Dr. Katarina Merše Lovrinčević, dr. Bojana Filej

Starševski strah pred cepljenjem

Prejeto 23. 3. 2020 / Sprejeto 23. 11. 2020

Znanstveni članek

UDK 614.47:364.624.6

KLJUČNE BESEDE: javno zdravje, nalezljive bolezni, cepljenje otrok, nevarna cepiva, starši

POVZETEK - Cepljenje po svetu velja za enega izmed največjih dosežkov javnega zdravja, vendar se v Sloveniji, tako kot v drugih državah, povečuje število staršev, ki zavračajo cepljenje. Strah večinoma izvira iz nedostopnih, nepravilnih, konfliktnih in negativnih informacij o cepivih in njihovih stranskih učinkih, ki imajo lahko dolgoročne posledice za otroke. Z namenom, da bi ugotovili razloge za necepljenje otrok, smo pregledali znanstvene članke, ki so bili objavljeni v obdobju 2008 do 2019 v podatkovnih bazah SAGE, SpringerLink, ProQuest, PubMed, MEDLINE, ScienceDirect in Wiley Online Library. Izmed 5376 identificiranih objav smo v končno analizo vključili 15 člankov. Ugotovili smo, da so najpogosteje izraženi vzroki za strah pred cepljenjem: neželeni stranski učinki cepiv, ki vključujejo razvoj drugih bolezni in motenj, nevarne vsebine v cepivu, vnos virusa v telo ter negativne osebne izkušnje staršev in sorojencev. Dejavniki, ki povečujejo strah staršev pred cepljenjem, se lahko prelevijo v razloge za necepljenje otrok.

Received 23. 3. 2020 / Accepted 23. 11. 2020

Scientific article

UDC 614.47:364.624.6

KEY WORDS: vaccination fear, vaccine hesitancy, vaccine refusal, child immunization, parents

ABSTRACT - Vaccination is considered one of the greatest achievements of public health. However, in Slovenia, as in other countries, the number of parents who are afraid of vaccination is increasing. Most of these fears stem from inaccessible, false, conflicting and negative information about vaccines and their side effects, which can have long-term effects on children. In order to determine the reasons for not vaccinating children, we have reviewed scientific articles published between 2008 and 2019 in the databases SAGE, SpringerLink, ProQuest, PubMed, MEDLINE, ScienceDirect, and Wiley Online Library databases. Of 5376 identified publications, 15 articles were included in the final analysis. We found that the most common causes of fear of vaccination are the following: side effects of vaccines, which include the development of other diseases and disorders, dangerous ingredients of the vaccine, the introduction of the virus into the body and negative personal experiences of parents and siblings. Factors that increase the parents' fear of vaccination may become the reasons for not vaccinating children.

1 Uvod

Cepljenje po svetu velja za enega izmed največjih dosežkov javnega zdravja, katerega programi pripomorejo k upadanju umrljivosti in obolevnosti zaradi nalezljivih bolezni (Centers for Disease Control and Prevention [CDC], 1999). Kljub temu pa se iz leta v leto veča število staršev, ki niso naklonjeni cepljenju, že odkar je bilo javnosti dostopno prvo cepivo (Spier, 2001). Čeprav je to število nemogoče oceniti, strokovnjaki po svetu prepoznavajo in priznavajo povečevanje trenda necepljenja otrok (Williams, 2014).

Zaradi pomislekov glede varnosti cepiv in agresivnih politik, ki zagovarjajo njihovo uporabo, je v vse več državah (razvitih in nerazvitih) prišlo do anti-cepivskih gibanj, ki so prispevala k zmanjševanju cepljenja otrok. Kapp (2004) tako trdi, da v

Nigeriji ljudje postopoma zavračajo cepljenje proti otroški paralizi, saj menijo, da je nevarno in da je del sterilizacijske kampanje. V Združenem kraljestvu pa avtorji Sabra, Bellanti in Colón (1998) ter Murch idr. (2004) navajajo, da so se pojavili pomisleki staršev glede varnosti cepiva proti ošpicam, mumpsu in rdečkam zaradi povezanosti z avtizmom, kar je zopet povzročilo upadanje cepljenja. Tudi v ZDA se je povečala zaskrbljenost, povezana z avtizmom, zaradi timerosala, konzervansa živega srebra v cepivih (Fombonne, 2008), kar je znižalo zaupanje javnosti v vladne programe cepljenja (Baker, 2008; Gross, 2009).

Da bi lahko razumeli, zakaj obstaja starševski strah pred cepljenjem, moramo najprej razumeti njihovo videnje različnih dejavnikov, ki jih lahko razvrstimo med čustvene, kulturne, verske, politične, družbene in spoznavne (Dubé idr., 2013). Pretekle raziskave, ki so se osredotočale na starše, ki sploh niso dali cepiti svojih otrok, so odkrile več ovir, zaradi katerih so starši zadržani do cepljenja. Največkrat se pojavljajo negativne reakcije otroka na cepivo (Blaisdell, Gutheil, Hootsmans in Han, 2016; Williams, 2014), njegova neučinkovitost (Espeleta, Beasley, Ridings, Smith in Shields, 2017; Perkins idr., 2013), težave z dostopom do informacij (Dubé idr., 2013) in splošno nezaupanje zdravstveni stroki glede cepljenja (Wilson, Barakat, Vohra, Ritvo in Boon, 2008).

Z namenom, da bi spoznali vzroke za strah staršev pred cepljenjem svojih otrok, smo pregledali in analizirali znanstvene članke.

2 Metode

V raziskavi smo uporabili pregled znanstvene literature, ki obravnava vzroke za strah staršev pred cepljenjem svojih otrok.

2.1 Metode pregleda

Za uvrstitev člankov v pregled literature smo upoštevali naslednje vključitvene kriterije:

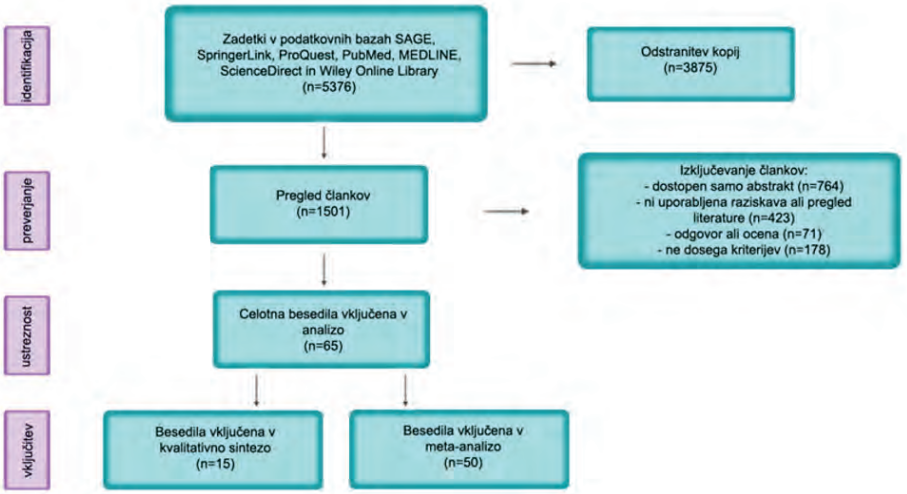
- ključne besede in besedne zveze: vaccine-hesitancy, vaccine-refusing, vaccination hesitant parents, vaccination fear, child immunization, parents, decision-making;
- članki v angleškem jeziku;
- izvirni in pregledni znanstveni članki;
- dostopnost celotnega besedila;
- vsebinska ustreznost in aktualnost;
- časovno obdobje od 2008 do 2019.

Literaturo smo iskali v tujih podatkovnih bazah SAGE, SpringerLink, ProQuest, PubMed, MEDLINE, ScienceDirect in Wiley Online Library. Ključne besede smo povezali z Boolovim operatorjem AND in OR.

2.2 Rezultati pregleda

Pregled literature smo naredili po metodologiji PRISMA (slika 1). Z iskanjem smo dobili 5376 zadetkov relevantne literature, prosto dostopne v povzetkih in celotnih besedilih. Po izključitvi kopij smo dobili 1501 članek. Po prebiranju vseh člankov in izključitvi povzetkov se je število literature omejilo na 65 enot. V poglobljeno vsebinsko analizo smo vključili 15 člankov, ostalih 50 pa smo uporabili za pripravo članka.

Slika 1: Rezultati pregleda literature po metodologiji PRISMA



3 Rezultati

V tabeli 1 prikazujemo članke, ki smo jih vsebinsko kvalitativno analizirali po naslednjih značilnostih: avtor, leto objave, država, uporabljena raziskovalna metodologija, namen raziskave, vzorec, osnovne ugotovitve, kot so jih izpostavili avtorji.

Tabela 1: Seznam v končno analizo vključenih raziskav

Avtor(ji), letnica objave, država	*Raziskovalna metodologija*	*Namen raziskave*	*Vzorec*	*Ugotovitve*
Blaisdell idr. (2016) Maine, ZDA	Kvalitativna fokusna raziskava	Raziskati zaznavanje in razvijanje osebnih mnenj o tveganjih in negotovostih, povezanih s cepljenjem.	42 staršev, ki so zadržani do cepljenja otrok	Starši zadržani do cepljenja otrok opažajo tveganja zaradi cepljenja, ki so večja kot bolezni, ki jih ta cepiva preprečujejo.
Dubé idr. (2013)	Kvalitativna raziskava	Preučiti fenomen negotovosti staršev glede cepljenja.	Pregled literature	Posameznikove odločitve glede cepljenja otrok so zelo zapletene in vključujejo čustvene, kulturne, družbene, verske in politične faktorje.
Espeleta idr. (2017) Illinois, ZDA	Kvalitativna fokusna raziskava	Pregledati, kako posamezniki sprejemajo informacije o cepljenju in kako le-te vplivajo na njihovo odločitev o cepljenju otrok.	29 dodiplomskih študentov, ki nimajo otrok	Mladi odrasli izkazujejo ozaveščenost o informacijah glede uporabe in učinkovitosti cepiv, cenijo zdravniško mnenje in si želijo podrobnejšeraziskave o cepivih.
Favin, Steinglass, Fields, Banerjee in Sawhney (2012)	Kvalitativna raziskava	Ugotoviti, zakaj so otroci primerne starosti bili delno ali pa niso bili cepljeni.	Pregled »sive« literature (126 dokumentov), ki ni bila ocenjena s strani strokovnjakov na temo necepljenja	Glavni razlogi za necepljenje so bili povezani s službami, ki so izvajale cepljenje ter s starševskim znanjem in stališči.
Harmsen idr. (2013) Nizozemska	Kvalitativna raziskava	Pridobiti večji vpogled v dejavnike zavrnitve cepiv z namenom oblikovanja javnih informacij in intervencij, ki bodo staršem pomagali pri odločanju glede koristi svojim otrokom in širši skupnosti.	60 staršev, ki so zavrnili del ali vsa cepiva	Zavrnitev cepljenja je odvisna od naslednjih dejavnikov: življenjski slog, zaznavanje otrokovega telesa in imunskega sistema, neučinkovitost cepiva in neželeni učinki, prednosti doživljanja bolezni, predhodne negativne izkušnje s cepljenjem.

Kelley idr. (2015) Vermont, ZDA	Kvantitativna raziskava	Ugotoviti stališča staršev glede cepljenja, da bi se pojasnilo, zakaj je procent cepljenih otrok upadel.	379 staršev, ki so člani nacionalnega zdravstvenega zavarovanja	Zaskrbljenost glede varnosti cepiva in prevelikega števila hkratnih cepljenj sta bila najpogostejša razloga staršev za necepljenje.
Lee, Riley-Behringer, Rose, Meropol in Lazebnik (2016) Ohio, ZDA	Kvantitativna raziskava	Raziskati, kako je starševska odločitev o cepljenju pred obiskom otrok pri zdravniku povezana z dejanskim sprejemom cepljenja na obisku.	316 staršev na obisku pri zdravniku	Zgodovina zavrnitve cepiva je bila ključni napovedni dejavnik, ali starši zavračajo cepiva na trenutnem obisku pri zdravniku s svojim otrokom. Več kot 1/5 staršev si je premislila, ali bo otroka cepila ali ne.
Luthy, Beckstrand, Callister in Cahoon (2011) Utah, ZDA	Kvalitativna raziskava	Raziskati osebna prepričanja staršev, ki so svoje otroke izvzeli iz programa cepljenja.	801 staršev, katerih otroci niso prejeli niti enega cepiva	Osebni razlogi: zaznave staršev, spornost sistemov zdravstvenega varstva, skrbi zaradi kroničnih bolezni, skrbi zaradi imunskega sistema, pomisleki o neželenih učinkih in drugi razlogi, ki niso bili razvrščeni.
Masaryk in Hatoková (2016) Slovaška	Kvalitativna fokusna raziskava	Raziskovanje sporočil in obvestil za podporo cepljenju in zakaj le-ta ne prepričajo staršev, da cepijo otroka.	73 ljudi, od tega 39 študentov in 34 mater	Sporočila in obvestila v podpor cepljenju niso imela pozitivnega vpliva na odločitev staršev za cepljenje otroka, delovala so ravno obratno.
McKee in Bohannon (2016)	Kvalitativna raziskava	Razumeti razloge za negotovost staršev glede cepljenja.	Pregled literature	Razlogi so se lahko uvrstili v štiri kategorije: verski ugovor, osebna prepričanja, filozofski razlogi in želja po več informacijah.
Ruijs idr. (2012) Nizozemska	Kvalitativna raziskava	Pridobiti vpogled v odziv zdravstvenih delavcev na starše z verskimi ugovori proti cepljenju svojih otrok.	22 zdravstvenih delavcev z izkušnjami verskega ugovora	Zdravstveni delavci so na verski ugovor zoper cepljenje odreagirali na tri načine: z dodatnimi informacijami, z uporabo avtoritativnega tona in razpravo o postopku odločanja.

Smith, Amlôt, Weinman, Yiend in Rubin (2017)	Kvalitativna raziskava	Preiskava psiholoških, družbenih in kontekstualnih dejavnikov glede koriščenja rutinskega cepljenja otrok.	Sistematični pregled literature	Cepljenje je večinoma odvisno od kvantitete in kvalitete informacij o cepivu, družbenih vplivov in zaupanja v zdravstveno osebje.
Williams (2014)	Kvalitativna raziskava	Pregled raziskav, ki obravnavajo modele skrbi staršev glede cepljenja.	Pregled literature	Ni znano, koliko so ti modeli učinkoviti. Zdravstveni delavci so ključni pri odločitvi staršev glede cepljenja.
Wilson idr. (2008) Ontario, Kanada	Kvalitativna fokusna raziskava	Preučiti razloge, ki jih imajo starši za ali proti cepljenju.	33 staršev, ki so imeli zadržke do cepljenja ali otrok niso cepili	Starši so se odločili za necepljenje večinoma zaradi skrbi glede varnosti cepiva in njegove (ne)učinkovitosti.
Yaqub, Castle-Clarke, Sevdalis in Chataway (2014)	Kvalitativna raziskava	Pregled literature na temo neodločenosti do cepljenja v Evropi.	Pregled literature	Razlogi za neodločitev za cepljenje vključujejo nezaupanje v institucije, povezane s cepljenjem, kot so farmacevtske združbe.

Ugotovitve raziskav smo združili v tri vsebinske kategorije, in sicer: »Faktorji, ki vplivajo na strah staršev pred cepljenjem«, »Razlogi za necepljenje otroka« in »Vloga zdravstvenih delavcev pri pojavu strahu staršev pred cepljenjem«. Kategorije, opis kategorij in avtorje raziskav, ki smo jih vsebinsko kvalitativno analizirali, prikazuje tabela 2.

Tabela 2: Sinteza znanstvene literature po kategorijah

Kategorija	*Opis*	*Avtorji*
Faktorji, ki vplivajo na strah staršev pred cepljenjem	Nepoznavanje in slab dostop do vseh informacij o cepivu in dolgoročnih stranskih učinkih.	Blaisdell idr. (2016); Dubé idr. (2013); Espeleta idr. (2017); McKee in Bohannon (2016); Wilson idr. (2008)
	Konfliktne informacije o cepivu, njegovih stranskih učinkih, sestavi in podobno.	Blaisdell idr. (2016); Favin idr. (2012); Luthy idr. (2011); McKee in Bohannon (2016)
	Možnosti napak v cepivu, ki se jih ne bo dalo popraviti, potem ko se otroka že cepi.	Blaisdell idr. (2016)
	Pomanjkanje raziskav na temo negativnih dolgoročnih učinkov na otroka.	Blaisdell idr. (2016); McKee in Bohannon (2016)
	Negativne informacije o cepljenju in ostre polemike v medijih.	McKee in Bohannon (2016); Smith idr. (2017)

Razlogi za necepljenje otroka	Negativne reakcije na cepivo, kot so razvoj nevroloških motenj, preobčutljivost in razvoj drugih bolezni.	Blaisdell idr. (2016); Espeleta idr. (2017); Favin idr. (2012); Harmsen idr. (2013); Luthy idr. (2011); Masaryk in Hatoková (2016); Wilson idr. (2008)
	Nevarne vsebine v cepivu, npr. živo srebro, in sama nevarnost cepiva.	Blaisdell idr. (2016); Kelley idr. (2015); Lee idr. (2016); Wilson idr. (2008); Yaqub idr. (2014)
	Vnos »virusa« v telo.	Espeleta idr. (2017); McKee in Bohannon (2016); Wilson idr. (2008)
	Prednosti doživljanja bolezni.	Harmsen idr. (2013); McKee in Bohannon (2016)
	Neučinkovitost cepiva.	Espeleta idr. (2017); Harmsen idr. (2013); Luthy idr. (2011); Wilson idr. (2008);
	Negativne osebne izkušnje staršev ali sorojencev.	Espeleta idr. (2017); Favin idr. (2012); Harmsen idr. (2013); Lee idr. (2016); Luthy idr. (2011)
	Verski razlogi.	Dubé idr. (2013); Espeleta idr. (2017); McKee in Bohannon (2016); Ruijs idr. (2012); Williams (2014);
	Stalnost cepiv.	Blaisdell idr. (2016)
	Preveliko število cepiv.	Harmsen idr. (2013); Kelley idr. (2015); Lee idr. (2016); McKee in Bohannon (2016)
	Šibek imunski sistem in razvojna faza otroka, ki pripomorejo k negativnemu sprejetju cepiva.	Blaisdell idr. (2016); Harmsen idr. (2013); Luthy idr. (2011); McKee in Bohannon (2016)
Vloga zdravstvenih delavcev pri pojavu strahu staršev pred cepljenjem	Zdravstveni delavci lahko pozitivno vplivajo na starševski strah pred cepljenjem informiranjem in vzpostavitvijo zaupanja.	Espeleta idr. (2017); McKee in Bohannon (2016); Ruijs idr. (2012); Wilson idr. (2008)
	Povečevanje strahu pred cepljenjem zaradi pritiska in zastraševanja s strani zdravstvenih delavcev.	Dubé idr. (2013); Favin idr. (2012); Wilson idr. (2008)
	Nezaupanje zdravstvenim delavcem pri cepljenju zaradi velikega vpliva farmacevtskih podjetij.	Masaryk in Hatoková (2016); Williams (2014); Wilson idr. (2008); Yaqub idr. (2014)

4 Razprava

Skrbi glede cepljena so obstajale že od razvoja prvega cepiva (Wolfe in Sharp, 2002). Ti pomisleki, kot navajata Bedford in Elliman (2000), so pogosto označeni kot nerazumni s strani oblikovalcev različnih politik in zakonodaj ter uradnikov, zaposlenih v javnem zdravstvu, ki strogo podpirajo pediatrične programe cepljenja. Vendar

skrbi, pomisleki in vse večja stopnja necepljenja otrok nakazujejo potrebo po globljem vpogledu v razloge za to starševsko odločitev.

Obstajajo nekateri dokazi za povezavo med informacijami o cepivu in strahom pred cepljenjem, medtem ko obstajajo tako pozitivni kot negativni dokazi o povezanosti med vplivom vira informacij na strah pred cepljenjem (Smith idr., 2017). Najbolj poudarjeno je bilo nepoznavanje vseh informacij, dobrih in slabih, o cepivu in njegovih dolgoročnih stranskih učinkih ter slab dostop do njih, saj so raziskave pokazale, da je to največji vir za strah staršev pred cepljenjem (Blaisdell idr., 2016; Cassell idr., 2006; Dubé idr., 2013; McKee in Bohannon, 2016; Smailbegovic, Laing in Bedford, 2003; Smith idr., 2017). Ko pa starši končno pridejo do informacij o cepivih in njihovih stranskih učinkih, pa so le-te pogosto nasprotujoče si in spreminjajoče se (Betsch idr., 2012; Blaisdell idr., 2016; Favin idr., 2012; Glanz idr., 2013; Luthy idr., 2011).

Raziskava Blaisdell idr. (2016) je izpostavila tudi možne napake v cepivih, ki jih po cepljenju ni možno popraviti, ter pomanjkanje znanstvenih raziskav na temo negativnih dolgoročnih učinkov cepljenja na otroka, kar vpliva na povečevanje strahu pred cepljenjem. To je zaostrilo še dejstvo, da so ponudniki zdravstvenih storitev oklevali glede posredovanja teh podatkov, zato so starši menili, da to zahteva nadaljnje preverjanje informacij (McKee in Bohannon, 2016).

Navsezadnje pa imajo velik vpliv na starševski strah pred cepljenjem tudi mediji in njihovo neugodno obveščanje o cepivih ter negativnih posledicah cepljenja (Bults, Beaujean, Richardus, van Steerbergen in Voeten, 2011; Dawar idr., 2002; McKee in Bohannon, 2016; Pearce, Law, Elliman, Cole in Bedford, 2008; Smith idr., 2017; Walsh, Thomas, Mason in Evans, 2015).

Dejavniki, ki povečujejo strah staršev pred cepljenjem, pa se lahko prelevijo v razloge za necepljenje otrok. V naši raziskavi, so ti razlogi največkrat neželeni stranski učinki cepiv, ki vključujejo razvoj drugih bolezni in motenj, nevarne vsebine v cepivu, vnos virusa v telo ter negativne osebne izkušnje staršev in sorojencev.

Te rezultate potrjujejo ugotovitve tujih znanstvenih raziskav, ki trdijo, da so dolgoročni učinki, kot so avtizem in kronične bolezni, katerih vir je lahko cepljenje, že dolgo povzročali skrb staršev (Brown idr., 2012; Burgess, Burgess in Leask, 2006; Gust idr., 2007; Kennedy, Basket in Sheedy, 2011; Parker, Schwartz, Todd in Pickering, 2004; Plotkin, Gerber, Offit, 2009). Temu se pridružujejo tudi kratkoročni učinki, ki se pojavijo takoj po cepljenju, med katere spadajo jok, povišana telesna temperatura in bolečina, ki je tudi povezana s prejetjem večjega števila cepiv na enem obisku (Delkhosh, Negarandeh, Ghasemi in Rostami, 2014; Figueiredo, Pina, Tonete, Lima in Mello, 2011; Gust idr., 2005; Kennedy idr., 2011). Harmsen idr. (2013) in McKee in Bohannon (2016) navajajo, da starši tudi trdijo, da je doživljanje lažjih bolezni, ki so preprečene s cepivom, prednost za otroka, saj se tako okrepi njegov imunski sistem. V raziskavah, narejenih s strani Wilson idr. (2008), Luthy idr. (2011) in Espeleta idr. (2017), pa starši izpostavljajo tudi morebitno neučinkovitost cepiva in navajajo primere, kjer so otroci zboleli, čeprav so prej prejeli cepivo proti tej bolezni.

Nekatere starše je prav tako skrbelo zaradi varnosti cepljenja, zlasti glede kombiniranih cepiv (Chen idr., 2011; Kennedy idr., 2011; Pal, Goodyear - Smith in Exeter, 2014) ter njihova stalnost (Blaisdell idr., 2016), saj so dejali, da če je njihov otrok cepljen in se kasneje odkrije, da je bilo s cepivom nekaj narobe, se le-to ne bo dalo spremeniti. Starši so bili zaskrbljeni, ali so imunski sistemi njihovih otrok dovolj razviti za cepljenje s cepivi, ki so bila v kratkem časovnem obdobju v priporočenih shemah (Blaisdell idr., 2016; Gust idr., 2005, Gust idr., 2007; Harmsen idr., 2013; Kennedy idr., 2011; Luthy idr., 2011; McKee in Bohannon, 2016; Tickner, Leman in Woodcock, 2010). Veliko število staršev pa se za cepljenje ali necepljenje odloči tudi na predlog osebnega zdravnika (Kempe idr., 2011; Kurup, Shorey, Wang in He, 2017; Rosen idr., 2017).

Zdravstveni delavci so načeloma veliki podporniki cepljenja in so hkrati osebe, s katerimi imajo starši, ki doživljajo strah pred cepljenjem, največ stika, zato je interakcija z njimi temelj vzdrževanja zaupanja v cepljenje (Leask idr., 2012; Schmitt idr., 2007) in v zdravstvo nasploh. Običajno gre strah pred cepljenjem in temu sledeče necepljenje otroka v eno izmed dveh smeri.

Prva smer, zelo neprijetna tako za starše kot za zdravstvene delavce, je povečevanje strahu pred cepljenjem zaradi pritiska in zastraševanja s strani zdravstvenih delavcev, kot jih opisujejo Wilson idr. (2008), Favin idr. (2012) in Dubé idr. (2013). Necepljenje, ali že samo pomislek o tem, velikokrat vzbudi močan čustveni odziv v zdravstvenih delavcih ter privede do prekinitve zaupne vezi s starši (Lyren in Leonard, 2006). Čeprav je nezaželeno s strani zdravstvene stroke, veliko zdravnikov na primarni ravni preneha obravnavati družine, kjer starši niso cepili otroka, ali pa ga nočejo cepiti (Diekema, 2013; Flanagan - Klygis, Sharp in Frader, 2005; Freed, Clark, Hibbs in Santoli, 2004; Leib, Liberatos in Edwards, 2011; Saad, Salmon, Orenstein, Dehart in Halsey, 2009). Ravno ta odziv ali pa agresiven in avtoritativen pristop zdravstvenih delavcev na to odločitev lahko odtuji starše, poveča starševski strah pred cepljenjem in poveča stopnjo zavrnitve cepljenja (Fahlquist, 2017; Wilson idr., 2008).

S tem je povezano tudi nezaupanje zdravstvenim delavcem pri cepljenju zaradi velikega vpliva farmacevtskih podjetij kot proizvajalcev cepiv (Masaryk in Hatoková, 2016; Williams, 2014; Wilson idr., 2008; Yaqub idr., 2014). To nezaupanje pa ni značilno le za starše, ki so neodločeni glede cepljenja ali pa so se odločili, da otrok ne bodo cepili, temveč velja tudi za starše, ki cepljenje podpirajo (Mills, Jadad, Ross in Wilson, 2005; Weiss, Schröpfer in Merten, 2016). Obe skupini staršev menita, da so zdravstveni delavci nezanesljivi vir informacij o cepljenju prav zaradi tega vpliva. Zanimivo pa je, da so medicinske sestre videne kot zaupljivejše osebe s strani staršev kot pa zdravniki (Hoekstra in Margolois, 2016; Peterson idr., 2012; Plumridge, Goodyear - Smith in Ross, 2009).

Na drugi strani, kot najbolj zaželen, pa je pozitiven odziv zdravstvenih delavcev, saj lahko le-ti pozitivno vplivajo na starševski strah pred cepljenjem s tem, da posredujejo ustrezne informacije, s katerimi vzpostavijo zaupanje (Espeleta idr., 2017; McKee in Bohannon, 2016; Ruijs idr., 2012; Wilson idr., 2008). Te informacije zdravstvenih delavcev so pomembne še zlasti tam, kjer so informacije o cepljenju pomanjkljive, neresnične, konfliktne in težko dostopne (Giambi idr., 2014; Kennedy idr.,

2011; Sheikh idr., 2013). Tako staršem dajo uvid v nevarnosti in prednosti cepljenja otrok, da lahko starši sprejmejo informirano odločitev. Ta pa je možna le, če je med zdravstvenimi delavci in starši vzpostavljen pozitivni odnos.

5 Zaključek

V Sloveniji, tako kot po svetu, se veča število staršev, ki imajo strah pred cepljenjem. Strah staršev večinoma izvira iz nedostopnih, nepravilnih, konfliktnih in negativnih informacij o cepivih in njihovih stranskih učinkih, ki imajo lahko dolgoročne posledice za otroke. Te pa lahko privedejo starše v odločitev za necepljenje otrok.

Pomembno vlogo za zmanjšanje ali odpravo strahu pri starših glede cepljenja imajo zdravstveni delavci, ki s pravimi informacijami lahko veliko pripomorejo k pravilni odločitvi staršev glede cepljenja v dobrobit otrok.

Katarina Merše Lovrinčević, PhD, Bojana Filej, PhD

Parental Fear of the Vaccination

Vaccination is considered one of the greatest achievements of public health in the world, with programmes helping to reduce mortality and morbidity from infectious diseases (Centres for Disease Control and Prevention [CDC], 1999). However, year after year, the number of parents who can be labelled as uncertain about vaccination has increased since the first vaccine was made available to the public (Spier, 2001). Although the number is impossible to estimate for sure, global experts recognize and acknowledge the increasing trend of non-vaccination of children (Williams, 2014).

In many countries (both developed and underdeveloped), concerns about the safety of vaccines and aggressive policies advocating their use have led to a growing number of anti-vaccination movements that have contributed to the reduction of childhood vaccination coverage. Kapp (2004) therefore argues that people in Nigeria are gradually rejecting polio vaccination, because they consider it dangerous and part of sterilisation campaign. According to Sabra, Bellanti, and Colón (1998) and Murch et al. (2004), the parents' concerns about the safety of the vaccine against measles, mumps, and rubella vaccine and its link to autism have been raised in the United Kingdom, which in turn has led to a decline in vaccinations. Concerns about thimerosal, a mercury preservative in vaccines, have increased in the United States, since it has been linked to autism (Fombonne, 2008), which has reduced public confidence in government vaccination programmes, according to Baker (2008) and Gross (2009).

In order to understand why the parental fear of vaccination exists, we must first understand its perspective, which stems from several factors that can be divided into emotional, cultural, religious, political, social, and cognitive categories (Dubé et al.,

2013). Previous research focusing on parents who have not fully vaccinated their children has identified several barriers that prevent parents from getting vaccinated. The most common are negative reactions of their child to the vaccine (Blaisdell, Gutheil, Hootsmans and Han, 2016; Williams, 2014), its ineffectiveness (Espeleta, Beasley, Ridings, Smith, and Shields, 2017; Perkins et al., 2013), difficulties in accessing information (Dubé et al., 2013) and general distrust of the medical profession with regard to vaccination (Wilson, Barakat, Vohra, Ritvo and Boon, 2008).

In order to determine the reasons for non-vaccination of children, we have reviewed scientific articles published between 2008 and 2019 in the databases SAGE, SpringerLink, ProQuest, PubMed, MEDLINE, ScienceDirect, and Wiley Online Library databases. Of 5376 identified publications, 15 articles were included in the final analysis. We found that the most common causes of fear of vaccination are the following: side effects of vaccines, which include the development of other diseases and disorders, dangerous ingredients of the vaccine, the introduction of the virus into the body and negative personal experiences of parents and siblings. Factors that increase the parents' fear of vaccination may become the reasons for not vaccinating children.

These results are corroborated by the findings of foreign scientific research, which argue that long-term effects, such as autism and chronic diseases, for which vaccination may be the source, have long been a concern for parents (Brown et al., 2012; Burgess, Burgess and Leask, 2006; Gust et al., 2007; Kennedy, Basket, and Sheedy, 2011; Parker, Schwartz, Todd and Pickering, 2004; Plotkin, Gerber, and Offit, 2009). This is compounded by the short-term effects that occur immediately after vaccination, which include excessive crying, high fever and pain, which are also associated with receiving multiple vaccines at one visit (Delkhosh, Negarandeh, Ghasemi, and Rostami, 2014; Figueiredo, Pina, Tonete, Lima, and Mello, 2011; Gust et al., 2005; Kennedy et al., 2011). According to Harmsen et al. (2013) and McKee and Bohannon (2016), parents also argue that experiencing minor vaccine-preventable diseases is an advantage for the child, as this strengthens their immune system. In the research by Wilson et al. (2008), Luthy et al. (2011), and Espeleta et al. (2017), parents also highlight the potential ineffectiveness of the vaccine, citing cases where children became ill despite having previously received the vaccine for the disease.

Some parents are also worried about the safety of vaccinations, especially regarding combination vaccines (Chen et al., 2011; Kennedy et al., 2011; Pal, Goodyear - Smith, and Exeter, 2014) and their persistence (Blaisdell et al., 2016), since they said that if their child was vaccinated and it was later discovered that something had been wrong with the vaccine, nothing would be possible to change. Parents were concerned whether their children's immune systems were sufficiently developed to be vaccinated with vaccines that had been recommended by the national guidelines (Blaisdell et al., 2016; Gust et al., 2005; Gust et al., 2007; Harmsen et al., 2013; Kennedy et al., 2011; Luthy et al., 2011; McKee and Bohannon, 2016; Tickner, Leman and Woodcock, 2010). However, a large number of parents also decide whether or not to vaccinate their child at the suggestion of a personal physician (Kempe et al., 2011; Kurup, Shorey, Wang, and He, 2017; Rosen et al., 2017).

Health professionals are generally great supporters of vaccination. At the same time, they are the people with whom parents who have fear of vaccination have the most contact when it comes to their child's health, so interaction with them is the basis for maintaining trust in vaccination (Leask et al., 2012; Schmitt et al., 2007) and healthcare in general. Usually, the topic of the anxiety about vaccination and not vaccinating the baby goes in one of two directions.

The first one, which is very unpleasant for both parents and healthcare professionals, is to increase the anxiety about vaccination due to pressure and intimidation by healthcare professionals, as described by Wilson et al. (2008), Favin et al. (2012), and Dubé et al. (2013). Non-vaccination, or the mere thought of it, often provokes a strong emotional response in health care professionals, which, according to Lyren and Leonard (2006), ranges from worrying about the general health issues to breaking the trusting relationship they nurtured with the parents. Although undesirable by the health profession, many primary care practitioners stop treating families where it appears that parents did not vaccinate the child or do not want to (Diekema, 2013; Flanagan - Klygis, Sharp and Frader, 2005; Freed, Clark, Hibbs and Santoli, 2004; Leib, Liberatos, and Edwards, 2011; Saad, Salmon, Orenstein, Dehart and Halsey, 2009). It is this response or the health care professionals' aggressive and authoritative approach to this decision, that can only alienate parents, increase parental fear of vaccination and increase the rate of vaccination refusal (Fahlquist, 2017; Wilson et al., 2008).

Due to the great influence of pharmaceutical companies as vaccine manufacturers, there is also a lack of trust in health care personnel when it comes to vaccination (Masaryk and Hatoková, 2016; Williams, 2014; Wilson et al., 2008; Yaqub et al., 2014). This distrust is not only typical of parents who are hesitant about vaccination or who have decided not to vaccinate but also applies to parents who support vaccination (Mills, Jadad, Ross and Wilson, 2005; Weiss, Schröpfer and Merten, 2016). Both groups of parents think that healthcare professionals are an unreliable source of information about vaccination because of this impact. Interestingly, nurses are seen as more trustworthy by parents than physicians (Hoekstra and Margolois, 2016; Peterson et al., 2012; Plumridge, Goodyear - Smith, and Ross, 2009).

The more desirable, on the other hand, is a positive response from healthcare professionals, as they can have a positive effect on parents' anxiety about vaccination by providing information and establishing trust (Espeleta et al., 2017; McKee and Bohannon, 2016; Ruijs et al., 2012; Wilson et al., 2008). This information is important because in a world that provides lacking, false, conflicting and difficult to access data regarding vaccination, health professionals are the primary source of it (Giambi et al., 2014; Kennedy et al., 2011; Sheikh et al., 2013). This gives the parents a picture that makes them think about the dangers and benefits of not vaccination, so they can make an informed decision. This, however, can only be achieved through a positive relationship between healthcare professionals and the parents.

In Slovenia, as in other countries, the number of parents with fear of vaccination is increasing. The Slovenian health care professionals cannot afford to neglect that, no matter what their position is about not vaccinating children. The parents' fear

largely stems from inaccessible, incorrect, conflicting and negative information about vaccines and their side effects, which can have long-term effects on children. This can lead to parents' reasons for not vaccinating children, which can range from negative vaccine reactions to religious reasons.

We also cannot ignore the important role that health care professionals play in the parents' fear of vaccination and their decision not to vaccinate children. Most undesirable is the treatment of these parents by healthcare professionals, who describe them as authoritative and aggressive, or when they refuse to treat their children at all, which is contrary to the code of ethics. Research confirms both the importance of trust between parents and health professionals and a positive attitude towards parents who refuse to be vaccinated, as this is a key element in the quality of the child's health care, which is the goal of both groups.

LITERATURA

1. Baker, J. P. (2008). Mercury, vaccines, and autism: one controversy, three histories. American Journal of Public Health, 98, št. 2, str. 244–253.
2. Bedford, H. in Elliman, D. (2000). Concerns about immunisation. BMJ: British Medical Journal, 320, št. 7229, str. 240–243.
3. Betsch, C., Brewer, N. T., Brocard, P., Davies, P., Gaissmaier, W., Haase, N. idr. (2012). Opportunities and challenges of Web 2.0 for vaccination decisions. Vaccine, 30, št. 25, str. 3727–3733.
4. Blaisdell, L. L., Gutheil, C., Hootsmans, N. A. and Han, P. K. (2016). Unknown risks: parental hesitation about vaccination. Medical Decision Making, 36, št. 4, str. 479–489.
5. Brown, K. F., Long, S. J., Ramsay, M., Hudson, M. J., Green, J., Vincent, C. A. idr. (2012). UK parents' decision-making about measles–mumps–rubella (MMR) vaccine 10 years after the MMR-autism controversy: A qualitative analysis. Vaccine, 30, št. 10, str. 1855–1864.
6. Bults, M., Beaujean, D. J., Richardus, J. H., van Steenbergen, J. E. and Voeten, H. A. (2011). Pandemic influenza A (H1N1) vaccination in The Netherlands: parental reasoning underlying child vaccination choices. Vaccine, 29, št. 37, str. 6226–6235.
7. Burgess, D. C., Burgess, M. A. in Leask, J. (2006). The MMR vaccination and autism controversy in United Kingdom 1998–2005: Inevitable community outrage or a failure of risk communication?. Vaccine, 24, št. 18, str. 3921–3928.
8. Cassell, J. A., Leach, M., Poltorak, M. S., Mercer, C. H., Iversen, A. and Fairhead, J. R. (2006). Is the cultural context of MMR rejection a key to an effective public health discourse?. Public health, 120, št. 9, str. 783–794.
9. Chen, M. F., Wang, R. H., Schneider, J. K., Tsai, C. T., Jiang, D. D. S., Hung, M. N. idr. (2011). Using the health belief model to understand caregiver factors influencing childhood influenza vaccinations. Journal of community health nursing, 28, št. 1, str. 29–40.
10. Centers for Disease Control and Prevention [CDC]. (1999). Ten great public health achievements--United States, 1900–1999. MMWR. Morbidity and mortality weekly report, 48, št. 12, str. 241.
11. Dawar, M., Dobson, S., Kallos, A., LaJeunesse, C., Weatherill, S. and Daly, P. (2002). Measuring hepatitis B uptake in a new universal infant program. Canadian Journal of Public Health/Revue Canadienne de Sante'e Publique, str. 281–284.
12. Delkhosh, M., Negarandeh, R., Ghasemi, E. and Rostami, H. (2014). Maternal concerns about immunization over 0–24 month children: a qualitative research. Issues in comprehensive pediatric nursing, 37, št. 4, str. 235–249.
13. Diekema, D. S. (2013). Provider dismissal of vaccine-hesitant families: misguided policy that fails to benefit children. Human vaccines & immunotherapeutics, 9, št. 12, str. 2661–2662.

14. Dubé, E., Laberge, C., Guay, M., Bramadat, P., Roy, R. and Bettinger, J. A. (2013). Vaccine hesitancy: an overview. Human vaccines & immunotherapeutics, 9, št. 8, str. 1763–1773.
15. Espeleta, H. C., Beasley, L. O., Ridings, L. E., Smith, T. J. and Shields, J. D. (2017). Immunizing Children: A Qualitative Analysis of Future Parental Decision Making. Clinical Pediatrics, 0009922817701173.
16. Fahlquist, N. J. (2017). Vaccine hesitancy and trust. Ethical aspects of risk communication. Scandinavian journal of public health, 1403494817727162.
17. Favin, M., Steinglass, R., Fields, R., Banerjee, K. and Sawhney, M. (2012). Why children are not vaccinated: a review of the grey literature. International health, 4, št. 4, str. 229–238.
18. Figueiredo, G. L. A., Pina, J. C., Tonete, V. L. P., Lima, R. A. G. D. and Mello, D. F. D. (2011). Experiences of families in the immunization of Brazilian children under two years old. Revista Latino-Americana de Enfermagem, 19, št. 3, str. 598–605.
19. Flanagan - Klygis, E. A., Sharp, L. and Frader, J. E. (2005). Dismissing the family who refuses vaccines: a study of pediatrician attitudes. Archives of pediatrics & adolescent medicine, 159, št. 10, str. 929–934.
20. Fombonne, E. (2008). Thimerosal disappears but autism remains. Archives of General Psychiatry, 65, št. 1, str. 15–16.
21. Freed, G. L., Clark, S. J., Hibbs, B. F. and Santoli, J. M. (2004). Parental vaccine safety concerns: the experiences of pediatricians and family physicians. American journal of preventive medicine, 26, št. 1, str. 11–14.
22. Giambi, C., D'Ancona, F., Del Manso, M., De Mei, B., Giovannelli, I., Cattaneo, C. idr. (2014). Exploring reasons for non-vaccination against human papillomavirus in Italy. BMC infectious diseases, 14, št. 1, str. 545.
23. Glanz, J. M., Wagner, N. M., Narwaney, K. J., Shoup, J. A., McClure, D. L., McCormick, E. V. idr. (2013). A mixed methods study of parental vaccine decision making and parent–provider trust. Academic pediatrics, 13, št. 5, str. 481–488.
24. Gross, L. (2009). A broken trust: lessons from the vaccine–autism wars. PLoS biology, 7, št. 5, e1000114.
25. Gust, D., Brown, C., Sheedy, K., Hibbs, B., Weaver, D. and Nowak, G. (2005). Immunization attitudes and beliefs among parents: beyond a dichotomous perspective. American journal of health behavior, 29, št. 1, str. 81–92.
26. Gust, D. A., Kennedy, A., Wolfe, S., Sheedy, K., Nguyen, C. and Campbell, S. (2007). Developing tailored immunization materials for concerned mothers. Health education research, 23, št. 3, str. 499–511.
27. Harmsen, I. A., Mollema, L., Ruiter, R. A., Paulussen, T. G., de Melker, H. E. and Kok, G. (2013). Why parents refuse childhood vaccination: a qualitative study using online focus groups. BMC Public Health, 13, št. 1, str. 1183.
28. Hoekstra, S. and Margolis, L. (2016). The Importance of the Nursing Role in Parental Vaccine Decision Making. Clinical pediatrics, 55, št. 5, str. 401–403.
29. Kapp, C. (2004). Nigerian states again boycott polio-vaccination drive. Lancet, 363, št. 9410, str. 709.
30. Kelley, C. A., Velazco, C. S., Delaney, T. V., Bensimhon, A., Huang, K. N., Jarvis, P. R. idr. (2015). Factors contributing to suboptimal rates of childhood vaccinations in Vermont. Journal of Child Health Care, 19, št. 4, str. 558–568.
31. Kempe, A., Daley, M. F., McCauley, M. M., Crane, L. A., Suh, C. A., Kennedy, A. M. idr. (2011). Prevalence of parental concerns about childhood vaccines: the experience of primary care physicians. American journal of preventive medicine, 40, št. 5, str. 548–555.
32. Kennedy, A., Basket, M. and Sheedy, K. (2011). Vaccine attitudes, concerns, and information sources reported by parents of young children: results from the 2009 HealthStyles survey. Pediatrics, str. S92–S99.
33. Kurup, L., Shorey, S., Wang, W. and He, H. G. (2017). An integrative review on parents' perceptions of their children's vaccinations. Journal of Child Health Care, 21, št. 3, str. 343–352.

34. Leask, J., Kinnersley, P., Jackson, C., Cheater, F., Bedford, H. and Rowles, G. (2012). Communicating with parents about vaccination: a framework for health professionals. BMC pediatrics, 12, št. 1, str. 154.
35. Lee, S., Riley - Behringer, M., Rose, J. C., Meropol, S. B. and Lazebnik, R. (2016). Parental Vaccine Acceptance: A Logistic Regression Model Using Previsit Decisions. Clinical pediatrics, 56, št. 8, str. 716–722.
36. Leib, S., Liberatos, P. and Edwards, K. (2011). Pediatricians' experience with and response to parental vaccine safety concerns and vaccine refusals: a survey of Connecticut pediatricians. Public Health Reports, 126, št. 2, str. 13–23.
37. Luthy, K. E., Beckstrand, R. L., Callister, L. C. and Cahoon, S. (2012). Reasons parents exempt children from receiving immunizations. The Journal of School Nursing, 28, št. 2, str. 153-160.
38. Lyren, A. and Leonard, E. (2006). Vaccine refusal: issues for the primary care physician. Clinical pediatrics, 45, št. 5, str. 399–404.
39. Masaryk, R. and Hatoková, M. (2016). Qualitative inquiry into reasons why vaccination messages fail. Journal of health psychology, 22, št. 14, str. 1880–1888.
40. McKee, C. and Bohannon, K. (2016). Exploring the reasons behind parental refusal of vaccines. The Journal of Pediatric Pharmacology and Therapeutics, 21, št. 2, str. 104–109.
41. Mills, E., Jadad, A. R., Ross, C. and Wilson, K. (2005). Systematic review of qualitative studies exploring parental beliefs and attitudes toward childhood vaccination identifies common barriers to vaccination. Journal of clinical epidemiology, 58, št. 11, str. 1081–1088.
42. Murch, S. H., Anthony, A., Casson, D. H., Malik, M., Berelowitz, M., Dhillon, A. P. idr. (2004). Retraction of an interpretation. Lancet (London, England), 363, št. 9411, str. 750.
43. Pal, M., Goodyear - Smith, F. and Exeter, D. (2014). Factors contributing to high immunisation coverage among New Zealand Asians. Journal of primary health care, 6, št. 4, str. 304–311.
44. Parker, S. K., Schwartz, B., Todd, J. and Pickering, L. K. (2004). Thimerosal-containing vaccines and autistic spectrum disorder: a critical review of published original data. Pediatrics, 114, št. 3, str. 793–804.
45. Pearce, A., Law, C., Elliman, D., Cole, T. J. and Bedford, H. (2008). Factors associated with uptake of measles, mumps, and rubella vaccine (MMR) and use of single antigen vaccines in a contemporary UK cohort: prospective cohort study. Bmj, 336, št. 7647, str. 754–757.
46. Perkins, R. B., Tipton, H., Shu, E., Marquez, C., Belizaire, M., Porter, C. idr. (2013). Attitudes toward HPV vaccination among low-income and minority parents of sons: a qualitative analysis. Clinical pediatrics, 52, št. 3, str. 231–240.
47. Peterson, R. M., Cook, C., Yerxa, M. E., Marshall, J. H., Pulos, E. and Rollosson, M. P. (2012). Improving immunization coverage in a rural school district in Pierce County, Washington. The Journal of School Nursing, 28, št. 5, str. 352–357.
48. Plotkin, S., Gerber, J. S. and Offit, P. A. (2009). Vaccines and autism: a tale of shifting hypotheses. Clinical Infectious Diseases, 48, št. 4, str. 456–461.
49. Plumridge, E., Goodyear Smith, F. in Ross, J. (2009). Nurse and parent partnership during children's vaccinations: a conversation analysis. Journal of advanced nursing, 65, št. 6, str. 1187–1194.
50. Rosen, B. L., Shew, M. L., Zimet, G. D., Ding, L., Mullins, T. L. and Kahn, J. A. (2017). Human Papillomavirus Vaccine Sources of Information and Adolescents' Knowledge and Perceptions. Global pediatric health, 4, 2333794X17743405.
51. Ruijs, W. L., Hautvast, J. L., van IJzendoorn, G., van Ansem, W. J., Elwyn, G., Van der Velden, K. idr. (2012). How healthcare professionals respond to parents with religious objections to vaccination: a qualitative study. BMC health services research, 12, št. 1, str. 231.
52. Saad O. B., Salmon, D. A., Orenstein, W. A., Dehart, M. P. and Halsey, N. (2009). Vaccine refusal, mandatory immunization, and the risks of vaccine-preventable diseases. New England Journal of Medicine, 360, št. 19, str. 1981–1988.
53. Sabra, A., Bellanti, J. A. and Colón, A. R. (1998). Ileal-lymphoid-nodular hyperplasia, non-specific colitis, and pervasive developmental disorder in children. The Lancet, 352, št. 9123, str. 234–235.

54. Schmitt, H. J., Booy, R., Aston, R., Van Damme, P., Schumacher, R. F., Campins, M. idr. (2007). How to optimise the coverage rate of infant and adult immunisations in Europe. BMC medicine, 5, št. 1, str. 11.
55. Sheikh, A., Iqbal, B., Ehtamam, A., Rahim, M., Shaikh, H. A., Usmani, H. A. idr. (2013). Reasons for non-vaccination in pediatric patients visiting tertiary care centers in a polio-prone country. Archives of Public Health, 71, št. 1, str. 19.
56. Smailbegovic, M. S., Laing, G. J. and Bedford, H. (2003). Why do parents decide against immunization? The effect of health beliefs and health professionals. Child: care, health and development, 29, št. 4, str. 303–311.
57. Smith, L. E., Amlôt, R., Weinman, J., Yiend, J. and Rubin, G. J. (2017). A systematic review of factors affecting vaccine uptake in young children. Vaccine, 35, št. 45, str. 6059–6069.
58. Spier, R. E. (2001). Perception of risk of vaccine adverse events: a historical perspective. Vaccine, 20, str. S78–S84.
59. Tickner, S., Leman, P. J. and Woodcock, A. (2010). Parents' views about pre school immunization: an interview study in southern England. Child: care, health and development, 36, št. 2, str. 190–197.
60. Walsh, S., Thomas, D. R., Mason, B. W. and Evans, M. R. (2015). The impact of the media on the decision of parents in South Wales to accept measles-mumps-rubella (MMR) immunization. Epidemiology & Infection, 143, št. 3, str. 550–560.
61. Weiss, C., Schröpfer, D. and Merten, S. (2016). Parental attitudes towards measles vaccination in the canton of Aargau, Switzerland: a latent class analysis. BMC infectious diseases, 16, št. 1, str. 400.
62. Williams, S. E. (2014). What are the factors that contribute to parental vaccine-hesitancy and what can we do about it?. Human vaccines & immunotherapeutics, 10, št. 9, str. 2584–2596.
63. Wilson, K., Barakat, M., Vohra, S., Ritvo, P. and Boon, H. (2008). Parental views on pediatric vaccination: the impact of competing advocacy coalitions. Public Understanding of Science, 17, št. 2, str. 231–243.
64. Wolfe, R. M. and Sharp, L. K. (2002). Anti-vaccinationists past and present. BMJ: British Medical Journal, 325, št. 7361, str. 430–432.
65. Yaqub, O., Castle - Clarke, S., Sevdalis, N. and Chataway, J. (2014). Attitudes to vaccination: a critical review. Social Science & Medicine, 112, str. 1–11.

Dr. Katarina Merše Lovrinčević, predavateljica na Fakulteti za vede o zdravju Univerze na Primorskem
E-naslov: katarina.merse@fvz.upr.si

Dr. Bojana Filej, izredna profesorica na Fakulteti za zdravstvene vede Univerze v Novem mestu
E-naslov: bojana.filej@gmail.com