about sharing medications among adolescents has indeed found that three-fourths of interviewees borrowed medication to avoid a health service visit.[8]

One physician opined that patients with short-term pain are more likely to engage in sharing of prescription analgesics than patients with long-term pain. A similar point of view was voiced by another participant, who pointed out that patients who suffer from a malignant disease are less likely to engage in sharing of medications than other patients. However, a study of Sheu et al found that patients with severe chronic pain were more likely to have abused a prescription medication or used an illicit drug to manage their pain than patients without severe chronic pain.[20]

One physician in this study mentioned having had the experience that drug addicts brought their parents to a pain clinic, claiming that parents suffer from pain for which they need opioids. It is already known that a problem with addiction increases the risk for the borrowing of prescription medications.[14,21]

Also another participant mentioned that there are problems with patients who refuse using analgesics, especially opioids. The PMP considered that such rejections of opioid analgesics are influenced by their family doctor, as patients and family doctors have concerns about addiction. Fear of addiction and lack of knowledge are the most frequent barriers to effective treatment of pain.[22–24]

Different levels of risks were perceived by the study participants, with most of them indicating that they consider sharing of prescription analgesics as unwanted behavior with potential negative consequences, while some found certain positive aspects to it, such as being benevolent behavior, helping patients to get drugs when they need them, and helping them cope with pain. One physician even indicated that this is a good way for patients to try different analgesics so that it helps later to make clinical decisions about a prescription analgesic that will be recommended to a patient. When asked to name potential risks associated with such behavior, most of the participants cited adverse reactions as a potential risk. A study of Goldsworthy et al reported there were 37% participants who reported having an adverse event after borrowing prescription medications.[8] It is likely that people who share prescription medication have greater risk of accidental overdoses. It has been reported that accidental opioid overdose was commonly due to prescribed and illicit polysubstance use, medication-taking errors, and inadequately treated chronic pain.[25]

One physician wondered whether patients check the expiry dates when sharing. In a study conducted among female students in Malaysia, it was found that 29% always controlled expiry dates of drugs, 54% sometimes, and only 6.9% did not control it.[5]

Problems with the access to health care have been cited in previous studies as a factor that contributes to the sharing of medications.[19,26] One of the main reasons for borrowing medication in the studies was not having a medication which they normally used.[2,26,27] The desire to help someone was one of the identified reasons for engaging in lending medications.[2,28] Cultural and legal issues also need to be taken into account. Sharing medications in some cultures can be expressed as care for others when they are ill.[29,30] In the USA, this behavior is illegal; a patient cannot lawfully share or borrow prescription pain medication because it is considered pharmaceutical diversion, and a prescriber cannot continue to prescribe when they know that the patient shares the prescribed medication. Such law does not exist in Croatia.

Participating physicians had differing opinion about the relative risk of OTC and prescription analgesics, with some saying that sharing of prescription analgesics was more risky, some indicated that sharing of OTC analgesics is more risky, while there was also an opinion that there is no difference in risk. Particular danger of sharing opioids was identified.

Regarding potential remedies that could prevent patients from engaging in sharing of prescription analgesics, the participating physicians pointed out to dangers of direct-to-consumer marketing of OTC analgesics. Advertising can give a false sense of security of advertised drugs and contribute to the increased request for the prescription of drugs.[31] It was mentioned that especially younger people become inclined to indiscriminate use of OTC analgesics and that OTC analgesics, such as those in the form of effervescent tablets, are seen as harmless. This observation is consistent with the results of

several studies that have found that younger people are more inclined to share medications than older ones.[1,5,21] However, Goldsworthy et al did not find a correlation between age and lending medication.[8]

Education was mentioned as one potential solution for preventing patients from sharing prescription analgesics, as well as prompting patients to read information about a drug, and encouraging general practitioners to enquire with patients about the contents of their home pharmacy. It was reported that 10% of respondents kept medicine for future use.[5] A previous systematic review and meta-analysis, which included 14 studies of patient education interventions in primary care, found that patient education, especially issued by physicians, increases long-term reassurance in patients with acute low back pain.[32] Another systematic review and meta-analysis with nine trials reported that therapeutic patient education has an effect for patients with migraine.[33] However, one study showed that pain management training of health care professionals is not adequate.[34] Fishman et al recommended early education about pain management in order to annul incongruity between students' opinion and the reality they are facing in their practice.[24] Therefore, careful consideration of potential remedies for patient sharing prescription is in order, and future studies on that subject would be welcome.

Limitations

This study had several limitations. There is a possibility of a nonresponse error, that is, risk that those that did not respond have different views from those who did. There may be cross-cultural differences, health and prescription drug delivery systems between different countries and this needs to be taken into account when interpreting the results. The sample size was rather small, with 15 PMPs included. However, based on a survey of pain clinics in Croatia, published in 2015, there were 70 anesthesiologists employed in them.[35] If this number is still the same, this sample constitutes 21% of the PMPs who work in pain clinics in Croatia. With larger sample size, the results could be more compelling and statistical comparisons between responses might then be possible. Temporal patterns were not analyzed in this study; physicians could have observed analyzed behavior recently or long time ago, since some of them were practicing for a long time. The study did not separate opioids from non-opioids and OTC analgesics. The risk and safety profile of different analgesics are different; since this qualitative study served for hypothesis generation, future studies can address these issues in a structured manner. This study did not differentiate between practice settings for PMPs in cancer pain vs chronic pain management, because pain clinics are not specialized for different types of pain; observations of the included participants were simply recorded. Physician and patient populations would be expected to have different attitudes regarding sharing medications; therefore, future studies on this topic should analyze such perception of risk among patients.

Conclusion

The majority of physicians specialized in pain management have come across patients sharing prescription analgesics. Most of them considered this as risky behavior with a number of potential consequences. It has been noted that this problem is neglected and that physicians should inquire about drug sharing. Direct-to-consumers advertising was perceived as a factor contributing to such behavior. Patient education and more involvement of physicians in identifying this behavior were cited as potential remedies for preventing sharing of prescription analgesics.

Disclosure

The authors report no conflicts of interest in this work.

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ORIGINAL RESEARCH

Risk perception about medication sharing among patients: a focus group qualitative study on borrowing and lending of prescription analgesics

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Background: One form of self-medication is sharing of medications, defined as borrowing or lending medications in situations where the receiver of these drugs is not the individual to whom the medications were allocated.

Objective: To explore experiences and opinions of patients about sharing prescription analgesics, reasons for sharing prescription analgesics, the way in which patients choose to share those medications, their awareness of risk regarding sharing prescription analgesics, and how they estimated the potential risk.

Methods: This qualitative study was conducted by focus group discussions with 40 participants led by a moderator trained in focus group methodology using a semi-structured moderator guide. Adults aged ≥18 years who had received a prescription for an analgesic at least once in a lifetime were included. Six separate focus groups were conducted to discuss participants' perception of risks associated with sharing of prescription analgesics among patients. Additionally, participants filled out two questionnaires on demographic data, their own behavior regarding sharing analgesics, and their attitudes about risks associated with sharing prescription analgesics.

Results: In a questionnaire, 55% of the participants indicated that they personally shared prescription analgesics, while subsequently in the focus group discussions, 76% confessed to such behavior. Participants recognized certain risks related to sharing of prescription analgesics, mentioned a number of reasons for engaging in such behavior, and indicated certain positive aspects of such behavior. Forty-five percent of the participants indicated that sharing prescription analgesics is riskier than sharing nonprescription analgesics.

Conclusion: There is a prevalent attitude among participants that sharing prescription analgesics is a positive behavior, where potential benefits outweigh risks.

Keywords: pain, self-medication, drugs, risk awareness, risk estimation

Introduction

Several studies have found that the most commonly used drugs for self-medication are analgesics.[1–8] Medication sharing is defined as borrowing or lending of drugs in situations where the receiver of these drugs is not the individual to whom the drugs are allocated.[9] The expression "lending" medications would imply that it is a provisory transfer of the medication, provided that the amount borrowed be returned; however, an individual "borrowing" a medication usually does not give back the medication to the individual who is "lending" it.[10]

Knowledge and awareness on the phenomenon of medication sharing between patients is very limited.[11] Individuals who borrow medications may thus lose an opportunity to receive optimal treatment and may delay use of professional help, and such

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medication may also mask clinical presentation and severity of disease. Furthermore, this behavior may be associated with unexpected side effects, adverse drug interactions, addiction, teratogenicity, drug abuse, intentional and unintentional poisoning, and misshapen perception of ineffectiveness of medications.[4,5,9,12–14] Beyene et al in their systematic review concluded that there is insufficient data on reasons for medication sharing, how patients decide to engage in medication sharing, whether they are aware of the potential risk, and how to estimate that potential risk.[10]

In this qualitative study, we analyzed experiences and opinions of patients about sharing prescription analgesics, reasons for sharing prescription analgesics, the way in which patients choose to share medications, their awareness of risk regarding sharing prescription analgesics, and how they estimate the potential risk.

Methods

Ethics

After reviewing the submitted research protocol, the Ethics Committee of the University of Split School of Medicine approved the study. The study was conducted according to the principles expressed in the Declaration of Helsinki. Informed consent, written and verbal, was obtained from all of the participants.

Participants

This qualitative study involved 40 participants in six focus groups. Number of participants and focus groups was determined based on medians reported in a study on methodological aspects of focus group studies, where the median was five focus groups. The sixth focus group was included to reach a point of saturation.[15]

Potential participants were prescreened by family physicians (DV, MP), and those who had received prescription analgesic at least once were invited to participate in the study.

Each focus group consisted of four to 12 participants. For the purpose of this manuscript, focus groups were coded with first six upper-case letters of the alphabet (A–F), and participants in each focus group were coded with first four to 12 lower-case letters of the alphabet (a–l). Potential participants received written information with details about research team, research protocol, guarantee of anonymity, and that the authors intended to publish study results in a research journal.

Participants included were adults aged ≥18 years who had received prescription analgesic at least once in a lifetime and spoke Croatian language. Exclusion criteria were mental health problems and an inability of verbal expression.

Research team and reflexivity

There were four researchers in the team (LP, DV, MP, and FM). Prof. LP is MD, PhD, and employed at the University of Split School of Medicine in Split, Croatia, as a researcher in the Laboratory for Pain Research and a lecturer at the Department of Histology and Embryology. DV is MD, PhD and affiliated with the University of Split School of Medicine in Split, Croatia, as a lecturer at the Department of Family Medicine. She also works as a specialist of family medicine. MP is MD, and employed at the Health Centre Imotski, Croatia. FM is MD, MSc, and works at the University Clinical Hospital Mostar, Bosnia and Herzegovina, as a specialist of clinical pharmacology and toxicology, and is the Head of the Centre for Clinical Pharmacology.

Potential participants received invitation to participate in the study together with detailed information about the study via study researcher who recruited them. Participants were also informed that they were not obliged to answer all the questions if they did not want to.

Questionnaires and focus group discussion

In addition to written information about the study that the participants received before consenting to participate, at the beginning of each focus group meeting, the same introduction about medication sharing was given by one study author (FM) to ensure that the participants understand the concept of prescription medication sharing.

Participants filled out two short questionnaires and participated in the discussion about sharing of prescription analgesics. First questionnaire was distributed before focus group discussion, and the second one after the discussion. In the first questionnaire, participants answered questions about their own behavior regarding medication sharing. In the second questionnaire, participants were asked to write their associations regarding multiple statements about medication sharing. We applied consolidated criteria for reporting qualitative research (COREQ) as an assistance tool for conducting and reporting the study.[16] For discussions, semi-structured interviews were conducted with patients in order to detect whether they considered that sharing drugs is risky and if they recognized potential negative consequences of prescription analgesics sharing. Use of semi-structured interviews enabled comparison of interviews, but also provided an option to include issues raised by participants that were not anticipated, but were regarded important.[17] Two questionnaires were used for triangulation purposes, to collect more data from the participants, and also to compare results of

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anonymous questionnaires with information shared during the focus group. Previously published literature was used to develop the questionnaires.[9,13,18,19] A list of questions used in the study is presented in the Supplementary material.

Focus group locations

The first focus group (A) discussion was conducted at the premises of the Society for Diabetes in Split, with two researchers (LP and FM). Interview was conducted in a room with an open door, but nobody else was present at the premises. Focus groups B and C were conducted at the University of Split School of Medicine, with two researchers (LP and FM). The focus group D was conducted in Mostar, with one researcher (FM). Focus groups E and F were conducted at the Health Centre Imotski, with one researcher (FM).

Analysis

All discussions about medication sharing were audio-taped. Transcripts were then analyzed by using qualitative content analysis.[20] It is a method for analysis of semi-structured interviews with experts because it is used to encode the text to a predetermined systematic coding that can be matched and supplemented with new issues that may arise during the interview. Predefined encoding system for this study was based on risk categories that were identified in previously published literature about drug sharing.[12] Coding was done by two researchers (FM, LP) from the author team independently. Specific risks were divided into appropriate categories. Meaningful units (complete sentences or parts of sentences) were defined as the analysis unit. Results were compared among researchers. The frequency of risks mentioned in discussions and spontaneously mentioned risks were described using descriptive statistics to indicate their relative importance in individual risk categories. For questionnaires, answers were coded, and frequency of answers was presented using descriptive statistics. The data were interpreted by the study authors.

The study questionnaires and focus group discussions were in Croatian. The questions and the participants responses have been translated into English for inclusion in this paper.

Results

The study included 40 participants (25 women and 15 men). The average age of participants was 56.3 years (range 20–83 years). The key finding of the study was that for the majority of the participants, sharing of prescription analgesics was normal, and they did not worry a lot about the possible negative consequences of such behavior. Patients were more interested in reducing the suffering of pain and maintaining good interpersonal relationships than potential dangers.

Participants' experiences and opinions about sharing analgesics

Almost all participants engaged in sharing of analgesics. Frequency of participants' sharing of analgesics and participants' awareness of risks related to sharing those drugs are shown in Table 1.

Lending prescription pain medication (n=22, 55%) was more common than lending nonprescription pain medications (n=20, 50%). There were 15 (38%) participants who indicated that they are lending both prescription and nonprescription analgesics. Less than half of the participants (n=17, 44%) borrowed pain medication from others. Lending of analgesics was more frequent than borrowing; 31% (n=12) of participants indicated that they were lending nonprescription analgesics and borrowing analgesics; 33% (n=13) of participants mentioned lending prescription analgesics and borrowing analgesics; and 28% (n=11) of participants stated lending both, nonprescription and prescription, analgesics and borrowing analgesics. There were 28% (n=11) of participants who indicated that they never lend and/or borrow pain medications.

Participants indicated that they shared analgesics usually with family/relatives and/or friends and/or neighbors, and less usually with work colleagues and/or acquaintances.

Through discussion in focus groups, more participants (76%) indicated that they personally shared prescription analgesics than they previously declared in the first questionnaire (55%). Probably, during discussions, some participants recalled a situation in which they shared analgesics, prompted by other participants' responses. Some participants later said they did not fully comprehend what does it mean to share medications, and for example, whether sharing medications with their wife or husband should also be reported. Participants indicated that medications prescribed to the spouse were considered a "common property" in the household. Two participants said that they shared analgesics only with their spouses (focus group participants [FGPs] Ae and Cd).

Some participants imparted their experiences and opinions about analgesic sharing.

> I once gave my prescription medication Zaldiar [tramadol with paracetamol] to my sister, who is 93 years old. After a leg surgery she had severe pain. Because the first tablet of Zaldiar she took from me did not help her, she did not want to take another tablet. [FGP Bd]

Table 1 Frequency of participants' sharing of analgesics and their awareness of the risks related to sharing those drugs

Question*	Responses						
	Focus group A	Focus group B	Focus group C	Focus group D	Focus group E	Focus group F	Total
Have you ever given someone your pain medication that you did not get by prescription?	Yes: 0	Yes: 5	Yes: 0	Yes: 2	Yes: 10	Yes: 3	Yes: 20
	No: 6	No: 2	No: 4	No: 2	No: 2	No: 4	No: 20
	Ø: 0	Ø: 0	Ø: 0	Ø: 0	Ø: 0	Ø: 0	Ø: 0
Have you ever given someone your prescription pain medication?	Yes: 1	Yes: 2	Yes: 1	Yes: 2	Yes: 11	Yes: 5	Yes: 22
	No: 5	No: 5	No: 3	No: 2	No: 1	No: 2	No: 18
	Ø: 0	Ø: 0	Ø: 0	Ø: 0	Ø: 0	Ø: 0	Ø: 0
Have you ever taken pain medication from a person who is not a physician?	Yes: 1	Yes: 2	Yes: 0	Yes: 3	Yes: 9	Yes: 2	Yes: 17
	No: 5	No: 5	No: 4	No: 1	No: 2	No: 5	No: 22
	Ø: 0	Ø: 0	Ø: 0	Ø: 0	Ø: 0	Ø: 0	Ø: 1
When you took pain medication from another person, did you also take the accompanying package insert with information about the medication?	Yes: 0	Yes: 1	Yes: 0	Yes: 2	Yes: 5	Yes: 2	Yes: 10
	No: 4	No: 5	No: 4	No: 2	No: 7	No: 5	No: 27
	Ø: 2	Ø: 1	Ø: 0	Ø: 0	Ø: 0	Ø: 0	Ø: 3
When you took pain medication from another person did you think it might be risky?	Yes: 4	Yes: 4	Yes: 3	Yes: 3	Yes: 4	Yes: 5	Yes: 23
	No: 1	No: 2	No: 1	No: 1	No: 8	No: 2	No: 15
	Ø: 1	Ø: 1	Ø: 0	Ø: 0	Ø: 0	Ø: 0	Ø: 2

Notes: Ø = no answer. *This is an English translation of the original version of these questions, which were presented in Croatian.

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I am lending and borrowing analgesics. I shared them with my children, husband, neighbors and work colleagues. It was the Aspirin from Bayer (authors note – generic name: acetylsalicylic acid). With this drug I rescued people and they rescued me when it was needed. I was careful about the expiration date; when it runs out I throw them. [FGP Bf]

One participant from focus group F recounted story from his childhood, which happened about 50 years ago. At that time, a neighbor stole one tablet of analgesic from the participant's house. The analgesic was prescribed by a veterinarian for the participant's cow. The next day, the neighbor confessed that to the participant's mother. Since the neighbor claimed that the analgesic was effective, the participant's mother decided to give the neighbor two more tablets.

Reasons for sharing prescription analgesics and the way in which patients choose to share medications

Distrust in physicians was indicated as one reason for engaging in medication sharing.

When it hurts, I could eat a snake if it will help. If there was no pain then I would not take anything. I trust more another patient than a doctor, honestly. I prefer an advice from a patient with the same experience than a doctor. [FGP Ac]

Inconvenience of contacting a physician and persons nearby having a drug available were reasons for medication sharing among some participants.

For me it is good to take a medication from someone because it allows me to skip a visit to the doctor and waiting in line. [FGP Dd]

Medication sharing may be fostered by unusual situations, such as when someone does not have access to a health care professional or accessibility of a drug in a pharmacy, for example, during the hiking (Bd) or working as a captain on a ship (FGP Cb). Some participants indicated willingness to share analgesics if someone has emergency situations such as "intensive pain".

Only if someone really has a strong pain, then it is ok for me to share an analgesic. [FGP Cd]

Sometimes, prescription analgesics were shared reluctantly.

I gave ibuprofen, which I got via prescription, several times to my neighbor. I did not want to do this and I was trying to discourage her, but she insisted. [FGP Ca]

For many participants, medication sharing was something normal and the way to maintain good relations with individuals in their life. Participant Bg, who is doing a lot of fieldwork, stated that his coworkers often suffer from pain and that sharing analgesics occurs commonly among work colleagues. Participant Ec commented that in his surroundings, there exists an opinion that people who experience pain in the same location can use the same medication.

I engage in such behavior only to maintain good neighborly relations. [FGP Cc]

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> Medications are shared more out of necessity than for economic reasons. We are used to that. It is a habit, we do not even think about it. [FGP Da]

Two participants emphasized that they borrow only analgesics which they know well (FGPs Ee and Ek).

> I think that is normal. People have always shared drugs and they always will be shared. [FGP Ea]
>
> It is okay to help someone when it hurts him. We should not always question the situation when someone's in pain. [FGP Ed]

Participants' awareness of risk regarding sharing prescription analgesics and how participants estimate the potential risk

Most of the participants considered it risky to borrow analgesics from another person. As possible harmful hazards and consequences, they mentioned side effects (FGPs Aa, Ab, Ae, Af, Ba, Bc, Bd, Cb, Cd, Ea, Ec, Fb, and Fe), allergies (FGPs Ae, Bd, Cb, Ee, and Ff), fear (FGP Da), threat to life (FGPs Eb and Fb), a possibility that given analgesic does not relieve the pain (FGP Fd), a possibility that dangerous combination of drugs may happen (FGPs Ed, Ee, and Ej), potential inappropriate use of medications (FGPs Ee and Ej), and a waste of time in treatment (FGP Cc). Three participants expressed that they did not know anything about risks related to borrowing medication (FGPs Ca, Fa, and Fc).

One participant described his experience when his neighbor had serious allergic reaction to acetylsalicylic acid and emphasized:

> If someone asked for an analgesic and complained of severe pain I would have told him to take them on their own responsibility. It helped me, but I do not know if it would help you. [FGP Ae]

Some participants had specific advice about using medication.

> Those who have problems with the stomach should take something based on acetaminophen. People should always estimate how long they can endure the pain, because there is a risk. [FGP Bf]
>
> I know that medications for pain affect the digestive tract, so I always reduce the recommended dosage and duration of drug administration. [FGP Bd]

Three participants stated that they always read instructions for medications written on the package insert, and therefore, they do not want to give their drugs to others (FGPs Bb, Bd, and Cd). Although, one participant commented:

> If I would read side effects in instructions for medications I would never take any medications, because they can have hundred side effects on the list. [FGP Ee]

One participant said that whoever is looking for medication should read instructions and decide on their own whether to take the medication (FGP Fc). Some participants said they think more about how to alleviate the pain than they think about risks (FGPs Bg, Db, Dc, Dd, and Ea).

A person lending his/her own medication may be exposed to the following risks, according to the participants: remorse/moral responsibility (FGPs Aa, Ab, Ae, Bc, Bd, Bg, Cb, Cc, Cd, Ca, Da, Db, Ec, Ee, Ef, Eh, Ei, Ej, Ek, El, Fb, and Ff), legal accountability (FGPs Dd, Ed, Ee, Ef, Ek, and El), remains without his/her own medications (FGPs Ca, Cc, Da, Eb, Ee, Eg, Ek, and El), imputation (FGP Ca), and regrets if the medication would not help (FGPs Fd and Fe). Two participants considered that a person lending his/her own medications could not be subject to any of risks indicated by other focus group members (FGPs Ea, Fc, and Fg). One participant stated:

> The responsibility exists only if children are involved. [FGP Bf]

One participant commented:

> I ran out of the medication when I give it. I do not like to give medication. That's why I often say that I do not have a medication, although I have it. I do not know how a drug will affect someone else. I do not want to be responsible if something happens and someone might say that I poisoned that person. I'm afraid that I will be charged if something bad happens. I do not want to hear something like – who knows whether the medicine was fresh, who knows what she gave her [...] I do not like to talk to others about medications that I am taking so that they would not ask me to give them some. Some other people like to list medications they are taking and they like to inquire about other people's medications. [FGP Ca]

One participant stated:

> [...] I think it is a greater sin to not give someone an analgesic when it hurts, than the risk that something bad will happen if I give it [....] [FGP Db]

Similarly, a participant said:

> Helping people should be the most important. [FGP Dc]

There were 45% of participants who indicated that sharing prescription analgesics is riskier than sharing nonprescription analgesics. Several participants expressed having more confidence in medications that were prescribed by their doctor

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than in medication they bought themselves (FGPs Bb, Ca, Cb, Cc, Ea, Ec, Ed, and Eg). Their explanation was that their doctor knows "pains" better and which medicines are adequate.

In the second questionnaire, participants were asked to provide free associations and open-ended answers related to the risk of taking analgesics from other people (Table 2), to indicate how they would describe individuals who give their drugs to others (Table 3) and individuals who take drugs from others (Table 4). Most of the participants responded to these questions, indicating either approval of behaviors involving sharing prescription medications, or neutral position, or their disagreement and condemnation.

More than half of participants (n=22, 55%) had negative free associations related to risk of taking prescription pain medications from other people. Only seven respondents (18%) had positive and six respondents had neutral free associations related to that risk. Half of the respondents described individuals who give their prescription drugs to others positively, while 14 (35%) respondents described them negatively. Thus, individuals who took prescription drugs from others were described negatively by half of respondents.

The great majority of participants noted that physicians should take measures to prevent sharing of prescription analgesics among patients. They suggested that physicians should

Table 2 Free associations related to the question: What comes to your mind first, in relation to a risk of taking pain medications from other people?

Focus group A	Focus group B	Focus group C	Focus group D	Focus group E	Focus group F
Irresponsibility toward your health	Fear	Side effects	I think I'll get dizziness, nausea, become panicked	Nothing	Fear
Contraindications	That would hurt me	It is a great risk to give another own medication	Fear of the consequences when I take the drug without sufficient information about it	Nothing at all	That will be easier for me
I want the pain to go away as soon as possible	Gastric irritation			Will it help me?	That will help me
I need to read twice the instructions for medication and I need to consider it carefully	Horror			Before this discussion, I never thought about that	Allergy
Similar to me	Do not give it			Perhaps allergic reactions	
Contraindications, side effects	Solidarity		This is a boring topic, I believe that drugs which I take are not very harmful	First, it comes to my mind that I will help the person to alleviate pain	
	Contraindications		Side effects	Drug interactions, allergic reactions	
				Allergic reaction	
				Allergy	
				Allergic reactions, incorrect dose of a drug, incorrect way of taking the drug, antagonistic effect of the drug	
				Complications for own life	

Note: The original responses were given in Croatian and have been translated to English.

Table 3 Free associations related to the question: How would you describe people who give their drugs to others?

Focus group A	Focus group B	Focus group C	Focus group D	Focus group E	Focus group F
They are as careless as persons who take unnecessary medication	Good	Irresponsible	Like myself, "good people", because we all want the pain to pass as soon as possible	They primarily want to help, they think less about the consequences	Irresponsible, but good
Irresponsible	They are not nice people	Undesirable		Good people, helping	Human
Similar to me	That's life	Undesirable. I would not give		Philanthropists	Good
Irresponsible	Good people		They share their experience with the drug with others	Ok people	It would be better if nobody would give anything to anyone
No way	Irresponsible		Good people	They are generous and willing to help	One should not indulge in giving drugs without a professional, without the need, it can be very dangerous
	Thoughtless		They are willing to help people in need	They are willing to help	
	Naive – irresponsible			Good	Benevolent
				Both must be aware of the responsibilities and risks	Humanely
				Humanitarian	

Note: The original responses were given in Croatian and have been translated to English.

Table 4 Free associations related to the question: How would you describe people who take drugs from others

Focus group A	Focus group B	Focus group C	Focus group D	Focus group E	Focus group F
A careless person	I do not know	Undesirable behavior	Maybe they ran out of a drug at a given time, although I think that people who use the therapy regularly obtain the new one as soon as possible	It hurts him and he is not thinking a lot	Irresponsible
Irresponsible	Unstable person	Careless		Shrewd	Rescuers
Crazy	Shrewd	Not good		Advanced	Ok
Not good	Needs	It is not good to take it from other person		I took drugs myself, too.	In case they need it and there are suitable drugs, let him take it
Reckless	Irresponsible			I cannot describe myself	I could say irresponsible
	Thoughtless			Careless	They take a drug out of need
	Naive – irresponsible			Good	If he needs some, let him take it
			Lazy to go and get their medication	If it hurts them, why not	
			Does not bother me and I do not think that they are doing something wrong	I can describe them as poor people, but they will be good, after they take a pill	
			Desperate people	Both must be aware of the responsibilities and risks	
				People in need	

Note: The original responses were given in Croatian and have been translated to English.

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warn, advise, instruct, inform, and educate patients about harmful consequences of sharing prescription medication. A participant from focus group D commented that it is "necessary to accelerate procedures at the family doctor and provide prescriptions for medications adapted to current needs and condition of a patient".

As possible benefits of giving one's analgesics to others, most frequent answers were pain relief and helping another person (21 participants). Financial savings and gratefulness were mentioned as potential benefits of medication sharing too. Five participants did not see any benefit in sharing prescription analgesics. Two respondents considered that the risk is greater than the benefit.

Thirteen participants considered that there are no harmful consequences in refusing to give someone an analgesic. Other participants mentioned the following as possible harmful consequences: pain/suffering (n=4), their own guilty conscience (n=5), and fear of the worsening of interpersonal relationships (n=5). One participant wrote that others might think she is a cheapskate if she refused them.

Discussion

Participants expressed various opinions related to sharing prescription analgesics, ranging from approving, neutral, and disapproving. Certain risks, but also benefits of this behavior, were recognized. As potential reasons for sharing prescription analgesics, participants indicated unusual situations when professional help is not available, distrust in physicians, inconvenience of contacting a physician, availability of a drug with persons nearby, financial savings, and accessibility of a drug in a pharmacy.

Even though this study was of qualitative nature and involved 40 participants, due to nature of the focus group methodology, prevalence of medication-lending behavior was considerably higher compared to other studies, where reported rate for lending medication was 6%–23%.[5,9,10,13,18,21–24] However, our findings correlate with study of Ali et al which found that 54% of respondents admitted to sharing their medications with friends and family members.[25] Prevalence for borrowing pain medication among our participants was 43.6%. In other studies, the reported ratio was 5.0%–51.9%.[4,5,9,10,13,18,19,21–23] In one study, more than half of students took leftover medications from family or friends,[25] and borrowing was less prevalent than lending, like in two previous studies.[18,24] However, in five studies, borrowing was more prevalent than lending.[5,9,13,21,22] About one-third of participants reported both lending and borrowing analgesics. In two other studies, 12%–16% indicated both borrowing and sharing medications.[5,22]

During discussions, more patients indicated engaging in prescription medication-sharing behavior compared to the first questionnaire. This could be due to their lack of understanding that sharing involves any other person, and some of them said that they did not consider that giving or taking a drug from spouse was "sharing medications" because they live in the same household and they considered their medications as their joint ownership. Some participants may have forgotten about such experiences, but they were prompted after hearing others' experiences. Participants' opinions may be influenced by group norms and may lead to bias. This is why we gave two anonymous questionnaires to the participants. Furthermore, we encouraged them to be open and detailed in their responses.

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Different behaviors may be associated with different types of medications. Our participants indicated that they share mostly paracetamol and nonsteroidal anti-inflammatory medications like in the previous studies.[1–4,19,26] Participants shared analgesics mostly with family, friends, and neighbors. In previous studies, it was found that medications were usually shared with family and friends.[7,10,19,22,27–30] In some cultures, sharing medications is a way of expressing care for family members when they are ill.[26,31,32] Desire to help others or oneself was the most reported explanation for sharing analgesics.

Borrowing medication for pain management was cited as an important reason in the study of Daniel et al.[9] In three earlier studies, the main situation in which borrowing occurred involved a person already taking a medicine but running out of it or having the similar medical problem as the person who had the medicine.[5,13,25] Such reasons are usually describing participants who share their medications with spouses. Some participants lent their leftover analgesics. In previous studies, primary explanations for lending behavior were having leftover medications.[5,13] Our participants reported the inconvenience of visiting a physician as a reason for sharing analgesics, like in the previous studies.[18,22]

Many of our participants (61%) were aware of risks related to the borrowing of analgesics, compared to 41% of borrowers aware of risks. Despite the possible risk, most of the participants considered that sharing analgesics is an acceptable behavior. These findings could suggest that those who are sharing and borrowing analgesics are underestimating potential health risks that are associated with this behavior. In an earlier study, many respondents were also aware of and worried about risk related to sharing of medications.[32] One study found that those who borrowed or shared medication considered they were at a lesser risk of side effects if they take other people's medicines.[22] Goldsworthy and Mayhorn in their study found that 37% of borrowers had experienced an adverse effect or an allergic reaction.[18] A study conducted in Australia found that people older than 65 years thought that sharing strong analgesics and the same prescription medication seemed to be acceptable.[24] In another study, adolescents assumed that medications would be shared if obtained from a family member or someone who "had the same problem" or someone who "knows something" about medicines, and in the case of pain.[9]

Written instructions for sharing analgesics were not taken by 65% of borrowers, which are worse than results of the study where half borrowers reported receiving written instructions as package inserts.[18] In one study, results showed that more than 60% of participants did not try to read the package inserts of their medications.[33] Some of the participants in our study mentioned intentionally using a lower dose of prescribed medication. One study found that the noncompliance to pharmacological therapy was associated with sharing analgesics.[34]

Even though the focus of our study was to analyze sharing of prescription analgesics between human beings, one case about sharing a medication prescribed to an animal was also described by a participant. We decided to describe this too, because maybe this behavior should be separately investigated, in order to see how often people engage in using medications intended for animals.

Our study indicated that physicians should be aware about patients' benevolent opinions about sharing prescription analgesics. Physicians should educate patients about dangers of such behavior, but also about the fact that over-the-counter medications are not harmless. Our recent study about opinions of pain management physicians regarding sharing of prescription analgesics among patients showed that majority of them believe that this is a negative behavior and that patients should be educated about its dangers.[35]

Limitations

Limitations of this study are those that are inherent for focus group discussions. There may be dominant persons in a group who can influence the conversation and tendencies toward socially acceptable and normative discourse. In this study, sample size was small due to study design.

Future large-scale quantitative studies can use these data for generating new hypothesis that may provide new insights about prevalence of sharing prescription medication and perceived risks. Additionally, we did not find any studies testing interventions for preventing such behavior, and therefore, such studies would be useful.

Conclusion

The attitude that sharing prescription analgesics is a positive behavior is prevalent among patients, where potential benefits outweigh risks. Physicians should be aware of the existence of this phenomenon among patients and warn patients about dangers of such behavior. Future quantitative studies should explore these attitudes on a large scale. There is also a need for testing interventions for reducing sharing of prescription analgesics.

Disclosure

The authors report no conflicts of interest in this work.

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Supplementary material

Table S1 Questionnaires used during focus group discussions

Questionnaire 1

1. Age: _____ years
2. Sex: M F
3. Have you ever given someone your pain medication that you did not get by prescription? Yes No
4. Have you ever given someone your prescription pain medication? Yes No
5. Have you ever taken prescription pain medication from a person who is not a physician? Yes No
6. When you took prescription pain medication from another person did you take also the accompanying package insert with information about a medication? Yes No
7. When you took prescription pain medication from another person did you think it might be risky? Yes No
8. From whom did you take prescription pain medication? _____
9. To whom did you give your prescription pain medication? _____

Focus group discussion questions:

1. Does anyone have any questions before we start discussion?
2. Firstly, describe situations in which you have taken pain medication from other people or you gave your pain medication to another person.
3. Did you give to others, or take from somebody, pain medications which can be obtained only by prescription?
4. What are possible risks or possible harmful consequences and danger for persons who take prescription pain medication from a person who is not a physician/health professional?
5. What are possible risks or possible harmful consequences and danger for a person who gives his/her prescription pain medication to other people? Could that person be exposed to some risks or harmful effects and dangers?
6. Is there a difference between the risk of sharing pain medications depending on whether the pain medication is prescribed or can be purchased over-the-counter without a prescription?
7. Is there a higher risk associated with drug sharing if the pain medication is provided via prescription or if it can be bought over-the-counter; please explain your opinion.
8. Please share with us your attitudes or any other thoughts about sharing pain medications.
9. Do you have any other comments about sharing prescription analgesics?

Questionnaire 2

Now, we kindly ask you to write any word that comes to your mind regarding sharing pain medications following these questions:

1. What comes to your mind first, in relation to a risk of taking pain medications from other people?
2. How would you describe people who give their prescription drugs to others?
3. How would you describe people who take prescription drugs from others?
4. Should health care workers do something to ensure that patients do not share their prescription drugs with others? If yes, what should they do?
5. What are the possible benefits of giving your prescription pain medications to others?
6. What are the possible harmful consequences if you refuse to give someone an analgesic who asks for it?

Note: This is an English translation of the original version of this questionnaire, which was presented in Croatian.

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ORIGINAL ARTICLE

Sharing of prescription analgesics amongst patients in family practice: Frequency and associated factors

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Abstract

Objective: To analyse the frequency of nonrecreational prescription analgesic sharing, associated factors and differences between lenders and borrowers.

Methods: A cross-sectional study was conducted in 10 outpatient family medicine practices in Croatia amongst 1000 patients to whom their physicians have prescribed analgesics at least once in their lives. A questionnaire was used to collect data about patients' pain intensity, prescription analgesic sharing habits, factors associated with this behaviour, perception of risks associated with the conduct and demographic data. Logistic regression was conducted to analyse independent factors associated with lending and borrowing prescription analgesics.

Results: We found that 61% of patients in family medicine practices engage in sharing prescription analgesics, whether it was lending (42%) and/or borrowing (54%). Independent predictors of lending prescription analgesics were as follows: history of sharing prescription medication other than analgesics, providing information regarding the medication alongside the prescription medication itself, not reading package insert that accompanies medication, subjective perception of personal health and decreased awareness of personal harm associated with prescription analgesic sharing. Independent predictors of prescription analgesic borrowing were as follows: younger age, communicating details regarding the medication that was given, scanning of package insert accompanying the medication, biased subjective perception of personal health and perceiving alternative medicine as a safer option over conventional medicine.

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Conclusions: Sharing prescription analgesics is highly prevalent amongst patients in family medicine. Healthcare providers should remain alert by routinely questioning patients regarding such behaviours. Preventive interventions should be conceived and established.

Significance: Sharing of prescription analgesics is a highly prevalent behaviour amongst pain patients, and there exist independent factors associated with such conduct. This information can be useful in the design of interventions aimed at mitigating analgesic sharing behaviour in the future.

1. Introduction

Patients are taking an increasingly active role regarding decisions that are made concerning treatments advised by their health practitioner, which may be potentially hazardous (Goldsworthy and Mayhorn, 2009; Beyene et al., 2016).

Prescription medication sharing is a common example of this rising medical involvement; this has been documented in previous studies with prevalence rates ranging from 5 to 54.3% (Thompson and Stewart, 2001; Daniel et al., 2003; Howell et al., 2006; Larson et al., 2006; Goldsworthy et al., 2008; Hall et al., 2008; Petersen et al., 2008; Wilens et al., 2008; Goldsworthy and Mayhorn, 2009; Ali et al., 2010; Auta et al., 2011; McCabe et al., 2011; Ward et al., 2011; Markotic et al., 2013; Beyene et al., 2014; Gascoyne et al., 2014; Ellis et al., 2015).

There are two types of prescription medication sharing behaviours: nonrecreational and recreational. Nonrecreational sharing consists of lending or borrowing medication for self-treatment purposes. Recreational sharing is illicit lending/selling or borrowing/buying of medication for nonmedical purposes. Majority of medication sharing behaviours is nonrecreational (Goldsworthy, 2010).

Nonrecreational sharing of medication bears both negative and positive features. Negative aspects include delayed seeking of medical care, increased risk of side effects, health complications associated with incorrect medication or multiplied risk of developing resistance to medication (Goldsworthy and Mayhorn, 2009; Dimitrov et al., 2012; Beyene et al., 2016). Justifiable aspects of this behaviour, as described in literature, include situations where medical aid is unavailable, inconvenience associated with contacting a physician, saving money, lack of faith in physicians, helping patients cope with pain, accessibility of drugs in pharmacies, availability of medication provided by close individuals and maintaining good interpersonal relationships (Hodgetts et al., 2011; Kamutingondo et al., 2011; Beyene et al., 2016; Markotic and Puljak, 2016; Markotic et al., 2017). Nonrecreational sharing of medication is mostly motivated by the desire to help others or oneself (Kamutingondo et al., 2011; Markotic et al., 2017).

In their systematic review published in 2014, Beyene et al. found only 19 published studies about drug sharing and concluded that there was not sufficient data regarding the reasons why medication is shared, on the methods patients choose to share medications, whether or not patients were aware of the risks, as well as patient personal judgement on the importance of these risks (Beyene et al., 2014). Previous studies indicated that medication sharing was associated with chronic illnesses, younger age, regular usage of Internet for medical information, nonadherence to medical regimens, lower socio-economic status and weaker assessment of personal physical and psychological health (Hogan et al., 1990; Daniel et al., 2003; Petersen et al., 2008; Markotic et al., 2013; Gascoyne et al., 2014).

According to our current knowledge, analgesics are amongst the most commonly shared prescription medications (Petersen et al., 2008; Wilens et al., 2008; Ward et al., 2011; Beyene et al., 2014). It is documented that 74% of borrowers indicated pain as one of the reasons for borrowing medication (Ward et al., 2011). Patients with chronic pain who reported higher pain, more symptoms of depression and problems with alcohol and/or substance abuse were more likely to borrow analgesics (Morasco and Dobscha, 2008). We recently conducted two qualitative studies about nonrecreational sharing of prescription analgesics that served as an incentive and source of information for the design of this study. We considered prescription medication sharing as lending/giving or borrowing/taking of medication in circumstances where the user of these medications was not the individual to whom the drugs were intended (Daniel et al., 2003). The first of those two

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qualitative studies showed that patients often positively perceive sharing of prescription analgesics as a behaviour that would benefit other individuals (Markotic et al., 2017). Our second qualitative study, which was conducted amongst pain management physicians, showed that they frequently came across patients who shared prescription analgesics. They stressed that this behaviour was undesirable and detrimental to others, while few revealed some positive features–the desire to help others and possibility for patients to test out new drugs that may benefit them, which could guide physicians in future prescriptions (Markotic and Puljak, 2016).

The aim of this study was to evaluate the frequency of nonrecreational prescription analgesic sharing, factors associated with such a behaviour, and to analyse the differences between lenders and borrowers in multiple patients followed by family practice. We wanted to supplement a quantitative perspective to the findings of our previous qualitative research, which was used for the preparation of a questionnaire for this study.

2. Methods

2.1 Study design

This was a cross-sectional study which included 1000 patients to whom their physicians had prescribed analgesics at least once in their lives.

2.2 Ethics

The study was approved by the Ethics Committee of the University of Split School of Medicine, and all participants gave written informed consent.

2.3 Setting

The study was conducted in 10 outpatient family medicine practices in five Croatian regions: Central Croatia, Northwest Croatia, Eastern Croatia, Northern Adriatic and Lika, Central and Southern Adriatic. Two practices, from an urban and a rural area, were included from each of the regions.

2.4 Inclusion and exclusion criteria

Inclusion criteria were as follows: adults, age ≥18, having received prescriptions analgesics at least once in their lives. Exclusion criteria were as follows: cognitive disorders and mental illnesses, which would prevent the participants from understanding the questionnaire.

2.5 Data collection

Participants were included consecutively as they visited the family medicine practice. Data were collected via a questionnaire developed specifically for this study. Two qualitative studies previously conducted amongst patients (Markotic et al., 2017) and pain management physicians (Markotic and Puljak, 2016), in which we analysed the risks associated with sharing of prescription analgesics, served as preliminary studies for this large-scale quantitative study. Results of those two studies served as a design for the questionnaire. The survey was piloted amongst five researchers and five lay persons to ensure that wording, content and language were appropriate. Feedback from the pilot testing was incorporated in the final version of the questionnaire.

The questionnaire required the participants to provide information regarding: (1) the list of analgesics they used at the time; (2) their opinion on their prescribed analgesics; (3) duration of pain and pain intensity on the 10-item numerical pain scale (where 1 indicated absence of pain and 10 as the worst possible pain), which best described their pain during the previous week; (4) incidences of lending and/or borrowing of prescription analgesics (respondents were asked directly whether they lent and/or borrowed medication); (5) personal perception of risks associated with sharing medication; (6) behaviour regarding sharing prescription analgesics; (7) personal characteristics; and (8) demographic data.

We followed a similar method to the one found in The Health Styles surveys. We asked the respondents whether they had ever given their prescription analgesic to another person, and whether they had ever taken a prescription analgesic from another individual. However, we did not restrict the potential answers to 'yes' or 'no'; seven choices were given in order to add precision to the answers. The first six referred to specific persons to whom they gave or from whom they took a prescription analgesic: immediate family, wider family, friends or acquaintances, colleagues from work, neighbours and other persons. The seventh response was 'somebody else' with a blank space left to fill out.

The following data on the patients were collected by the questionnaire: whether they read the paper-based instructions (package inserts) that came with medication; tendency to take (multi)vitamin supplements or other types of supplements; tendency to search for health information on the Internet; tendency of respondents to resort to alternative

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medicine; personal assessment of medical condition and attitudes towards medications.

Demographic variables collected from the participants were as follows: household size, education level, sex, age, region of residence and whether their residence was in an urban or rural area.

2.6 Data analysis

We calculated the sample size for a significance level set at 0.05 and precision of 3%, expecting the prevalence of 28% as in our previous study in the similar setting (Markotic and Puljak, 2016). We estimated that the adequate sample size would be 861 participants. The total number of included participants was 1000 because we expected around 10% of missing data for each question.

Frequencies and percentages, medians and interquartile range (IQR) were used in descriptive statistics. Kolmogorov–Smirnov test was used to determine whether data were distributed normally. Mann–Whitney U-test and Pearson's chi-square test were used for univariate analyses. These statistical tests were used because data distribution was not normal. Variables for which we found a significant difference between persons lending or borrowing prescription analgesics and persons not sharing analgesics at univariate analysis were further used for analysis of potential predictors in two separate logistic regressions. One logistic regression analysis was conducted to identify predictors of lending behaviour, and one for borrowing behaviour. Continuous variables were not transformed into categorical variables. The combined contribution to the dependent variable through significant predictors was reported (Nagelkerke R^2). Analyses were conducted with MedCalc statistical software, v 15.2.1 (MedCalc Software bvba, Ostend, Belgium). Statistical significance was set at $p < 0.05$.

3. Results

A total of 1 000 participants were included in this study. There were more women (62%) than men (36%). Median participants' age was 54 (IQR: 18–92 years). Median number of household members was 3 (IQR: 1–13). The majority of participants had high school education and were employed. The most common answer regarding self-assessment of health was 'satisfactory'. Most of the participants indicated that they did not use alternative medicine and that they did not think that it was a safer and more effective option compared to conventional medicine. Almost half of the participants searched for medical information on the Internet; 44% of participants took (multi)vitamin products (Table 1).

Sixty-eight per cent of participants had chronic pain, and thirty-seven per cent had chronic pain for more than 5 years (Table 1). Participants reported average pain intensity in the previous weeks of 4.8 ± 2.5 on the numeric scale 1–10. On average, at the time of the survey, participants were taking more than 1 analgesic (1.5 ± 0.7). The most commonly used nonopioid analgesic was ibuprofen ($N = 509$; 51%), and amongst opioids, it was

Table 1 Demographic and pain characteristics of the study participants (total $N = 1000$).

Features	Values
Gender, *N* (%)	
Women	619 (62)
Men	357 (36)
Age, years	
Median age (IQR)	54 (18-92)
Number of household members	
Median (IQR)	3 (1–13)
Education, *N* (%)	
Primary school or less	194 (19)
High school	604 (60)
Tertiary education	175 (18)
Work status, *N* (%)	
Student	15 (1.5)
Unemployed	148 (15)
Employed	437 (44)
Retired person	367 (37)
Duration of pain, *N* (%)	
<3 months	241 (24)
3 months–5 years	306 (31)
≥5 years	372 (37)
Ili	
<3 months (acute pain)	241 (24)
≥3 months (chronic pain)	678 (68)
Opinion regarding prescribed analgesics, *N* (%)	
My drugs are effective	783 (78)
My drugs are not effective enough	88 (8.8)
There are too many of them	32 (3.2)
I need more drugs	48 (4.8)
My physician prescribed them too early	14 (1.4)
My physician was supposed to prescribe them sooner	13 (1.3)
Personal assessment of their medical condition, *N* (%)	
Excellent or very good	182 (18)
Good or satisfactorily	550 (55)
Poorly	139 (14)
Indefinite	101 (10)
Using alternative medicine, *N* (%)	302 (30)
Opinion that alternative medicine is safer and more effective than conventional medicine, *N* (%)	179 (18)
Searching for health information on the Internet, *N* (%)	461 (46)
Taking (multi) vitamin supplements, *N* (%)	437 (44)

IQR, interquartile range.

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tramadol (N = 205; 21%). The majority of participants indicated that their analgesics were effective (Table 1).

Overall, 61% (595/975) of participants engaged in sharing of prescription analgesics, that is lending and/or borrowing of prescription analgesics. The prevalence rate for lending was 42% and 54% for borrowing. There were 45% participants who reported both lending and borrowing. Participants most commonly shared analgesics with family members, followed by colleagues, friends/acquaintances and neighbours (Table 2).

Thirty-six per cent of participants who were borrowing analgesics did not ask for the accompanying package insert containing information regarding the medication. Likewise, 32% of participants who were lending analgesics did not give the accompanying package insert. Nonetheless, the majority of participants indicated that they read the package insert when they took another individual's prescription analgesic. Sixty per cent of participants indicated that their physician had never questioned them about drug sharing and 64% of them did not inform their physician about this behaviour (Table 3).

Participants evaluated the risk associated with analgesics sharing using a 10-item numeric scale (1 = not probable; 10 = very probable). The mean participants' score for each suggested potential risk was above 5.0, indicating that on average they perceived this behaviour somewhat or very risky (Table 4).

Table 2 Patterns of analgesic sharing (total N = 1000).

Features	N (%)
Sharing analgesics	
Lending	415 (42)
Borrowing	537 (54)
Lending and borrowing	357 (36)
Lending and/or borrowing	595 (60)
Not sharing	380 (38)
No answer	25 (2.5)
Lending analgesics with	
Family	348 (35)
Neighbour(s)	64 (6.4)
Extended family	58 (5.8)
Friends and/or acquaintances	65 (6.5)
Colleague	77 (7.7)
Someone else	7 (0.7)
Borrowing analgesics with	
Family	418 (42)
Neighbour(s)	60 (6.0)
Extended family	47 (4.7)
Friends and/or acquaintances	91 (9.1)
Colleague	110 (11)
Someone else	15 (1.5)

Table 3 Attitudes and behaviours related to safety of prescription analgesic sharing (total N = 1000).

Questions/answers	N (%)
Did you ask for a package insert containing information about the medication together with borrowed prescription analgesic?	
Yes, verbal instructions	191 (19)
Yes, written instructions	203 (20)
No, nothing	361 (36)
No answer	245 (25)
Did you give a package insert containing information about the medication together with the lent prescription analgesic?	
Yes, verbal instructions	228 (23)
Yes, written instructions	177 (18)
No, nothing	320 (32)
No answer	274 (27)
Do you read the package inserts containing information about the medication?	
Yes, always	605 (61)
Usually	199 (20)
Sometimes	108 (11)
Rarely	34 (3.4)
Never	24 (2.4)
No answer	30 (3.0)
Did you inform your physician about your borrowing or lending of prescription medication?	
Yes	90 (9.0)
No	635 (64)
No answer	275 (28)
Have you ever discussed sharing prescription medication with your physician?	
Yes	313 (31)
No	597 (60)
No answer	90 (9.0)

When attitudes towards medications were analysed, we found that the majority of participants believed that the most trustworthy drugs were the ones prescribed by a family physician/general practice specialist (84%) and a clinical specialist (78%), while a mere 8.9% agreed that they mostly trusted medications coming from a person with the same problem. A fifth of participants agreed that over-the-counter drugs are harmless. Almost half of the participants agreed that prescription medications were more effective than over-the-counter medications. Very few participants believed that drugs advertised in the media are trustworthy and reliable (Table 5).

To analyse the association of drug sharing behaviour with independent variables from this study, we categorized participants into those who generally lend prescription analgesics and those who generally borrow prescription analgesics. According to the

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Table 4 Participants' assessment of likelihood of risk associated with sharing prescription analgesics.

Question	Total, M ± SD
Could you harm yourself if you borrow a prescription analgesic from another person who is not a physician?	6.2 ± 3.4
How likely is that someone else who borrows a prescription analgesic from a person who is not a physician will harm themselves?	6.3 ± 3.2
Do you think there are risks for you if you have lent your prescription analgesic to another person?	5.8 ± 3.4
What do you think, what is the probability that you will develop side effects from prescription medications in general?	5.1 ± 2.8
How likely is it that you will develop side effects after using prescription medications prescribed to someone else, if your problems are similar?	5.8 ± 3.1
How likely is that someone else will have side effects from the use of prescription medication prescribed to you, even if they had a similar problem?	5.7 ± 3.0

M ± SD = mean ± standard deviation.

results of logistic regression, independent positive predictors of lending prescription analgesics were as follows: history of sharing prescription medication other than analgesics, giving information about the medication together with their prescribed drug, failure to reading package insert, better perception of personal health (very good or good) and lower perception of personal harm if prescription analgesic was given to another person. The model explained 66% of variance (Nagelkerke R^2 = 0.66) (Table 6). Independent positive predictors of borrowing prescription analgesics were as follows: younger age, giving information about the medication together with their prescribed drug, tendency to read package insert, better perception of personal health (very good) and perception of alternative medicine as probably safer than standard medicine. The model explained 61% of variance (Nagelkerke R^2 = 0.61) (Table 7).

4. Discussion

Our results show that 61% of patients in family medicine engage in sharing prescription analgesics, with either lending (42%) or borrowing (54%) tendencies. Independent predictors of sharing prescription analgesics were somewhat different between persons lending and borrowing such drugs. However, not all of these predictors can be modified through interventions. Modifiable predictors include giving package insert or information about the drug together with medication, reading package inserts, perception of harm associated with sharing prescription analgesics, perception about alternative medicine and perception of personal health. Interventions addressing these behaviours and perceptions should be implemented. Age and previous sharing habits are nonmodifiable factors. Acknowledging these nonmodifiable factors may be useful to physicians when identifying patients who are at risk to sharing prescription medication.

Compared to our results, a higher prevalence of sharing prescription medication was found in only one qualitative study, where 66% of patients reportedly shared medication for HIV treatment (Groh et al., 2011). It is important to emphasize that the recall period differs between the studies on this topic, as some use a specific period for recall, such as 1 year and others use a lifetime recall (Beyene et al., 2014). Some studies did not report the recall period that was used (Daniel et al., 2003; Sorensen et al., 2003). In our study, we used a lifetime recall period and focused on prescription analgesics only. It was

Table 5 Attitudes towards medications in the whole sample (total *N*= 1000).

Statement	Very strongly or strongly agree, *N* (%)	Neither agree or disagree, *N* (%)	Very strongly or strongly disagree, *N* (%)
Over-the-counter medicines are harmless	202 (21)	284 (28)	465 (46)
Prescription medications are more efficacious than over-the-counter medications	493 (49)	232 (23)	220 (22)
I have most trust in medications prescribed by a family physician/general practice specialist	838 (84)	58 (5.8)	65 (6.5)
I have most trust in medications prescribed by a clinical specialist	796 (78)	96 (9.6)	56 (5.6)
I have most trust in medications that were recommended by a person with the same problems	89 (8.9)	168 (17)	693 (69)
I have most trust in drugs that are advertised in media (TV, newspapers)	37 (3.7)	101 (10)	813 (81)

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Table 4 Participants' assessment of likelihood of risk associated with sharing prescription analgesics.

Question	Total, M ± SD
Could you harm yourself if you borrow a prescription analgesic from another person who is not a physician?	6.2 ± 3.4
How likely is that someone else who borrows a prescription analgesic from a person who is not a physician will harm themselves?	6.3 ± 3.2
Do you think there are risks for you if you have lent your prescription analgesic to another person?	5.8 ± 3.4
What do you think, what is the probability that you will develop side effects from prescription medications in general?	5.1 ± 2.8
How likely is it that you will develop side effects after using prescription medications prescribed to someone else, if your problems are similar?	5.8 ± 3.1
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I have most trust in drugs that are advertised in media (TV, newspapers)	37 (3.7)	101 (10)	813 (81)

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Table 6 (*Continued*)

Independent variable	Coefficient	SE	Wald	OR	95% CI	*p*
Perception that they will develop side effects after using prescription medications prescribed to someone else, if your problems are similar	0.07	0.10	0.475	1.07	0.88–1.30	0.49
Probability that someone else will have side effects from the use of prescription medication prescribed to them, even if they had a similar problem	−0.14	0.11	1.445	0.87	0.70–1.09	0.23
Prescription medications are more efficacious than over-the-counter medications	−0.01	0.12	0.002	1.00	0.79–1.26	0.97
Having most trust in medications prescribed by a family physician/general practice specialist	0.17	0.23	0.540	1.18	0.76–1.83	0.46
Having most trust in medications prescribed by a clinical specialist	−0.09	0.25	0.125	0.92	0.56–1.49	0.72
Having most trust in medications that were recommended by a person with the same problems	0.25	0.14	3.060	1.28	0.97–1.70	0.08
Number of household members	0.14	0.11	1.603	1.15	0.93–1.43	0.21
Constant	0.99	1.26	0.63			0.4291

* = reference category, CI = confidence interval, OR = odds ratio, *p* = probability value, SE = standard error.
Nagelkerke R2 = 0.66, chi2 (df = 37) = 310.32, $p < 0.0001$.

previously reported that 74% of borrowers indicate pain as a reason for engaging in prescription medication sharing (Ward et al., 2011). We know from previous studies that analgesics were amongst the most commonly shared prescription medications (Petersen et al., 2008; Wilens et al., 2008; Ward et al., 2011; Beyene et al., 2014). Opioids and nonsteroidal anti-inflammatory drugs represented the most frequently borrowed drug types in a study where 18% participants indicated borrowing prescription medication at some point in their lives (Ward et al., 2011). Another study showed 52.7% prevalence rate of sharing prescription medication within a recall period of 1 year (Auta et al., 2011). During 1 year in Auckland, 24.1% of participants were lending and 25.5% were borrowing prescription medication (Gascoyne et al., 2014). The higher reported prevalence in our study could be attributed to the sample of participants used, consisting of adults aged ≥18 years, who received prescriptions analgesics at least once in their life. In this study, lending of prescription analgesics (42%) was less prevalent then borrowing (54%), which corresponded to the findings of other previous studies (Larson et al., 2006; Hall et al., 2008; Petersen et al., 2008; Wilens et al., 2008; Auta et al., 2011). A high prevalence rate (51.9%) of borrowing prescription medication was found in one previous study (Auta et al., 2011).

Previous research has shown that women are more likely to lend medication compared to men (Larson et al., 2006; Petersen et al., 2008; Wilens et al., 2008), but we did not find that gender was particularly associated with medication sharing in univariate analyses or as an independent predictor of such behaviour. Younger age was also an independent predictor of borrowing prescription analgesics in our study. It was previously reported that the prevalence of borrowing medication increases starting at the age of 15, but begins to decline near the fourth decennial (≥44 years). This group also includes women of reproductive age, with possible unintended and unrecognized pregnancies, who are at risk of potentially taking teratogenic medications (Larson et al., 2006; Petersen et al., 2008). Furthermore, we found that better perception of personal health is another predictor of sharing prescription analgesics. It is likely that patients who feel that their health is poor will consult a physician rather than resort to self-medication. A previous study reported that women who evaluated their health as being poor were more likely to lend and borrow medications (Petersen et al., 2008). Reasons for these differences should be explored in further research.

It is also worth emphasizing that there is no recommended standard method for measuring medication sharing. In our survey, we gave respondents seven potential options as answers to questions about lending and borrowing analgesics. The first six answers referred to specific persons to whom they gave or from whom they took a prescription analgesic (i.e. immediate family, wider family, friends or acquaintances, colleagues from work, neighbours and other persons), while for the seventh answer, respondents could indicate any other person not mentioned in the first six choices. We believe that

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Table 7 Results of the logistic regression analysis for independent predictors of borrowing prescription analgesics. Borrowing prescription analgesics is dependent variable (1 = borrowing, 2 = not borrowing).

Independent variable	Coefficient	SE	Wald	OR	95% CI	*p*
Age	−0.04	0.02	6.09	0.96	0.92–0.99	0.0136
Education						
Primary school or less	0.02	0.44	0.002	1.02	0.43–2.40	0.97
Highschool*	–	–	–	1	–	–
Undergraduate degree	0.02	0.42	0.002	1.02	0.45–2.34	0.97
Graduate degree	−1.08	1.06	1.03	0.34	0.04–2.73	0.31
Work status						
Unemployed	−0.68	0.42	2.622	0.51	0.22–1.15	0.11
Employed*	–	–	–	–	–	–
Retired person	0.02	0.50	0.001	1.02	0.38–2.71	0.97
Duration of pain						
<3 months	−0.66	0.41	2.656	0.52	0.23–1.14	0.10
3 months–2 years	−0.81	0.46	3.086	0.45	0.18–1.10	0.08
2 years–5 years	−0.19	0.45	0.187	0.82	0.34–1.98	0.67
>5 years*	–	–	–	1	–	–
History of sharing prescription medication that was not an analgesic						
Yes	0.63	0.42	2.189	1.87	0.82–4.28	0.14
No*	–	–	–	1	–	–
Availability of medication instruction						
Yes, verbal instructions	0.60	0.54	1.223	1.82	0.63–5.24	0.27
Yes, written instructions	−0.05	0.58	0.007	0.95	0.31–2.95	0.93
No, nothing*	–	–	–	1	–	–
Make available medication instruction						
Yes, oral	2.29	0.53	18.82	9.88	3.51–27.80	<0.0001
Yes, written	2.29	0.63	13.09	9.91	2.86–34.29	0.0003
No*	–	–	–	1		
Reading package insert that accompanies a medication						
Yes, always*	–	–	–	1	–	–
Usually	1.56	0.41	14.640	4.76	2.14–10.58	0.0001
Sometimes	0.56	0.50	1.24	1.74	0.66–4.64	0.27
Rarely	1.57	0.77	4.178	4.83	1.07–21.83	0.0410
Never	0.92	0.95	0.940	2.51	0.39–16.09	0.33
Perception of personal health						
Excellent	0.25	0.88	0.083	1.29	0.23–7.17	0.77
Very good	−1.24	0.48	6.523	0.29	0.11–0.75	0.0106
Good	0.53	0.43	1.513	1.70	0.73–3.95	0.22
Satisfactory	–	–	–	1	–	–
Poor*	−0.04	0.48	0.009	0.96	0.37–2.45	0.93
Indeterminate	0.64	0.51	1.573	1.90	0.70–5.19	0.21
Using alternative medicine						
Yes	−0.02	0.34	0.003	0.98	0.50–1.92	0.96
No*	–	–	–	1	–	–
Thinking that alternative medicine is probably safer than standard medicine						
Very probably	−0.57	1.11	0.261	0.57	0.06–5.02	0.61
Probably	−0.90	0.44	4.294	0.41	0.17–0.95	0.0383
Unlikely*	–	–	–	1	–	–
Searching for health information on the Internet						
Yes*	–	–	–	1	–	–
No	−0.39	0.38	1.051	0.68	0.32–1.43	0.31
I do not use Internet	−0.62	0.47	1.711	0.54	0.21–1.36	0.19
Taking (multi) vitamin supplements						
Yes	0.12	0.31	0.151	1.13	0.61–2.07	0.70

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Table 7 (*Continued*)

Independent variable	Coefficient	SE	Wald	OR	95% CI	*p*
No*	–	–	–	1	–	–
Perception of personal harm if they borrow a prescription analgesic from a person who is not a physician	−0.08	0.07	1.084	0.93	0.80–1.07	0.30
Perception of probability of personal harm if they borrow a prescription analgesic from a person who is not a physician	−0.14	0.08	3.020	0.87	0.74–1.02	0.08
Perception of personal harm if they have lent their prescription analgesic to another person	−0.08	0.06	1.904	0.92	0.82–1.04	0.17
Probability that they will develop side effects from prescription medications in general	−0.01	0.07	0.016	0.99	0.87–1.14	0.90
Perception that they will develop side effects after using prescription medications prescribed to someone else, if your problems are similar	−0.02	0.12	0.017	0.99	0.78–1.24	0.90
Probability that someone else will have side effects from the use of prescription medication prescribed to them, even if they had a similar problem	−0.03	0.13	0.065	0.97	0.75–1.25	0.80
Prescription medications are more efficacious than over-the-counter medications	0.01	0.11	0.005	1.01	0.81–1.26	0.94
Having most trust in medications prescribed by a family physician/general practice specialist	0.22	0.22	1.024	1.25	0.81–1.91	0.31
Having most trust in medications prescribed by a clinical specialist	−0.25	0.23	1.144	0.78	0.50–1.23	0.29
Having most trust in medications that were recommended by a person with the same problems	0.21	0.14	2.171	1.23	0.93–1.63	0.14
Number of household members	0.20	0.10	3.75	1.22	1.00–1.50	0.053
Constant	3.58	1.42	6.35			0.0117

* = reference category, CI = confidence interval, OR = odds ratio, *p* = probability value, SE = standard error.
Nagelkerke R2 = 0.61, chi2 (df = 43) = 278.56, $p < 0.0001$.

this might have contributed to a higher reported prevalence of prescription analgesic sharing because our previous qualitative study regarding this same subject showed that patients did not necessarily believe that sharing medication with immediate family was a problem, and even perceived prescription medications as a common property of a family (Markotic et al., 2017).

Despite expressing awareness of the risks associated with such a conduct, the sharing rates in our study remained high. Literature indicates that risk perception is a key factor influencing safe medical behaviours. However, little is known about the mechanisms through which risk perceptions influence safety behaviour. In risk assessment, people use rational and emotional perspectives. The rational ways of assessing risk include perceived probability, severity and usefulness. It has been reported that safety-related behaviours amongst workers relied mainly on emotional perceptions, but not rational calculations of risk. Authors concluded that individuals' emotions can be useful in understanding their perceptions (Xia et al., 2017). In another study, self-efficacy and trust in physicians amongst diabetic patients appeared to be more beneficial than risk perception for positive behavioural changes (food habits and exercise) and for improving depression (Imai et al., 2017). More research is required to understand how risk awareness can be used to prevent harmful behaviours.

The strength of our study is the inclusion of a large number of patients, as well as using statistical analysis for independent predictors of prescription analgesic sharing behaviour. Furthermore, the study was conducted in Europe, contributing to the body of knowledge about this subject across the globe. The majority of previous studies related to sharing medication was conducted in the United States, Australia and New Zealand, justifying the importance of future studies from other settings (Beyene et al., 2014).

Our study adds to the body of literature indicating that sharing of prescription medications is a prevalent behaviour amongst patients. Further studies should explore interventions for reducing such a risky behaviour.

4.1 Limitations

In this study, we used a survey as a research tool, which is in line with previous studies on the subject. The questionnaire was developed for the purposes of

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this study since there is no validated tool for this research topic and no standard gold method for such research. Furthermore, we used a long recall period because we asked participants if they had ever engaged in sharing of prescription analgesics. Using lifetime recall period may be associated with under-reporting. However, since the prevalence of sharing behaviour in our study was very high, we believe that the recall bias in our study is minimal. It is also possible that patient sampling could have introduced bias because patients were self-selected; that is, the nature of participation in the study was voluntary and patients could decline participation. Also, our sample may not be representative of the general population because participants were patients visiting their family physician/general practice specialist, so these could be participants that are generally more interested in their health. Even though each question about analgesics in the questionnaire asked specifically about prescription analgesics, it is possible that patients might have confused some prescription analgesics with OTC drugs, as in Croatia some of the prescription analgesics may be purchased as OTC drugs in smaller doses.

5. Conclusion

Despite being aware of the risks, sharing of prescription analgesics is a highly prevalent behaviour amongst family medicine patients. Healthcare providers should remain alert towards this behaviour by questioning their patients about such behaviours. Family physicians may not have time to do this due to short consultation time, but community pharmacists and other healthcare workers could be involved in strategies for preventing prescription medication sharing. Further studies about effective interventions for the prevention of such undesirable behaviours are warranted.

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Author contributions

All authors have made substantial contributions to making or revising this study and have read and approved the final version to be submitted. All authors discussed the results and commented on the manuscript.

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5. DODATCI

Dodatak 5. 1. Usporedba rezultata između ove doktorske disertacije i prethodno objavljene literature

	Prethodna istraživanja	Podaci iz ove doktorske disertacije
Učestalost dijeljenja lijekova.	• Od 5% do 66%	• 61%
Zašto se lijekovi dijele i kako pacijenti odlučuju dijeliti lijekove?	• Ostanak bez propisanih lijekova na recept • Nedostupnost medicinske usluge • Nedostatak novca za kupnju lijekova • Hitna situacija • Pogodnost	• Smanjivanje patnje • Održavanje dobrih međuljudskih odnosa
Posljedice dijeljenja lijekova na recept?	• Odgođeno traženje liječničke pomoći • Povećan rizik od različitih nuspojava vezanih uz uzimanje lijekova • Komplikacije vezane uz uzimanje neispravne doze lijeka • Povećani rizik od razvoja rezistencije na antibiotike (zbog subdoziranja ili prijevremenog prekida uzimanja) • Interakcije s drugim lijekovima ili zlouporabe vezane uz adiktivna svojstva nekih lijekova	
Da li su pacijenti svjesni rizika		• Većina pacijenata dijeljenje

dijeljenja lijekova?		analgetika na recept smatra normalnim ponašanjem i ne zabrinjavaju se oko mogućih negativnih posljedica.
Kako pacijenti procjenjuju važnost rizika dijeljenja lijekova?		• Smanjivanje patnje radi boli i održavanje dobrih međuljudskih odnosa važnije je od potencijalne opasnosti radi takvog ponašanja. • 45% pacijenata ispitanika se izjasnilo da je dijeljenje analgetika na recept opasnije nego dijeljenje analgetika koji se mogu kupiti bez recepta.
Prediktori dijeljenja lijekova?	• Dob od 15 do 44 godine • Procjena zdravstvenog stanje kao loše • Korištenje internet za informacije o zdravlju • Kronična bolest • Nezaposlenost • Veliki broj članova kućanstva • Niska primanja	• Neovisni prediktori za davanje analgetika na recept bili: – anamneza dijeljenja lijekova na recept koji nisu analgetici – pružanje informacija o lijekovima na recept koji idu uz taj lijek – ne čitanje uputa za lijek – subjektivna percepcija zdravlja – smanjena svjesnost štetnosti povezane sa dijeljenjem

		analgetika na recept • Neovisni prediktori za uzimanjem analgetika na recept su bili: – mlađa životna dob – priopćavanje pojedinosti o lijeku koji se daje – traženjem upute o lijeku – subjektivna procjena osobnog zdravlja – percepcija da je alternativna medicina sigurnija opcija od konvencionalne medicine

Dodatak 5.2. Pitanja korištena u polu-strukturiranom intervju u istraživanju za prvo kvalitativno istraživanje

***Prvi dio**: Pitanja o ispitanicima i ambulanti u kojoj rade*

Na početku vas molim za odgovor na nekoliko pitanja vezanih za vas i vašu ambulantu za liječenje boli:

1. Dob: _____ godina
2. Spol: M Ž
3. Koliko dugo godina radite kao liječnik anesteziolog? _____ godina
4. Koliko godina radite u ambulanti za liječenje boli?_____ godina
5. Koliko pacijenata prosječno posjeti vašu ambulantu za liječenje boli tjedno? _____

***Drugi dio**: Polu-strukturirana pitanja za razgovor s ispitanicima*

1. Susrećete li se u svojoj praksi s pacijentima koji dijele svoje receptne analgetike drugim pacijentima kojima nisu namijenjeni?
2. Kako doživljavate takvo ponašanje pacijenata?
3. Smatrate li da je dijeljenje receptnih analgetika među pacijentima kojima nisu namijenjeni rizično ponašanje?
4. Koji su mogući rizici, odnosno negativne, štetne posljedice, od dijeljenja receptnih analgetika među pacijentima?
5. Postoje li pozitivne strane dijeljenja receptnih analgetika među pacijentima?
6. Postoji li razlika između rizika od dijeljenja lijekova protiv bolova ovisno o tome je li lijek protiv bolova propisan na recept ili se može kupiti bez recepta?

Dodatak 5.3. Pitanja korištena u upitnicima i kao pitanja za raspravu u istraživanju za drugi kvalitativni pokus

***Prvi dio*:** *Upitnik sa sociodemografskim podacima*

1. Dob: _____ godina
2. Spol: M Ž
3. Jeste li ikad dali nekom svoj lijek protiv bolova koji niste dobili na recept? Da Ne
4. Jeste li ikad dali nekom svoj lijek protiv bolova koji ste dobili na recept? Da Ne
5. Jeste li ikad uzeli od neke osobe koja nije liječnik lijek protiv bolova? Da Ne
6. Jeste li pri uzimanju lijeka od druge osobe uzeli i uputu o lijeku koja se nalazi u kutiji lijeka? Da Ne
7. Jeste li pri uzimanju lijeka protiv bolova od druge osobe pomislili da bi to moglo biti rizično? Da Ne
8. Od koga ste uzimali lijekove protiv bolova? _____
9. Kome ste vi davali svoje lijekove protiv bolova? _____

Drugi dio*: pitanja korištena za raspravu u fokus skupinama ispitanika*

a) Ima li netko pitanja prije početka? (Odgovor na pitanja)

b) Počnimo s razgovorom o našoj temi. Za početak, opišite situacije u kojima ste uzeli lijek protiv bolova od druge osobe ili ste dali svoj lijek protiv bolova drugoj osobi. U kojim situacijama se tako nešto dogodilo?

c) Jeste li davali drugima ili od njih uzimali lijekove protiv bolova koji se dobivaju isključivo na recept?

d) Koji su mogući rizici, odnosno moguće štetne posljedice i opasnosti za osobu koja uzima lijek protiv bolova od osobe koja nije liječnik/zdravstveni djelatnik?

e) Koji su mogući rizici, odnosno moguće štetne posljedice i opasnosti za osobu koja daje svoj lijek protiv bolova drugim osobama? Može li i ta osoba biti izložena nekim rizicima, odnosno štetnim posljedicama i opasnostima?

f) Postoji li razlika između rizika od dijeljenja lijekova protiv bolova ovisno o tome je li lijek protiv bolova propisan na recept ili se može kupiti bez recepta?

g) Je li veći rizik od dijeljenja lijekova ako je lijek protiv bolova receptni ili bezreceptni, i obrazložite svoje mišljenje.

h) Stavovi prema dijeljenju lijekova protiv bolova.

Treći dio: *Upitnik s asocijacijama o stavovima prema rizicima povezanim s dijeljenjem analgetika*

1. Što vam prvo padne na pamet kad se spomene rizik od uzimanja lijekova protiv bolova?
2. Kako biste opisali ljude koji daju svoj lijek drugoj osobi?
3. Kako biste opisali ljude koji uzmu svoj lijek od druge osobe?
4. Bi li zdravstveni djelatnici trebali raditi na tome da pacijenti ne dijele svoje lijekove drugim pacijentima? Što bi trebali napraviti?
5. Koje su moguće koristi od davanja svojih lijekova protiv bolova drugim ljudima?
6. Koje su moguće štetne posljedice ako vas netko pita da mu date svoj lijek protiv bolova, i vi to odbijete?

Dodatak 5.4. Upitnik korišten u istraživanju za presječno kvantitativno istraživanje

1. **Koje lijekove protiv bolova uzimate i u kojoj dozi?**

……..

……
…

2. **Što mislite o lijekovima protiv bolova koji su vam propisani od strane liječnika?** (Moguće više odgovora)

- ☐ previše ih je
- ☐ trebam više lijekova
- ☐ moji lijekovi nisu dovoljno učinkoviti
- ☐ moji lijekovi su učinkoviti
- ☐ moj liječnik mi ih je prerano propisao
- ☐ smatram da mi ih je liječnik trebao prije uključiti

3. **Koliko dugo imate bolove?**

☐ manje od 3mjeseca ☐ 3 mjeseca-2 godine ☐ 2-5 godine ☐ dulje od 5 godina

4. **Na ljestvici od 1 do 10 (1=nema boli; 10=najjača moguća bol) označite koliki je prosječni intenzitet vaše boli u zadnjih tjedan dana?**

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10

5. **Jeste li ikad nekome <u>dali/posudili</u> svoj receptni lijek protiv bolova?** (Moguće više odgovora)

- ☐ da, užoj obitelji (suprug/a, djeca, roditelj, ...)
- ☐ da, široj obitelji
- ☐ da, prijateljima ili poznanicima
- ☐ da, kolegama s posla
- ☐ da, susjedu/susjedi
- ☐ da, nekom drugom (drugoj osobi,kućnom ljubimcu):……..
- ☐ ne, nikada to nisam učinio/učinila

6. **Jeste li ikada <u>uzeli</u> lijekove protiv bolova od nekog drugog?** (Moguće više odgovora)

- ☐ da, od uže obitelji (suprug/a, djeca, roditelj, ...)
- ☐ da, od šire obitelji
- ☐ da, od prijatelja ili poznanika
- ☐ da, od kolega s posla
- ☐ da, od susjeda/susjede
- ☐ od drugog nekog:……
- ne, nikada to nisam učinio/učinila

7. **Možete li se prisjetiti koliko puta ste do sada posudili svoj receptni lijek protiv bolova drugoj osobi i/ili uzeli receptni lijek protiv bolova od druge osobe**?

☐ nijednom ☐ 1 ☐ 2-3 ☐ ≥4 puta ☐ ne sjećam se

8. **Ako ste uzimali od nekog i/ili da li nekome receptne lijekove protiv bolova, molimo navedite koje:**

……

Za sljedećih 6 pitanja (pitanja 9-14) procijenite koliko su vjerojatni navedeni rizici tako da zaokružite jedan broj od 1 do 10, pri čemu 1 znači da taj rizik uopće nije vjerojatan, a 10 da je vrlo vjerojatan:

9. **Biste li mogli sebi naštetiti ako <u>uzmete</u> receptni lijek protiv bolova od druge osobe koja nije liječnik?**

□ 1 □ 2 □ 3 □ 4 □ 5 □ 6 □ 7 □ 8 □ 9 □ 10

10. **Koliko je vjerojatno da će netko tko uzme receptni lijek protiv bolova od osobe koja nije liječnik naštetiti sebi?**

□ 1 □ 2 □ 3 □ 4 □ 5 □ 6 □ 7 □ 8 □ 9 □ 10

11. **Smatrate li da postoje rizici za vas ako ste <u>dali</u> svoj receptni lijek protiv bolova drugome?**

□ 1 □ 2 □ 3 □ 4 □ 5 □ 6 □ 7 □ 8 □ 9 □ 10

12. **Što mislite, kolika je vjerojatnost da ćete razviti nuspojave od lijekova na recept uopće?**

□ 1 □ 2 □ 3 □ 4 □ 5 □ 6 □ 7 □ 8 □ 9 □ 10

13. **Koliko je vjerojatno da ćete vi imati nuspojave od korištenja lijekova na recept propisanih za nekog drugog, ako su vaši problemi slični?**

□ 1 □ 2 □ 3 □ 4 □ 5 □ 6 □ 7 □ 8 □ 9 □ 10

14. **Koliko je vjerojatno da će <u>netko</u> drugi imati nuspojave od korištenja lijeka na recept propisanog za vas, čak iako su imali sličan problem?**

□ 1 □ 2 □ 3 □ 4 □ 5 □ 6 □ 7 □ 8 □ 9 □ 10

15. **Jeste li ikada uzeli od nekog i/ili dali nekom receptni lijek koji nije protiv bolova?** (npr. antibiotik, lijekove za srce, lijekove za alergije, lijekove za probavne tegobe, lijekove za raspoloženje i smirenje, itd.)

□ Da □ Ne

16. **Ako ste uzeli receptni lijek od nekog da li ste tražili i upute za uzimanje tog lijeka?**

□ Da, usmene □ Da, pisane □ Ne, nikakve

17. **Ako ste dali svoj receptni lijek nekome da li ste dali i upute za uzimanje tog lijeka?**

□ Da, usmene □ Da, pisane □ Ne, nikakve

18. **Da li čitate papirnate upute koje idu uz lijek?**

□ da, uvijek □ uglavnom □ ponekad □ rijetko □ nikada

19. **Ako ste davali drugima i/ili posuđivali receptne lijekove, da li ste o tome obavijestili svoga liječnika?**

□ Da □ Ne

20. **Da li vas liječnik ikada pita jeste li davali i/ili uzimali od drugih lijekove koje vam je propisao na recept?**

□ Da □ Ne

21. **Kako ocjenjujete svoje zdravstveno stanje?**

□ odlično □ vrlo dobro □ dobro

□ zadovoljavajuće □ loše □ neodređeno

22. **Jeste li ikad potražili pomoć alternativne medicine (npr. travar, bioenergetičar, kiropraktičar…) za svoje zdravstvene probleme?**

□ Da □ Ne

23. **Smatrate li da je alternativna medicina sigurnija i učinkovitija od službene medicine?**

□ vrlo vjerojatno □ vjerojatno □ malo vjerojatno

24. **Da li na Internetu tražite informacije o zdravlju?**

□ Da □ Ne □ Ne koristim se Internetom

25. **Da li koristite multivitamine i/ili dodatke prehrani i/ili pripravke za jačanje imuniteta?**

□ Da □ Ne

26. **Je li ikad zaboravite uzeti Vaš lijek?**

□ Da □ Ne

27. **Jeste li povremeno nemarni u uzimanju Vašeg lijeka?**

□ Da □ Ne

28. **Kad se osjećate bolje da li ponekad prestanete uzimati svoj lijek?**

□ Da □ Ne

29. **Ako se osjećate lošije ponekad kada uzimate lijek, da li ga prestanete uzimati?**

□ Da □ Ne

30. **Molimo vas da zaokružite broj koji najbolje pokazuje vaše slaganje ili neslaganje sa sljedećim tvrdnjama:** (1= u potpunosti se ne slažem; 2= djelomično se ne slažem; 3= niti se slažem niti se ne slažem/neodlučan; 4= djelomično se slažem; 5= u potpunosti se slažem)

Lijekovi koji se mogu kupiti bez recepta su bezopasni.	1	2	3	4	5

Lijekovi na recept su učinkovitiji od lijekova koji se mogu kupiti bez recepta.	1	2	3	4	5
Imam najviše povjerenja u lijekove koje mi je propisao moj obiteljski liječnik.	1	2	3	4	5
Imam najviše povjerenja u lijekove koje mi je propisao specijalist.	1	2	3	4	5
Imam najviše povjerenja u lijekove koje su mi preporučile osobe s istim tegobama.	1	2	3	4	5
Imam najviše povjerenja u lijekove koji se reklamiraju preko medija (TV, novine)	1	2	3	4	5

31. **Koliko članova ima Vaše kućanstvo?**

Ima …… članova.

32. **Koji je Vaš status?**

☐ student ☐ nezaposlen/a ☐ zaposlen/a ☐ umirovljen/a

33. **Vaše obrazovanje:**

☐ Osnovna škola ili manje

☐ Srednja škola

☐ Fakultetsko (stručni ili sveučilišni preddiplomski, odnosno diplomski studij)

☐ Magisterij znanosti ili doktorat znanosti (poslijediplomski sveučilišni studij)

34. **Spol**

☐ muško ☐ žensko

35. **Koliko vam je godina?** Imam ……. godina

Dodatak 5.5. Potencijalni rizici povezani sa dijeljenjem, prepoznati od strane liječnika (1. rad)

Potencijalni rizici/negativne posljedice	**Kod ispitanika**														
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
Nuspojave			●	●	●	●	●	●	●	●				●	●
Povraćanje	●														
Gastrične tegobe/ulkus				●			●								
Krvarenje iz GIT	●														
Krvarenje	●								●	●		●			
Depresija disanja										●					
Alergije	●	●		●			●							●	●
Interakcije		●		●	●					●	●				
Predoziranje	●			●											
Zloupotreba lijeka					●							●			
Ovisnost					●					●	●	●			●
Neodgovarajuća doza		●		●										●	
Neodgovarajući analgetik/kontraindikacija							●						●	●	
Polipragmazija												●			
Aktivacija komorbiditeta														●	
Odgođeno traženje liječničke pomoći															●
Istek roka trajanja lijeka				●											

Dodatak 5.6. Učestalost dijeljenja analgetika među pacijentima i svjesnost rizika povezanih sa dijeljenjem tih lijekova u drugom kvalitativnom istraživanju (2. rad)

Pitanja	Odgovori po fokus skupinama i ukupno						
	A	B	C	D	E	F	Svi
Jeste li ikad dali nekom svoj lijek protiv bolova koji niste dobili na recept?	Da: 0 Ne: 6 Ø: 0	Da: 5 Ne: 2 Ø: 0	Da: 0 Ne: 4 Ø: 0	Da: 2 Ne: 2 Ø: 0	Da: 10 Ne: 2 Ø: 0	Da: 3 Ne: 4 Ø: 0	Da: 20 Ne: 20 Ø: 0
Jeste li ikad dali nekom svoj lijek protiv bolova koji ste dobili na recept?	Da: 1 Ne: 5 Ø: 0	Da: 2 Ne: 5 Ø: 0	Da: 1 Ne: 3 Ø: 0	Da: 2 Ne: 2 Ø: 0	Da: 11 Ne: 1 Ø: 0	Da: 5 Ne: 2 Ø: 0	Da: 22 Ne: 18 Ø: 0
Jeste li ikad uzeli od neke osobe koja nije liječnik lijek protiv bolova?	Da: 1 Ne: 5 Ø: 0	Da: 2 Ne: 5 Ø: 0	Da: 0 Ne: 4 Ø: 0	Da: 3 Ne: 1 Ø: 0	Da: 9 Ne: 2 Ø: 1	Da: 2 Ne: 5 Ø: 0	Da: 17 Ne: 22 Ø: 1
Jeste li pri uzimanju lijeka od druge osobe uzeli i uputu o lijeku koja se nalazi u kutiji lijeka?	Da: 0 Ne: 4 Ø: 2	Da: 1 Ne: 5 Ø: 1	Da: 0 Ne: 4 Ø: 0	Da: 2 Ne: 2 Ø: 0	Da: 5 Ne: 7 Ø: 0	Da: 2 Ne: 5 Ø: 0	Da: 10 Ne: 27 Ø: 3
Jeste li pri uzimanju lijeka protiv bolova od druge osobe pomislili da bi to moglo biti rizično?	Da: 4 Ne: 1 Ø: 1	Da: 4 Ne: 2 Ø: 1	Da: 3 Ne: 1 Ø: 0	Da: 3 Ne: 1 Ø: 0	Da: 4 Ne: 8 Ø: 0	Da: 5 Ne: 2 Ø: 0	Da: 23 Ne: 15 Ø: 2

Ø = bez odgovora

Dodatak 5.7. Asocijacije na pitanje: Što vam prvo padne na pamet kad se spomene rizik od uzimanja lijekova protiv bolova? (2. rad)

Fokus skupina A	Fokus skupina B	Fokus skupina C
➢ Neodgovornost prema svom zdravlju. ➢ Kontraindikacija. ➢ Da mi što prije prođe. ➢ Da pročitam dva puta upute i dobro razmislim. ➢ Slično meni. ➢ Kontraindikacija, nuspojava.	➢ Strah. ➢ Da će mi naškoditi. ➢ Iritacija želuca. ➢ Užas. ➢ Da ga ne dam. ➢ Solidarno. ➢ Kontraindikacije.	➢ Nuspojave. ➢ To je velik rizik dati drugome.
Fokus skupina D	**Fokus skupina E**	**Fokus skupina F**
➢ Mislim da ću dobiti vrtoglavicu, mučninu, uhvati me panika. ➢ Strah od posljedica kod uzimanja lijeka bez dovoljno informacija. ➢ Dosadno za slušati, smatram da lijekove koje uzimam nisu puno štetni. ➢ Nuspojave.	➢ Ništa. ➢ Baš ništa. ➢ Hoće li mi pomoći? ➢ Prije ovog susreta nisam baš razmišljala. Možda alergijske reakcije. ➢ Prvo mi padne na pamet kako ću toj osobi pomoći da je ne boli. ➢ Interakcije lijekova, alergijske reakcije. ➢ Alergijske reakcije. ➢ Alergija. ➢ Alergijska reakcija, pogrešna doza lijeka, pogrešan način uzimanja lijeka, antagonističko djelovanje lijeka. ➢ Komplikacije za vlastiti život.	➢ Strah. ➢ Da će mi biti lakše. ➢ Da će mi pomoći. ➢ Alergija.

Dodatak 5.8. Asocijacije na pitanje: Kako biste opisali ljude koji daju svoj lijek drugoj osobi? (2. rad)

Fokus skupina A	Fokus skupina B	Fokus skupina C
➢ Također neoprezna osoba kod uzimanja nepotrebnog lijeka. ➢ Neodgovorno. ➢ Slično meni. ➢ Nikako. ➢ Neodgovornima.	➢ Dobro. ➢ Nisu ljudi ugodni. ➢ Životnim. ➢ Dobri ljudi. ➢ Neodgovorne. ➢ Nepromišljeno. ➢ Lakovjerni – neodgovorni.	➢ Neodgovornost. ➢ Nepoželjno. ➢ Nepoželjno. ➢ Ja ne bi joj dava.
Fokus skupina D	**Fokus skupina E**	**Fokus skupina F**
➢ Kao i sebe, „dobrim osobama“ jer svi želimo da bol što prije prođe. ➢ Svoje iskustvo sa lijekom dijele s drugima. ➢ Dobre ljude. ➢ Spremni pomoći ljudima u nevolji.	➢ Više što žele pomoći, manje da mislimo o posljedicama. ➢ Dobri ljudi, pomažu. ➢ Dobrotvor. ➢ Ok ljudi. ➢ Darežljivi i spremni pomoći. ➢ Neoprezni. ➢ Voljni pomoći. ➢ Dobri. ➢ Voljni su pomoći. ➢ I jedni i drugi moraju biti svjesni odgovornosti i rizika. ➢ Humanitarac.	➢ Neodgovorni, dobri. ➢ Humani. ➢ Dobri. ➢ Najbolje da niko nikome ne daje što znaš što je kome. ➢ Ne valja se upuštati u davanje lijekova bez stručne osobe, bez potrebe, to može biti vrlo opasno. ➢ Dobronamjerne. ➢ Humano.

Dodatak 5.9. Asocijacije na pitanje: Kako biste opisali ljude koji uzmu svoj lijek od druge osobe? (2. rad)

Fokus skupina A	Fokus skupina B	Fokus skupina C
➢ Neoprezne osobe. ➢ Neodgovorni. ➢ Ludi. ➢ Neodgovorni. ➢ Nije ok. ➢ Lakoumni.	➢ Ne znam. ➢ Labilni. ➢ Snalažljivi. ➢ Potreba. ➢ Neodgovorne. ➢ Nepromišljeno. ➢ Lakovjerni-neodgovorni.	➢ Nepoželjno ponašanje. ➢ Nepažljivi. ➢ Nije dobro. ➢ Nije dobro uzimati od drugoga.
Fokus skupina D	**Fokus skupina E**	**Fokus skupina F**
➢ Možda im je u datom trenutku ponestalo iako mislim da osobe koje koriste terapije u što skorije vrijeme uzmu nove. ➢ Lijeni da odu po lijek. ➢ Ne smeta mi pa ne razmišljam da čine nešto loše. ➢ Očajni ljudi.	➢ Boli ga i puno ne razmišlja. ➢ Snalažljivi. ➢ Napredni. ➢ Uzimala sam ih sama. Sebe ne mogu opisati. ➢ Neoprezni. ➢ Neoprezni. ➢ Dobri. ➢ Kako? Pa nisu došli iz nekog razloga, ako ih boli, zašto ne. Opisala bi ih… Jadni, ali prođe popi to…ha. ➢ I jedni i drugi moraju biti svjesni odgovornosti i rizika. ➢ Ljudi iz potrebe.	➢ Neodgovorni. ➢ Spasitelji. ➢ Ok. ➢ Ako mu je potreba i paše mu neka uzme. ➢ Moglo bi se reći neodgovorno. ➢ Pa po potrebi su uzeli. ➢ Ako mu je potrebno neka uzme.

Dodatak 5.10. Demografske karakteristike i karakteristike boli pacijenata iz presječnog kvantitativnog istraživanja (ukupno n=1000) (3. rad)

Karakteristike	Vrijednosti
Spol, n (%)	
Žene	619 (62)*
Muškarci	357 (36)
Bez odgovora	24 (2.4)
Dob, godine	
Median dobi (raspon)	54 (18-92)
Broj članova kućanstva	
Median (raspon)	3 (1-13)
Stupanj obrazovanja, n (%)	
Osnovna škola ili manje	194 (19)
Srednja škola	604 (60)
Tercijarno obrazovanje	175 (18)
Bez odgovora	27 (2.7)
Radni status, n (%)	
Student	15 (1,5)
Nezaposlen/a	148 (15)
Zaposlen/a	437 (44)
Umirovljen/a	367 (37)
Bez odgovora	33 (3,3)
Trajanje boli, n (%)	
< 3 mjeseca	241 (24)
3 mjeseca – 5 godina	306 (31)
≥ 5 godina	372 (37)
Bez odgovora	81 (8,1)
Mišljenje o propisanim lijekovima, n (%)	
Moji lijekovi su učinkoviti	783 (78)
Moji lijekovi nisu dovoljno učinkoviti	88 (8,8)
Previše ih je	32 (3,2)
Trebam više lijekova	48 (4,8)
Moj liječnik mi ih je prerano propisao	14 (1,4)
Smatram da mi ih je liječnik trebao prije uključiti	13 (1,3)

Bez odgovora	58 (5,8)
Osobna procjena zdravstvenog stanja, n (%)	
Odlično ili vrlo dobro	182 (18)
Dobro ili zadovoljavajuće	550 (55)
Loše	139 (14)
Neodređeno	101 (10)
Bez odgovora	28 (2,8)
Korištenje alternative medicine, n (%)	302 (30)
Uvjerenje da je alternativna medicina sigurnija i učinkovitija od konvencionalne medicine, n (%)	179 (18)
Traženje informacija o zdravlju na Internetu, n (%)	461 (46)
Uzimanje (multi)vitamina, n (%)	437 (44)

*****Postotci manji od 10 su zaokruženi na jednu decimalu, a postotci veći od 10 bez decimale, tako da zbir postotaka nije točno 100.

Dodatak 5.11. Obrazac dijeljenja analgetika (ukupno n=1000) (3. rad)

Karakteristike	n (%)*
Dijeljenje analgetika	
Davanje drugoj osobi	415 (42)
Uzimanje od druge osobe	537 (54)
Davanje drugoj osobi i uzimanje od druge osobe	357 (36)
Davanje drugoj osobi i/ili uzimanje od druge osobe	595 (60)
Ne dijele analgetike	380 (38)
Bez odgovora	25 (2,5)
Davanje analgetika	
Užoj obitelji	348 (35)
Susjedima	64 (6,4)
Široj obitelji	58 (5,8)
Prijateljima i/ili poznanicima	65 (6,5)
Kolegama	77 (7,7)
Nekome drugome	7 (0,7)
Uzimanje analgetika od	
Uže obitelji	418 (42)
Susjeda	60 (6)
Šire obitelji	47 (4,7)
Prijatelja i/ili poznanika	91 (9,1)
Kolega	110 (11)
Nekoga drugoga	15 (1,5)

***Postotci manji od 10 su zaokruženi na jednu decimalu, a postotci veći od 10 bez decimale, tako da zbir postotaka nije točno 100.

Dodatak 5.12. Stavovi i ponašanja povezana sa dijeljenje analgetika na recept (ukupno n=1000) (3. rad)

Pitanja/odgovori	n (%)*
Ako ste uzeli receptni lijek od nekog da li ste tražili i upute za uzimanje tog lijeka?	
Da, usmene	191 (19)
Da, pisane	203 (20)
Ne, nikakve	361 (36)
Bez odgovora	245 (25)
Ako ste dali svoj receptni lijek nekome da li ste dali i upute za uzimanje tog lijeka?	
Da, usmene	228 (23)
Da, pisane	177 (18)
Ne, nikakve	320 (32)
Bez odgovora	274 (27)
Da li čitate papirnate upute koje idu uz lijek?	
Da, uvijek	605 (61)
Uglavnom	199 (20)
Ponekad	108 (11)
Rijetko	34 (3,4)
Nikad	24 (2,4)
Bez odgovora	30 (3)
Ako ste davali drugima i/ili posuđivali receptne lijekove, da li ste o tome obavijestili svoga liječnika?	
Da	90 (9)
Ne	635 (64)
Bez odgovora	275 (28)
Da li vas liječnik ikada pita jeste li davali i/ili uzimali od drugih lijekove koje vam je propisao na recept?	
Da	313 (31)
Ne	597 (60)
Bez odgovora	90 (9)

*****Postotci manji od 10 su zaokruženi na jednu decimalu, a postotci veći od 10 bez decimale, tako da zbir postotaka nije točno 100.

Dodatak 5.13. Procjena rizika povezanog sa dijeljenje analgetika na recept (3. rad)

Pitanja	Medijan (raspon)
Biste li mogli sebi naštetiti ako uzmete receptni lijek protiv bolova od druge osobe koja nije liječnik?	6 (1-10)
Koliko je vjerojatno da će netko tko uzme receptni lijek protiv bolova od osobe koja nije liječnik naštetiti sebi?	6 (1-10)
Smatrate li da postoje rizici za vas ako ste dali svoj receptni lijek protiv bolova drugome?	5 (1-10)
Što mislite, kolika je vjerojatnost da ćete razviti nuspojave od lijekova na recept uopće?	5 (1-10)
Koliko je vjerojatno da ćete vi imati nuspojave od korištenja lijekova na recept propisanih za nekog drugog, ako su vaši problemi slični?	5 (1-10)
Koliko je vjerojatno da će netko drugi imati nuspojave od korištenja lijeka na recept propisanog za vas, čak iako su imali sličan problem?	5 (1-10)

Dodatak 5.14. Stavovi prema lijekovima (ukupno n=1000) (3. rad)

Tvrdnja	Slažem se, n (%)*	Neodlučno, n (%)*	Ne slažem se, n (%)*
Lijekovi koji se mogu kupiti bez recepta su bezopasni.	202 (21)	284 (28)	465 (46)
Lijekovi na recept su učinkovitiji od lijekova koji se mogu kupiti bez recepta.	493 (49)	232 (23)	220 (22)
Imam najviše povjerenja u lijekove koje mi je propisao moj obiteljski liječnik.	838 (84)	58 (5,8)	65 (6,5)
Imam najviše povjerenja u lijekove koje mi je propisao specijalist.	796 (78)	96 (9,6)	56 (5,6)
Imam najviše povjerenja u lijekove koje su mi preporučile osobe s istim tegobama.	89 (8,9)	168 (17)	693 (69)
Imam najviše povjerenja u lijekove koji se reklamiraju preko medija (TV, novine).	37 (3,7)	101 (10)	813 (81)

***Postotci manji od 10 su zaokruženi na jednu decimalu, a postotci veći od 10 bez decimale, tako da zbir postotaka nije točno 100.

Dodatak 5.15. Rezultati logističke regresije za analizu neovisnih prediktora za davanje drugim osobama analgetika na recept. Davanje analgetika na recept je ovisna varijabla (1=davanje, 2=ne davanje). (3. rad)

Neovisne varijable	KLR*	SE*	Wald	OR*	95% CI*	p*
Dob	-0,02	0,013	2,295	0,98	0,95 do 1,01	0,1298
Spol						
Žene	-0,49	0,35	2,029	0,61	0,31 do 1,20	0,1543
Muškarci*	-	-	-	1	-	-
Obrazovanje						
Osnovna škola ili manje	-0,10	0,47	0,047	0,90	0,36 do 2,25	0,8277
Srednja škola*	-	-	-	-	-	-
Fakultet	-0,32	0,44	0,523	0,73	0,31 do 1,73	0,4694
Magisterij/doktorat znanosti	-2,14	1,16	3,425	0,12	0,01 do 1,14	0,0642
Anamneza dijeljenja lijekova koji nisu analgetici	0,94	0,42	4,973	2,56	1,12 do 5,86	0,0257
Da	-	-	-	1	-	-
Ne*						
Dostupnost uputa za lijek						
Da, usmene	-0,46	0,57	0,648	0,63	0,21 do 1,94	0,4209
Da, pismene	-0,46	0,57	0,636	0,63	0,21 do 1,94	0,4253
Ne, nikakve*	-	-	-	1	-	-
Ustupiti upute za lijek						
Da, usmene	3,50	0,57	37,524	33,22	10,83 do 101,90	<0,0001
Da, pismene	2,82	0,62	20,733	16,80	4,99 do 56,59	<0,0001
Ne*	-	-	-	1		-
Čitanje uputa za lijek						
Da, uvijek*	-	-	-	1	-	-
Uglavnom	1,59	0,42	14,716	4,92	2,18 do 11,11	0,0001
Ponekad	0,60	0,52	1,354	1,83	0,66 do 5,06	0,2447
Rijetko	1,74	0,85	4,223	5,69	1,08 do 29,82	0,0399
Nikada	0,76	0,98	0,603	2,14	0,31 do 14,66	0,4375
Percepcija zdravlja						
Odlično	0,79	0,77	1,056	2,20	0,49 do 9,83	0,3041

Vrlo dobro	-1,29	0,49	7,02	0,28	0,11 do 0,72	0,0081
Dobro	1,04	0,43	6,008	2,83	1,23 do 6,51	0,0142
Zadovoljavajuće*	-	-	-	1	-	-
Loše	-0,04	0,49	0,005	0,97	0,37 do 2,50	0,9428
Neodređeno	0,85	0,57	2,208	2,33	0,76 do 7,12	0,1373
Alternativna medicina						
Da	0,05	0,34	0,017	1,05	0,54 do 2,05	0,8965
Ne*	-	-	-	1	-	-
Traženje informacija o zdravlju na Internetu						
Da*	-	-	-	1	-	-
Ne	-0,20	0,38	0,266	0,82	0,39 do 1,73	0,6058
Ne koristim Internet	-0,29	0,48	0,362	0,75	0,29 do 1,93	0,5472
Uzimanje (multi)vitamina						
Da	-0,04	0,32	0,016	0,96	0,52 do 1,79	0,8997
Ne*	-	-	-	1	-	-
Percepcija osobnog rizika ako uzmu lijek od osobe koja nije liječnik.	-0,05	0,07	0,421	0,95	0,83 do 1,10	0,5164
Percepcija vjerojatnosti da će netko tko uzme analgetik na recept od osobe koja nije liječnik naštetiti sebi.	-0,12	0,09	1,959	0,89	0,75 do 1,05	0,1616
Percepcija osobnog rizika ako se daju svoji receptni analgetici drugoj osobi.	-0,17	0,06	7,120	0,85	0,75 to 0,96	0,0076
Vjerojatnost da će netko razviti nuspojave od lijekova na recept uopće.	0,02	0,07	0,066	1,02	0,88 do 1,17	0,7973
Vjerojatnost da će razviti nuspojave ako uzmu lijek od osobe koja ima slične probleme.	0,07	0,10	0,475	1,07	0,88 do 1,30	0,4906

Vjerojatnost da će netko drugi razviti nuspojave ako se uzme lijek od ispitanika iako imaju slične probleme.	-0,14	0,11	1,445	0,87	0,70 do 1,09	0,2294
Lijekovi na recept su učinkovitiji od OTC lijekova.	-0,01	0,12	0,002	1,00	0,79 do 1,26	0,9693
Imati više povjerenja u lijekove propisane od liječnika obiteljske/opće medicine.	0,17	0,23	0,540	1,18	0,76 do 1,83	0,4626
Imati više povjerenja u lijekove propisane od specijaliste.	-0,09	0,25	0,125	0,92	0,56 do 1,49	0,7237
Imati više povjerenja u lijekove koje je preporučila osoba s istim tegobama.	0,25	0,14	3,060	1,28	0,97 do 1,70	0,0803
Broj članova kućanstva	0,14	0,11	1,603	1,15	0,93 do 1,43	0,2055
Konstanta	0,99	1,26	0,63			0,4291

*KLR=koeficijent logističke regresije (engl. coefficient logistic regression); SE=standardna pogreška (engl. standard error); OR= (engl. odds ratio); CI= raspon pouzdanosti (engl. confidence interval); p=vjerojatnost (engl. probability)

Dodatak 5.16. Rezultati logističke regresije za analizu neovisnih prediktora za uzimanjem analgetika na recept od drugih osoba. Uzimanje analgetika na recept je ovisna varijabla (1=uzimanje, 2=ne uzimanje). (3. rad)

Neovisne varijable	**KLR***	**SE***	**Wald**	**OR***	**95% CI***	**p***
Dob	-0,04	0,02	6,09	0,96	0,92 do 0,99	0,0136
Obrazovanje						
Osnovna škola ili manje	0,02	0,44	0, 002	1,02	0,43 do 2,40	0,9678
Srednja škola*	-	-	-	1	-	-
Fakultet	0,02	0,42	0,002	1,02	0,45 do 2,34	0,9613
Magisterij/doktorat	-1,08	1,06	1,03	0,34	0,04 do 2,73	0,3109
Radni status						
Nezaposlen/a	- 0,68	0,42	2,622	0,51	0,22 do 1,15	0,1054
Zaposlen/a*	-	-	-	-	-	-
Umirovljen/a	0,02	0,50	0,001	1,02	0,38 do 2,71	0,9708
Trajanje boli						
< 3 mjeseca	-0,66	0,41	2,656	0,52	0,23 do 1,14	0,1032
3 mjeseca – 2 godine	-0,81	0,46	3,086	0,45	0,18 do 1,10	0,0790
2 godine – 5 godina	-0,19	0,45	0,187	0,82	0,34 do 1,98	0,6654
> 5 godina*	-	-	-	1	-	-
Anamneza dijeljenja lijekova koji nisu analgetici						
Da	0,63	0,42	2,189	1,87	0,82 do 4,28	0,1390
Ne*	-	-	-	1	-	-
Dostupnost uputa za lijek						
Da, usmene	0,60	0,54	1,223	1,82	0,63 do 5,24	0,2686
Da, pismene	-0,05	0,58	0,007	0,95	0,31 do 2,95	0,9324
Ne, nikakve*	-	-	-	1	-	-
Ustupiti upute za lijek						
Da, usmene	2,29	0,53	18,82	9,88	3,51 do 27,80	<0,0001
Da, pismene	2,29	0,63	13,09	9,91	2,86 do 34,29	0,0003
Ne*	-	-	-	1		
Čitanje uputa za lijek						
Da, uvijek*	-	-	-	1	-	-
Uglavnom	1,56	0,41	14,640	4,76	2,14 do 10,58	0,0001

Ponekad	0,56	0,50	1,24	1,74	0,66 do 4,64	0,2656
Rijetko	1,57	0,77	4,178	4,83	1,07 do 21,83	0,0410
Nikada	0,92	0,95	0,940	2,51	0,39 do 16,09	0,3323
Percepcija zdravlja						
Odlično	0,25	0,88	0,083	1,29	0,23 do 7,17	0,7739
Vrlo dobro	-1,24	0,48	6,523	0,29	0,11 do 0,75	0,0106
Dobro	0,53	0,43	1,513	1,70	0,73 do 3,95	0,2186
Zadovoljavajuće	-	-	-	1	-	-
Loše*	-0,04	0,48	0,009	0,96	0,37 do 2,45	0,9267
Neodređeno	0,64	0,51	1,573	1,90	0,70 do 5,19	0,2097
Alternativna medicina						
Da	-0,02	0,34	0,003	0,98	0,50 do 1,92	0,9557
Ne*	-	-	-	1	-	-
Alternativna medicina sigurnija od konvencionalne medicine	-0,57	1,11	0,261	0,57	0,06 do 5,02	0,6096
Vrlo vjerojatno	-0,90	0,44	4,294	0,41	0,17 do 0,95	0,0383
Vjerojatno	-	-	-	1	-	-
Malo vjerojatno*						
Traženje informacija o zdravlju na Internetu						
Da*	-	-	-	1	-	-
Ne	-0,39	0,38	1,051	0,68	0,32 do 1,43	0,3054
Ne koristim Internet	-0,62	0,47	1,711	0,54	0,21 do 1,36	0,1909
Uzimanje (multi)vitamin						
Da	0,12	0,31	0,151	1,13	0,61do 2,07	0,6978
Ne*	-	-	-	1	-	-
Percepcija osobnog rizika ako uzmu lijek od osobe koja nije liječnik.	-0,08	0,07	1,084	0,93	0,80 do 1,07	0,2978
Percepcija vjerojatnosti da će netko tko uzme analgetik na recept od osobe koja nije liječnik naštetiti sebi.	-0,14	0,08	3,020	0,87	0,74 do 1,02	0,0822

Percepcija osobnog rizika ako se daju svoji receptni analgetici drugoj osobi.	-0,08	0,06	1,904	0,92	0,82 do 1,04	0,1676
Vjerojatnost da će netko razviti nuspojave od lijekova na recept uopće.	-0,01	0,07	0,016	0,99	0,87 do 1,14	0,9009
Vjerojatnost da će razviti nuspojave ako uzmu lijek od osobe koja ima slične probleme.	-0,02	0,12	0,017	0,99	0,78 do 1,24	0,8964
Vjerojatnost da će netko drugi razviti nuspojave ako se uzme lijek od ispitanika iako imaju slične probleme.	-0,03	0,13	0,065	0,97	0,75 do 1,25	0,7991
Lijekovi na recept su učinkovitiji od OTC lijekova.	0,01	0,11	0,005	1,01	0,81 do 1,26	0,9434
Imati više povjerenja u lijekove propisane od liječnika obiteljske/opće medicine.	0,22	0,22	1,024	1,25	0,81 do 1,91	0,3115
Imati više povjerenja u lijekove propisane od specijaliste.	-0,25	0,23	1,144	0,78	0,50 do 1,23	0,2848
Imati više povjerenja u lijekove koje je preporučila osoba s istim tegobama.	0,21	0,14	2,171	1,23	0,93 do 1,63	0,1407
Broj članova kućanstva	0,20	0,10	3,75	1,22	1,00 do 1,50	0,0528
Konstanta	3,58	1,42	6,35			0,0117

*KLR=koeficijent logističke regresije (engl. coefficient logistic regression); SE=standardna pogreška (engl. standard error); OR= (engl. odds ratio); CI= raspon pouzdanosti (engl. confidence interval); p=vjerojatnost (engl. probability)