

POVEZANOST KARAKTERISTIKA ADOLESCENATA S NOVIM UPITNIČKIM MJERAMA ZA PROCJENU STAVOVA I UČESTALOSTI USPOSTAVLJANJA RIZIČNIH *ONLINE* KONTAKATA

ADDRESSING THE RELATIONSHIP BETWEEN ADOLESCENT CHARACTERISTICS AND THEIR ATTITUDES TOWARDS AND FREQUENCY OF EXPOSURE TO RISKY ONLINE CONTACT

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Sažetak: Istraživanja pokazuju kako su adolescenti skloni različitim rizičnim online ponašanjima, između ostalog i uspostavljanju rizičnih online kontakata. Cilj ovog istraživanja bio je ispitati stavove adolescenata prema rizičnim online kontaktima i njihovo uspostavljanje takvih kontakata. U istraživanju provedenom s novorazvijenim instrumentima i kratkotrajnim longitudinalnim nacrtom ispitali smo mogu li se na temelju dobi, spola, vrste škole, školskog uspjeha i vremena provedenog u online aktivnostima predvidjeti stavovi i rizično online ponašanje adolescenata te može li se na temelju stavova prema online rizičnom ponašanju adolescenata predvidjeti njihovo rizično online ponašanje uspostave rizičnih kontakata. Uzorak su činili učenici srednje škole ($N = 667$). Prosječna dob sudionika iznosila je 16,30 godina ($SD = 1,181$). Sudjelovao je 201 mladić (30,1 %) i 466 djevojaka (69,9 %). Primijenjeni su upitnici koji su konstruirani za potrebe ovog istraživanja: Upitnik sociodemografskih karakteristika i Upitnik stavova prema kontaktnom rizičnom online ponašanju, koji su primijenjeni u prvoj točki mjerenja te Upitnik kontaktnog rizičnog online ponašanja, koji je primijenjen u drugoj točki mjerenja, dva mjeseca poslije. Upitnici su pokazali očekivane faktorske strukture i zadovoljavajuće do visoke koeficijente unutarnje pouzdanosti. Rezultati pokazuju kako

Abstract: Research shows that adolescents are prone to various risky online behaviours, including establishing risky online contacts. The aim of this research was to assess adolescents' attitudes towards establishing risky online contacts and the frequency of such behaviour. Using newly developed instruments and a short-term longitudinal research design, we wanted to determine whether we can predict the adolescents' attitudes towards risky online contacts and the frequency of this type of risky online behaviour based on their age, gender, type of school, academic achievement, and time spent online. Additionally, we investigated whether we can predict their risky online behaviour based on their attitudes. The sample consisted of high school students ($n = 667$) with an average age of 16.3 years ($SD = 1.181$), comprising 201 boys (30.1%) and 466 girls (69.9%). The study used customised questionnaires that were constructed for the purpose of this research: the Sociodemographic Data Questionnaire and the Attitudes Towards Risky Online Contacts Questionnaire were both applied at the first time point, and the Risky Online Contacts Questionnaire was applied at the second time point two months later. These questionnaires demonstrated expected factor structures, as well as satisfactory to high internal reliability coefficients. The results indicate that boys have more positive attitudes

mladići imaju pozitivnije stavove prema online kontaktima s nepoznatim osobama od djevojaka i kako adolescenti imaju pozitivnije stavove prema tim kontaktima što više vremena provode u online aktivnostima. Također, što su adolescenti imali pozitivnije stavove prema uspostavljanju rizičnih online kontakata te što su više vremena provodili u online aktivnostima u prvoj točki mjerenja, češće su se upuštali u ovo rizično ponašanje u drugoj točki mjerenja. Dob, vrsta srednje škole i školski uspjeh učenika nisu se pokazali statistički značajnim prediktorima ni stavova ni njihovog rizičnog online ponašanja. Rezultati su pokazali kako adolescenti povremeno uspostavljaju rizične online kontakte i podcjenjuju negativne posljedice koje mogu proizaći iz takvog ponašanja, što upućuje na važnost poticanja njihovog kritičkog mišljenja u online okruženju.

Ključne riječi: adolescenti, rizični online kontakti, stavovi prema rizičnim online kontaktima, upitnik stavova

UVOD

Adolescenti svakodnevno koriste internet i danas je uobičajeno da imaju otvorene profile na nekoliko različitih društvenih mreža. Društvene mreže adolescentima su privlačne jer im omogućuju komunikaciju s prijateljima i drugim osobama sličnih interesa. Nacionalna istraživanja u Republici Hrvatskoj ukazuju na to kako su u posljednje vrijeme najpopularnije društvene mreže među adolescentima Instagram, Facebook, Snapchat, TikTok i YouTube (Ciboci i sur., 2020; Vejmelka i sur., 2022). Rezultati istraživanja o utjecaju društvenih mreža na adolescente su nejednoznačni, ali uglavnom upozoravaju na rizike tijekom boravka na društvenim mrežama i negativne posljedice koje su povezane s njihovom prekomjernom uporabom, kao što su veća depresivnost, slabiji školski uspjeh i lošija kvaliteta spavanja (Gupta i sur., 2022; Khalaf i sur., 2023).

Prilikom boravka na društvenim mrežama, adolescenti se često susreću s različitim *online* rizicima (Crone i Duijvenvoorde, 2021; Livingstone i Stoilova, 2021; Steijn i sur., 2016). U literaturi se javljaju različita određenja *online* rizika, a prema autoricama Livingstone i Stoilovoj (2021) *online* rizici nastaju kada su adolescenti izloženi potencijalno štetnom *online* sadržaju; kada su na meti potencijalno ugrožavajućeg *online* kontakta; kada su iskorišteni potencijalno štetnim ugovorom ili sudjeluju u ponašanju koje može biti štetno za njih ili za drugu osobu. Sadržajni rizik (engl. *content*

towards risky online contacts than girls. In addition, the more time adolescents spent online, the more positive their attitudes were towards risky online contacts. Adolescents who had more positive attitudes towards establishing risky online contacts and those who spent more time engaging in online activities in the first time point were more likely to engage in such behaviour in the second time point. Age, type of high school attended, and academic achievement did not contribute to predicting adolescents' attitudes and their frequency of establishing risky online contacts. These findings suggest that adolescents sometimes establish risky online contacts and tend to underestimate the negative consequences that can occur from such behaviour, which highlights the importance of encouraging their critical thinking in online contexts.

Keywords: adolescents, risky online contact, attitudes towards risky online contacts

INTRODUCTION

Adolescents use the Internet on a daily basis and it is common for them to have profiles on several different social networks. Social networks are attractive to adolescents because they allow them to communicate with friends and other people who share similar interests. National research in the Republic of Croatia indicates that the most popular social networks among adolescents are Instagram, Facebook, Snapchat, TikTok, and YouTube (Ciboci et al., 2020; Vejmelka et al., 2022). Research on the impact of social networks on adolescents' wellbeing is ambiguous, but it mainly warns about risks faced while accessing social networks, as well as negative consequences associated with excessive use, such as increased depression, low academic achievement, and poor sleep quality (Gupta et al., 2022; Khalaf et al., 2023).

When using social networks, adolescents often encounter various online risks (Crone & Duijvenvoorde, 2021; Livingstone & Stoilova, 2021; Steijn et al., 2016). There are different definitions and types of online risks. According to the definition by Livingstone and Stoilova (2021), online risks arise when adolescents are exposed to potentially harmful online content, when they are targeted by potentially harmful online contact, when they are exploited by a potentially harmful contract, or when they participate in behaviour that may be harmful to them or other people. Content risk

risk) nastaje kada se adolescenti susretnu sa sadržajima koji potiču nasilje, mržnju, samoozljeđivanje, poremećaje prehrane i sl., dok rizik kontakta (engl. *contact risk*) obuhvaća *online* komunikaciju i dijeljenje informacija s potencijalno opasnim, nepoznatim osobama. Rizik sklapanja ugovora (engl. *contract risk*) podrazumijeva komercijalnu prijevaru i trgovinu lažnim ili ilegalnim proizvodima, a ponašajni rizik (engl. *conduct risk*) nastaje kada adolescenti sudjeluju u *online* zlostavljanju ili uznemiravanju drugih osoba.

Kao osnovna svrha uporabe društvenih mreža često se izdvaja komunikacija s *online* prijateljima, osobama koje su adolescentima poznate iz stvarnog života, ali i nepoznatim osobama sličnih interesa (Ciboci i sur., 2020). *Online* komunikacija s nepoznatim osoba može za adolescente biti rizična, no može imati i neke prednosti. Kao tri osnovna obilježja *online* komunikacije, koja ju čine posebno privlačnima za adolescente, Valkenburg i Peter (2011) navode: (1) anonimnost, koja adolescentima omogućuje da budu iskreniji u izražavanju svojih misli i emocija i manje razmišljaju o tome što će drugi misliti o njima, (2) asinkronost, koja adolescentima omogućuje da razmisle prije nego što nekome pošalju poruku ili objave informacije o sebi te tako upravljaju dojmom o sebi i (3) dostupnost, koja podrazumijeva lak pronalazak i stupanje u kontakt sa sličnim vršnjacima. Međutim, posljednja prednost ujedno predstavlja i rizik jer dostupnost omogućuje lak kontakt s nepoznatim osobama koje za adolescente mogu biti opasne.

Ponašanje koje je povezano s *online* komunikacijom s nepoznatim osobama je dodavanje nepoznatih kontakata (prijatelja ili pratitelja, engl. *friend/follower*) na profil društvene mreže te se upravo ovo ponašanje u literaturi ističe kao poseban rizik za adolescente (Li i Kobsa, 2019). Prema nalazima Ciboci i suradnika (2020) 50 % hrvatskih adolescenata u dobi od 15 do 17 godina uspostavilo je *online* komunikaciju s osobom koju ne poznaje, a čak 11 % adolescenata prihvaća apsolutno sve *zahtjeve za prijateljstvom ili praćenjem* (engl. *friend/follow request*) pa i one nepoznatih osoba, dok 44 % adolescenata prihvaća *zahtjev za prijateljstvom* nepoznate osobe samo ako imaju zajedničke *prijatelje* na društvenoj mreži. Prihvaćanje nepoznatih

arises when adolescents encounter content that encourages violence, hatred, self-harm, eating disorders, and so on, while contact risk involves online communication and sharing information with potentially dangerous and unknown persons. Contract risk involves commercial fraud and the trade of counterfeit or illegal products, and conduct risk arises when adolescents participate in online abuse or harassment.

The main purpose of using social networks is to communicate with online friends, people who these adolescents know from real life, as well as unknown people with similar interests (Ciboci et al., 2020). Online communication with unknown people can be risky for adolescents, but it can also have some advantages. Valkenburg & Peter (2011) stated three basic characteristics of online communication that make it particularly attractive to adolescents: (1) anonymity, which allows adolescents to be more honest in expressing their thoughts and emotions, and think less about what others will think of them; (2) asynchrony, which allows adolescents to think before sending a message to someone or posting information about themselves, and thus, manage the way they present themselves; and (3) accessibility, which makes it easy for adolescents to find and contact like-minded peers. However, the third advantage also represents a risk because accessibility allows for contact with strangers, which can be dangerous for adolescents.

A behaviour associated with online communication with strangers is adding unknown contacts (friends or followers) to a social network profile, and this behaviour is highlighted in the literature as a risk that is specific to adolescents (Li & Kobsa, 2019). According to the findings of Ciboci et al. (2020), 50% of Croatian adolescents aged 15 to 17 years have established online communication with a person they do not know, and as many as 11% of adolescents accept absolutely all friend/follow requests, including those from strangers. Furthermore, 44% of adolescents accept a friend request from a stranger only if they have mutual friends on a social networking platform. Accepting unknown friend requests is risky because it threatens online privacy, as well as exposes ado-

zahtjeva za prijateljstvom rizično je jer povećava vjerojatnost zloupotrebe osobnih informacija, izloženost adolescenta neprijateljskim porukama i rizičnim *online* sadržajima (Li i Kobsa, 2019).

Neki autori, kao npr. Cernikova i suradnici (2018), razlikuju različite razine *online* interakcije s nepoznatim osobama; (1) neverbalnu interakciju, koja uključuje npr. zajedničko igranje igre s nepoznatom osobom, (2) inicijalni kontakt, koji uključuje dodavanje osobe kao prijatelja ili pratitelja na profil društvene mreže bez izravne komunikacije, (3) komunikaciju, koja podrazumijeva razmjenu poruka putem *chata* ili *Messengera* i (4) sastanak uživo s osobom upoznatom putem interneta. *Online* komunikacija s nepoznatim osobama vrlo je rizična jer je često povezana sa sastancima uživo s osobama upoznatima *online*, odnosno s osobama čiji su dob, spol i namjere adolescentima najčešće nepoznate.

Teorije rizičnog *online* ponašanja

Različite teorije nastoje objasniti pojavu rizičnog ponašanja adolescenata u stvarnom životu, no manji je broj onih koje u fokusu imaju rizično *online* ponašanje adolescenata. U objašnjenju rizičnog ponašanja adolescenata u stvarnom životu, istraživači ističu utjecaj individualnih osobina pojedinca, čimbenika iz njihovog obiteljskog i društvenog okruženja, odnosno upotrebljavaju modele poput Bronfenbrennerovog ekološkog modela (1979) ili Teorije obiteljskih sustava (Klever, 2005). Kleverova teorija obiteljskih sustava (2005) tumači rizična ponašanja kroz interakcije unutar obitelji i ističe da je rizično ponašanje djeteta ili adolescenta posljedica disfunkcije cijele obitelji, dok Bronfenbrenner (1979) uzroke rizičnog ponašanja promatra u kontekstu interakcije psiholoških, socijalnih i ekonomskih faktora. U literaturi uglavnom postoji konsenzus kako postojanje pojedinog rizičnog čimbenika nije dovoljno za razvoj rizičnog ponašanja te da vjerojatnost pojave rizičnog ponašanja raste s brojem rizičnih čimbenika (Evans i sur., 2013). Zbog specifičnosti rizičnog *online* ponašanja, ove teorije nije uvijek prikladno primijeniti u *online* kontekstu (npr. Banks i sur., 2010; Sasson i Mesch, 2016) pa se u tu svrhu češće primjenjuju Teorija planiranog ponašanja (Ajzen, 1991) i Teorija motivacije za

lescents to hostile messages and risky online content (Li & Kobsa, 2019).

Some authors, including Cernikova et al. (2018), distinguish between different levels of online interaction with strangers as follows: (1) non-verbal interaction, which includes, for example, playing a game together with a stranger; (2) initial contact, which includes adding a person as a friend or follower on a social network profile without direct communication; (3) communication, which involves exchanging messages via chat or messenger; and (4) a face-to-face meeting with a person who they met online. Online communication with strangers is very risky because it is often associated with face-to-face meetings with people who they met online, i.e., with people whose age, gender, and intentions are most often unknown to adolescents.

Theories of risky online behaviour

Different theories attempt to explain the occurrence of risky behaviour among adolescents in real-world contexts, but fewer focus on adolescents' risky online behaviour. Considering risky behaviour in real life, researchers emphasised the influence of individual characteristics, family, and social environment as predictive factors, or they used models such as Bronfenbrenner's model (1979) or Family Systems Theory (Klever, 2005) to understand this topic further. Klever's Family Systems Theory (2005) interprets risky behaviour through interactions within the family and emphasises that the risky behaviour of a child or adolescent is often a consequence of dysfunction of the entire family, while Bronfenbrenner (1979) observed the causes of risky behaviour in the context of the interaction of psychological, social, and economic factors. There is consensus in the literature that the occurrence of a single risk factor is not sufficient for the development of risky behaviour and that the probability of the occurrence of risky behaviour increases with the number of risk factors (Evans et al., 2013). Due to the nature of risky online behaviour, these theories are not always appropriate for explaining online behaviour (e.g. Banks et al., 2010; Sasson & Mesch, 2016; Youn, 2009). Therefore, the Theory of

zaštitom (Maddux i Roger, 1983). Ove dvije teorije smatraju se teorijama usklađenosti stavova o ponašanju i ponašanja te je njihova pretpostavka da je odluka o upuštanju u rizično ponašanje rezultat racionalnog procesa. Njihovi autori ističu kako pojedinac razmišlja o potencijalnim posljedicama određenog ponašanja i zatim odlučuje o tome kako će postupiti. Dakle, vrlo važan čimbenik koji utječe na odluku o (ne)upuštanju u ponašanje su stavovi pojedinca prema određenom rizičnom ponašanju. Uz stavove prema ponašanju, prema ovim teorijama, na ponašanje utječu i socijalne norme, odnosno očekivanja za koja pojedinac vjeruje da od njega imaju njemu bliske osobe te vjerovanja o kontroli vlastitog ponašanja (kada govorimo o Teoriji planiranog ponašanja), odnosno samoefikasnost vezana za izvedbu ponašanja (kada je riječ o Teoriji motivacije za zaštitom). U novije vrijeme u objašnjenju rizičnog *online* ponašanja (Ouytsel i sur., 2020; Walrave i sur., 2015) upotrebljava se i Model prototipova (Gerrard i Gibbons, 1995) koji naglašava kako rizična ponašanja adolescenata nisu posve racionalna ni socijalno poželjna, odnosno kako osim kognitivne komponente stava dodatni socijalni čimbenici (socijalne norme i percepcija prototipa, odnosno kognitivna reprezentacija tipičnog vršnjaka koji se rizično ponaša) utječu na odluku adolescenta o upuštanju u rizično ponašanje. Ipak, u navedenim teorijama razvoja rizičnog ponašanja koje se upotrebljavaju u *online* kontekstu kao najvažnija odrednica rizičnog ponašanja ističu se stavovi prema rizičnom ponašanju.

Pregled istraživanja o stavovima adolescenata prema rizičnom *online* ponašanju i njihovom rizičnom *online* ponašanju

Brojne studije bavile su se istraživanjem individualnih čimbenika povezanih sa stavovima adolescenata prema rizičnom *online* ponašanju i njihovim rizičnim *online* ponašanjem; najčešće njihovim spolom, dobi i vremenom provedenim *online*. Čini se kako rezultati istraživanja s obzirom na spol i dob adolescenata nisu posve jednoznačni. Postoje nalazi koji ukazuju kako su stariji adolescenti oba spola (u dobi od 15 do 18 godina), u odnosu na mlađe (u dobi od 11 do 14 godina), kao i mladići, u odnosu na djevojke

Planned Behaviour (Ajzen, 1991) and the Protection Motivation Theory (Maddux & Roger, 1983) are used more often for this purpose. These theories assume congruence between attitudes and behaviour, i.e., that the decision to engage in risky behaviour is the result of a rational process based on outcome evaluation. The authors emphasised that an individual thinks about the potential consequences of a certain behaviour and then makes a decision about that behaviour. Therefore, a very important factor that influences the decision to engage in a behaviour is an individual's attitude towards certain risky behaviours. In addition to attitudes, according to these theories, behaviour is also influenced by subjective norms, i.e., expectations that an individual believes that people close to him/her have of him/her, as well as beliefs about behavioural control (in Theory of Planned Behaviour) or self-efficacy related to behavioural performance (in Protection Motivation Theory). Recently, the Prototype Willingness Model (Gerrard & Gibbons, 1995) has been used to explain risky online behaviour (Ouytsel et al., 2020; Walrave et al., 2015), which emphasises that risky behaviours are neither entirely rational nor socially desirable, i.e., in addition to the cognitive component of attitude, additional social factors influence the adolescent's decision to engage in risky behaviour. However, in the aforementioned theories applied in the online context, attitudes towards behaviour remain the most important determinant of risky online behaviour.

Research overview on adolescents' attitudes toward risky online behaviour and their participation in risky online behaviour

Numerous studies have investigated individual factors associated with adolescents' attitudes towards risky online behaviour and their participation in risky online behaviour: most often their gender, age, and time spent online. Research results regarding adolescents' gender and age are inconclusive. Some findings indicate that older adolescents of both genders (aged 15 to 18 years), in comparison to younger ones (aged 11 to 14 years), as well as boys, in comparison to girls, are more prone to various forms of risky online behaviour

skloniji različitim oblicima rizičnog *online* ponašanja te prema rizičnom *online* ponašanju imaju pozitivnije stavove (Benvenuti i sur., 2023; Ciboci i sur., 2020; Öncü, 2016; Vejmelka i sur., 2017). Međutim, prema rezultatima nekih istraživanja mlađi adolescenti, u usporedbi sa starijima manje razmišljaju o svojoj *online* privatnosti i dijele više podataka o sebi *online* (Anderson i sur., 2022). Nadalje, prema nalazima Smahela i suradnika (2020) djevojke se češće od mladića koriste internetom za socijalizaciju i češće se susreću s rizičnim *online* sadržajima. Nadalje, prema nekim nalazima postoji tendencija da će se adolescenti koji provode više vremena *online* upuštati u više različitih rizičnih *online* ponašanja i imati pozitivnije stavove prema rizičnom *online* ponašanju, od onih adolescenata koji provode manje vremena *online* (Livingstone i sur., 2011; Velki i sur., 2017). Utvrđena je i mala do umjerena korelacija čestine upuštanja mladih u rizična *online* ponašanja s čestinom angažiranja u stvarnim ili *offline* rizičnim ponašanjima poput uporabe opojnih sredstava i seksualno rizičnim ponašanjima (Vannucci i sur., 2020).

Iako postoje brojna istraživanja o povezanosti školskog uspjeha i vrste srednje škole adolescenata s njihovim rizičnim ponašanjem u stvarnom životu, rijetka su istraživanja koja su se bavila povezanošću školskog uspjeha i programa srednje škole sa stavovima prema rizičnom *online* ponašanju i rizičnim *online* ponašanjem adolescenata. Prema nekim istraživanjima, učenici strukovnih škola upuštaju se u više rizičnih ponašanja u stvarnom životu (Ricijaš i sur., 2010; Livazović, 2017; Trubelja i Sambolec, 2018) i *online* okruženju (Velki, 2018), od učenika gimnazija. Također, u nekim je istraživanjima utvrđeno kako se učenici koji imaju bolji školski uspjeh upuštaju u manje rizičnih ponašanja u stvarnom životu (Gremmen i sur., 2017; Hawkins i sur., 2021; Ricijaš i sur., 2010) i *online* okruženju (Đuranović i Klasnić, 2016; Hajar i sur., 2022). Zbog malog broja istraživanja o povezanosti školskog uspjeha i vrste srednje škole s rizičnim *online* ponašanjem adolescenata u budućim istraživanjima bilo bi korisno detaljnije ispitati ove odnose.

Prema rezultatima nekih istraživanja, čini se kako su negativniji stavovi adolescenata prema

and have more positive attitudes towards risky online behaviour (Benvenuti et al., 2023; Ciboci et al., 2020; Öncü, 2016; Vejmelka et al., 2017). However, other studies find that, compared to older adolescents, younger ones are less concerned about their online privacy and share more personal information online (Anderson et al., 2022). Furthermore, Smahel et al. (2020) found that girls use the Internet more often than boys for socialisation and are more likely to encounter risky online content. Moreover, according to some findings, there is a tendency for adolescents who spend more time online to engage in different risky online behaviours and have more positive attitudes towards risky online behaviour than those adolescents who spend less time online (Livingstone et al., 2011; Velki et al., 2017). A small to moderate correlation has been found between risky online behaviour and risky offline behaviour such as substance use and risky sexual behaviour (Vannucci et al., 2020).

Although many studies have investigated the relationship between academic achievement, the type of high school attended, and occurrence of risky behaviour in real-life contexts, only a few have investigated the relationship between academic achievement, type of high school (grammar vs. vocational school), and the attitudes of adolescents towards and their participation in risky online behaviour. According to some researchers, vocational school students are more likely to engage in risky behaviours in real-life contexts (Ricijaš et al., 2010; Livazović, 2017; Trubelja & Sambolec, 2018) and online (Velki, 2018) than grammar school students. In addition, it was determined that students who have higher academic achievements engage in less risky behaviour in real life (Gremmen et al., 2017; Hawkins et al., 2021; Ricijaš et al., 2010) and online (Đuranović & Klasnić, 2016; Hajar et al., 2022). Due to the small number of studies on the connection between academic achievement, type of high school attended, and risky online behaviour among adolescents, it would be useful to examine these relationships in detail in the future.

Some studies suggest that negative attitudes among adolescents towards risky online behaviour are associated with safer online behaviour

rizičnom *online* ponašanju povezani s manje rizičnog *online* ponašanja (Chou i Chou, 2023; Ouytsel i sur., 2020; Schyff i Flowerday, 2023). Neki nalazi (Gerrard i Gibbons, 1995; Gibbons i sur., 2008) ukazuju na to da adolescenti podcjenjuju svoju osobnu ranjivost na posljedice rizičnog ponašanja te obrađuju informacije o potencijalnom riziku na površnji način; fokusiraju se na neposredne prednosti ponašanja, a ne dugoročnije rizike. Upuštanje u rizično *online* ponašanje adolescenata ne percipira se isključivo negativno, već je ono za njih ponekad uzbudljivo i zabavno te im donosi popularnost među vršnjacima (Dumas i sur., 2019). Istraživanja povezanosti stavova i *online* ponašanja rijetko su longitudinalna, što onemogućuje zaključivanje o uzrocima rizičnog *online* ponašanja te dopušta samo utvrđivanje korelata i prediktora. Stavovi se smatraju važnim prethodnicama ponašanja u teorijskim modelima poput Teorije planiranog ponašanja (Ajzen, 1991) u kojoj se povoljna ili nepovoljna procjena određenog ponašanja vezuje uz češće odnosno rjeđe upuštanje u određena ponašanja. S druge strane, Teorija kognitivne disonance (Festinger, 1957) objašnjava povezanost stavova i ponašanja u suprotnome smjeru. Prema toj teoriji, budući da ljudi teže usklađenosti vlastitih stavova i ponašanja, oni će, kada učine nešto što nije u skladu s njihovim ponašanjem, mijenjati stav kako bi osigurali održavanje ravnoteže tj. razriješili kognitivnu disonancu ili neravnotežu. Drugim riječima, ako se adolescenti upuštaju u rizična *online* ponašanja, to ponašanje može promijeniti njihov stav prema rizičnim ponašanjima, tj. on može postati pozitivniji. Kako bi se utvrdio smjer povezanosti stavova i ponašanja, potrebna su longitudinalna istraživanja kojih je mnogo manje nego transverzalnih (Gupta i sur., 2022; Khalaf i sur., 2023; Ouytsel i sur., 2020; Vanucci i sur., 2020). Zato smo u ovom istraživanju odlučili upotrebljavati kratkotrajni longitudinalni nacrt istraživanja i ispitati stavove adolescenata prema uspostavljanju rizičnih *online* kontakata vremenski prije ispitivanja učestalosti takvog potencijalno rizičnog *online* ponašanja.

Istraživanja *online* navika adolescenata imaju određene metodološke nedostatke koji se prvenstveno odnose na upitničke mjere. U većini istra-

(Chou & Chou, 2023; Ouytsel et al., 2020; Schyff & Flowerday, 2023). Some findings (Gerrard & Gibbons, 1995; Gibbons et al., 2008) indicate that adolescents underestimate their vulnerability to risky behaviour and process information about potential risk in a more superficial way; they focus on the immediate benefits of the behaviour, rather than the longer-term risks. Engaging in risky online behaviour is not perceived by adolescents as being exclusively negative, but it is sometimes exciting and fun for them and brings them popularity among peers (Dumas et al., 2019). Research on the connection between attitudes and online behaviour is rarely longitudinal, which makes it impossible to draw conclusions about the causes of risky online behaviour and solely enables the determination of correlations. Attitudes are considered important antecedents of behaviour in theoretical models such as the Theory of Planned Behaviour (Ajzen, 1991), in which a favourable or unfavourable cognitive assessment of a certain behaviour is associated with more frequent or less frequent engagement in certain behaviours. On the other hand, the Cognitive Dissonance Theory (Festinger, 1957) explains the relationship between attitudes and behaviour in the opposite direction. According to this theory, since people strive for consistency between their attitudes and behaviour, when they do something that is inconsistent with their behaviour, they will change their attitude in order to ensure that the balance is maintained, i.e., resolve the cognitive dissonance or imbalance. In other words, if adolescents engage in risky online behaviours, this behaviour can change their attitude towards risky behaviours, i.e., it can become more positive. In order to more easily determine the direction of the relationship between attitudes and behaviour, researchers should use longitudinal study designs, which are comparatively less common than cross-sectional study designs (Gupta et al., 2022; Khalaf et al., 2023; Ouytsel et al., 2020; Vanucci et al., 2020). Therefore, in the present study, we decided to use a short-term longitudinal research design and examine adolescents' attitudes towards establishing risky online contacts before examining the frequency of such potentially risky online behaviour.

živanja (npr. Chen i sur., 2019; Gool i sur., 2015; Ouytsel i sur., 2020; Walrave i sur., 2015) stav prema rizičnom *online* ponašanju procjenjivao se općenitim tvrdnjama o rizičnom ponašanju, npr. „*Uspostavljanje kontakata s nepoznatim osobama je opasno*“, odnosno potencijalne neugodne posljedice nisu bile dovoljno specifično opisane, a rizično ponašanje procjenjivalo se samo jednom česticom, npr. „*Koliko si često u posljednja dva mjeseca prihvatio zahtjev za prijateljstvom nepoznate osobe na društvenoj mreži?*“. Upotrebljavale su se vrlo kratke mjere konstrukata niskih koeficijenata pouzdanosti. Također, navedena istraživanja rizično *online* ponašanje adolescenata operacionaliziraju kao objavu određenih sadržaja na društvenim mrežama ili kao *online* nasilje, odnosno očit je nedostatak istraživanja koja bi pokušala objasniti sklonost adolescenata da uspostavljaju *online* kontakte s nepoznatim osobama. Prema različitim studijama (Cernikova i sur., 2018; Heirman i sur., 2016; Liu i sur., 2022; Popat i Tarrant, 2023; Valkenburg i Peter, 2011) adolescenti koji uspostavljaju *online* kontakte s nepoznatim osobama izloženi su većem riziku od gubitka *online* sigurnosti i privatnosti, zloupotrebe osobnih informacija i *online* nasilja te je važno utvrditi čimbenike koji su povezani s takvim oblikom rizičnog *online* ponašanja.

CILJ I PROBLEMI ISTRAŽIVANJA

S obzirom na nedovoljan broj istraživanja o *online* kontaktima s nepoznatima osobama adolescenata, kao i nedostatke upitničkih mjera u dosadašnjim istraživanjima, cilj ovog istraživanja bio je ispitati stavove adolescenata prema rizičnim *online* kontaktima i njihovo uspostavljanje takvih kontakata. Pokušali smo utvrditi možemo li na temelju nekih karakteristika srednjoškolaca i njihova školskog okruženja te njihova vremena provedenog *online* predvidjeti njihove stavove prema potencijalno rizičnom ponašanju uspostavljanja *online* kontakata s nepoznatim osobama. Također, zanimalo nas je jesu li navedene varijable (karakteristike učenika, njihovog školskog okruženja, vrijeme provedeno *online* i stavovi) prediktori rizičnog *online* ponašanja. U tu svrhu također smo odlučili razviti nove instrumente za

Previous research on adolescents' online habits have mentioned certain methodological shortcomings, primarily related to the measures used. In most studies (e.g. Chen et al., 2019; Gool et al., 2015; Ouytsel et al., 2020; Walrave et al., 2015), attitudes towards risky online behaviour were assessed using general statements about risky behaviour, for example, “*Making contact with strangers is dangerous*”, i.e., the potential risky consequences were not described specifically enough, or the risky behaviour was measured using only one item, for example, “*How often in the past two months have you accepted friend requests from strangers on a social network?*”: these measures had low reliability coefficients. Additionally, many studies operationalise adolescents' risky online behaviour in terms of posting certain content on social networks or cyberbullying, thus highlighting the lack of research studies examining the tendency of adolescents to establish contact with strangers online. According to various studies (Cernikova et al., 2018; Heirman et al., 2016; Liu et al., 2022; Popat & Tarrant, 2023; Valkenburg & Peter, 2011), adolescents who establish online contacts with strangers are exposed to higher online privacy and security risks. Therefore, it is important to identify factors associated with this type of risky online behaviour.

RESEARCH GOAL AND OBJECTIVES

Given the insufficient number of studies on adolescents engaging in online contact with strangers, as well as the shortcomings of the questionnaire measures used in previous studies, the aim of the present study was to examine the attitudes of school students towards establishing online contacts with strangers, as well as the frequency of such behaviour. We investigated whether we can predict attitudes towards potentially risky online behaviour - establishing online contact with unknown persons - based on characteristics of high school students, the type of school attended, and the amount of time spent online. Furthermore, we investigated whether these variables predict risky online behaviour. For this purpose, we developed new instruments (questionnaires) to assess adolescents' attitudes towards establishing risky online

procjenu stavova adolescenata prema uspostavljanju rizičnih *online* kontakata i procjenu učestalosti uspostavljanja takvih kontakata. Rizično *online* ponašanje, odnosno uspostavljanje rizičnih *online* kontakata bilo je operacionalizirano kao dodavanje nepoznatih osoba (vršnjaka ili odraslih osoba) na profil društvene mreže i uspostavljanje komunikacije s nepoznatim osobama putem društvene mreže. Na temelju cilja istraživanja postavljeni su sljedeći problemi i hipoteze istraživanja:

P1. Utvrditi učestalost *online* rizičnog ponašanja i stavove prema takvom ponašanju kod srednjoškolaca novokonstruiranim upitničkim mjerama i utvrditi postoji li povezanost stavova i rizičnog *online* ponašanja učenika s njihovom dobi, spolom i školskim uspjehom, dnevnim vremenom provedenim u *online* aktivnostima te vrstom srednje škole koju pohađaju.

H1. Postoji povezanost stavova prema *online* rizičnom ponašanju, rizičnog *online* ponašanja, karakteristika učenika, njihovog školskog okruženja i vremena provedenog *online*.

P2. Utvrditi mogu li se na temelju sociodemografskih karakteristika učenika, njihova školskog uspjeha, dnevnog vremena provedenog u *online* aktivnostima i škole koju pohađaju predvidjeti njihovi stavovi prema rizičnom *online* ponašanju i učestalost njihovog rizičnog *online* ponašanja.

H2. Mladići (u usporedbi s djevojkama) i učenici strukovnih srednjih škola (u usporedbi s učenicima gimnazija) imaju pozitivnije stavove i češće se rizično ponašaju; također što su učenici stariji, što imaju slabiji školski uspjeh i provode više vremena u *online* aktivnostima, to imaju pozitivnije stavove i uspostavljaju više rizičnih *online* kontakata.

P3. Utvrditi može li poznavanje učeničkih stavova prema rizičnom *online* ponašanju uspostavljanja kontakata s nepoznatim osobama značajno doprinijeti predviđanju njihovog budućeg rizičnog ponašanja povrh poznavanja njihovih sociodemografskih karakteristika, dnevnog vremena provedenog u *online* aktivnostima i škole koju pohađaju.

H3. Pozitivniji stavovi prema rizičnim *online* kontaktima predviđaju češće uspostavljanje ta-

contacts and frequency of such contacts. Risky online behaviour, or establishing risky online contacts, was operationalised as adding strangers (peers or adults) to a social network profile and establishing communication with strangers via social networks. Based on the research goal, the following research objectives and hypotheses were determined:

O1. To determine the frequency of risky online behaviour and attitudes towards such behaviour among high school students using newly constructed questionnaire measures and examine whether there is a connection between attitudes and risky online behaviour of students based on their age, gender, academic achievement, daily time spent in online activities, and the type of high school they attend.

H1. There are significant correlations between attitudes towards online risky behaviour, frequency of risky behaviour, student characteristics, school type, and time spent online.

O2. To determine whether students' attitudes towards risky online behaviour and the frequency of their risky online behaviour can be predicted based on their sociodemographic characteristics, academic achievement, daily time spent in online activities, and the high school they attend.

H2. Boys (compared to girls) and vocational high school students (compared to grammar school students) have more positive attitudes and engage in risky online behaviour more frequently. Additional, older students with lower academic achievement who spend more time online are more likely to have positive attitudes about risky online behaviour and are more likely to establish risky online contacts.

O3. To determine whether knowledge of students' attitudes towards risky online behaviour, (i.e.) establishing contact with unknown persons, can significantly contribute to predicting their future risky behaviour, in addition to knowledge of their sociodemographic characteristics, daily time spent in online activities, and the type of school they attend.

H3. Positive attitudes towards risky online contacts predict more frequent establishment of such contacts in addition to sociodemographic

kvih kontakata i povrh sociodemografskih karakteristika, dnevnog vremena provedenog u *online* aktivnostima i škole koju adolescenti pohađaju.

METODE RADA

Predistraživanje

Provedeno je kratko predistraživanje kako bi se dobio uvid u stavove koje adolescenti imaju prema uspostavljanju kontakata s nepoznatim osobama putem društvenih mreža te je u skladu s rezultatima predistraživanja konstruiran Upitnik stavova prema kontaktnom rizičnom *online* ponašanju. Upitnik primijenjen u predistraživanju se sastojao od četiriju pitanja otvorenog tipa. Učenike smo pitali što misle koje posljedice - pozitivne i negativne mogu uslijediti ako se uključe u komunikaciju s nepoznatom osobom putem društvene mreže te ako dodaju nepoznate kontakte na svoj profil društvene mreže.

U predistraživanju su sudjelovali učenici ($n = 151$) od 1. do 4. razreda triju srednjih škola iz Osijeka. Sudjelovalo je 53 mladića (35 %) i 98 djevojaka prosječne dobi 16,67 godina ($SD = 1,121$). Učenici su ispunjavali upitnike metodom papir-olovka za vrijeme nastavnog sata psihologije u školama. Provedba je trajala pet minuta.

Sudionici su u prosjeku na svako od četiri postavljena pitanja odgovorili jednim odgovorom, odnosno u prosjeku su navodili ukupno četiri različite posljedice uspostavljanja kontakata s nepoznatima ($M = 3,93$, $SD = 1,42$). Ukupni raspon frekvencija njihovih odgovora kretao se od dva do šest; navodili su od dvije do šest različitih posljedica, odnosno od jedne do tri pozitivne te od jedne do tri negativne posljedice. Kao potencijalne negativne posljedice uspostavljanja *online* kontakata s nepoznatim osobama adolescenti su najčešće navodili krađu osobnih podataka, javno osramoćivanje i *online* nasilje, a kao potencijalne dobiti, odnosno pozitivne posljedice zabavu, razvoj komunikacijskih vještina i stjecanje popularnosti među vršnjacima. Napravljena je sadržajna analiza odgovora sudionika te je formirano šest kategorija. Sadržajno slični odgovori grupirani su u istu kategoriju, a kategorije su se međusobno razlikovale prema posljedicama i prema tome

characteristics, daily time spent in online activities, and the type of school they attend.

METHODS

Preliminary research

A short preliminary research study was conducted to gain insight into adolescents' attitudes towards establishing contact with strangers via social networks. In accordance with the results of the preliminary research, the Attitudes Towards Risky Online Contacts Questionnaire was constructed. The questionnaire used in the preliminary research consisted of four open-ended questions. The participants – in this case, high school students - were asked to describe the potential consequences, both positive and negative, that could occur if they chose to engage in communication with an unknown person via social networking platforms, as well as if they chose to add unknown contacts to their social network profile.

Students ($n = 151$) from 1st to 4th grade of three high schools in Osijek participated in the preliminary research. Participants included 53 boys (35%) and 98 girls with an average age of 16.67 years ($SD = 1.121$). The students filled out the questionnaire using the paper-pencil method during psychology lessons in schools. The implementation lasted five minutes.

On average, participants answered each of the four questions with one answer, or they listed a total of four different consequences of establishing contact with strangers ($M = 3.93$, $SD = 1.42$). The total range of their responses was from two to six; they listed two to six different consequences, or one to three positive and one to three negative consequences. In terms of potential negative consequences of establishing online contact with strangers, adolescents most often listed personal data theft, public humiliation, and cyberbullying, while the potential benefits or positive consequences included entertainment (having fun), development of communication skills, and gaining popularity among peers. A content analysis of the participants' responses was conducted and six categories were identified. Responses with similar content were grouped into the same category, and the categories differed from

jesu li se odnosile na poželjne (zabava, komunikacija, popularnost) ili nepoželjne posljedice uspostavljanja rizičnih *online* kontakata (ugroza *online* privatnosti i sigurnosti, osramoćivanje i *online* nasilje). Na temelju proizašlih kategorija formirane su čestice Upitnika stavova prema kontaktnom rizičnom *online* ponašanju.

Glavno istraživanje

Sudionici

Uzorak su činili učenici 45 razrednih odjela iz triju srednjih škola na području grada Osijeka. U prvoj točki mjerenja sudjelovalo je 805 sudionika, u drugoj točki mjerenja 739 sudionika, a nakon spajanja podataka uzorak je brojao 667 sudionika koji su sudjelovali u objema točkama mjerenja. Sudjelovalo je 134 učenika prvog razreda, 223 učenika drugog razreda, 161 učenik trećeg razreda i 149 učenika četvrtog razreda. Prosječna dob sudionika iznosila je 16,30 godina ($SD = 1,181$). Sudjelovao je 201 mladić (30,1 %) i 466 djevojaka (69,9 %). Kako bi se osigurala heterogenost uzorka u istraživanje su uključeni učenici različitih strukovnih škola (smjer prodavač, komercijalist, ekonomist, poslovni tajnik, upravni referent, kozmetičar, kemijski tehničar, grafički tehničar) ($n = 534$, 80,1 %) i učenici gimnazije ($n = 133$, 19,9 %).

Više od polovine uzorka ($n = 365$, 54,7 %) činili su učenici vrlo dobrog školskog uspjeha, njih 24,1 % ($n = 160$) imali su odličan, a 20,5 % ($n = 137$) dobar školski uspjeh. Samo 0,4 % ($n = 3$) sudionika prethodni je razred završilo s dovoljnom ocjenom, a 0,3 % ($n = 2$) je ponavljalo razred. Prema vlastitoj procjeni dnevno prosječno manje od jednog sata *online* provodi 2,4 % ($n = 16$) sudionika, između jednog i dva sata njih 10,8 % ($n = 72$), između dva i četiri sata 32,4 % ($n = 216$), između četiri i šest sati 27,1 % ($n = 181$), između šest i osam sati 13,6 % ($n = 91$) te više od osam sati 13,6 % ($n = 91$) sudionika.

Budući da 138 sudionika koji su sudjelovali u prvoj točki mjerenja, nisu sudjelovali u istraživanju u drugoj točki mjerenja, napravljena je usporedba njihovih prosječnih odgovora u varijabli stavovi prema rizičnom *online* ponašanju s

each other based on the consequences reported and whether they referred to potentially desirable (entertainment, communication, popularity) or undesirable consequences of establishing risky online contact (online privacy and security threat, public humiliation and cyberbullying). Based on the resulting categories, the items of the Attitudes Towards Risky Online Contacts Questionnaire were formed.

Main research

Participants

The sample consisted of students from 45 classes across four grades in three high schools located in the city of Osijek. A total of 805 students participated in the first measurement point, while 739 students participated in the second measurement point. After merging the data, the sample consisted of 667 students who participated in both measurement points, including 134 first grade students, 223 second grade students, 161 third grade students, and 149 fourth grade students. The final sample included 201 boys (30.1%) and 466 girls (69.9%), with an average age of 16.30 years ($SD = 1.181$). In order to ensure sample heterogeneity, the study included students from various vocational schools (commercialist, economist, business secretary, administrative clerk, beautician, chemical technician, graphic technician; $n = 534$, 80.1%), as well as grammar school students ($n = 133$, 19.9%).

More than half of the sample ($n = 365$, 54.7%) consisted of students with very good academic achievement, 24.1% ($n = 160$) had excellent grades, and 20.5% ($n = 137$) had good academic achievement. Only 0.4% ($n = 3$) of the participants had completed the previous grade with a sufficient (passing) grade, and 0.3% ($n = 2$) had to repeat the grade. According to their own estimates, 2.4% ($n = 16$) of participants spent (on average) less than one hour online per day, 10.8% ($n = 72$) spent between 1 and 2 hours per day, 32.4% ($n = 216$) spent between 2 and 4 hours per day, 27.1% ($n = 181$) spent between 4 and 6 hours per day, 13.6% ($n = 91$) spent between 6 and 8 hours per day, and 13.6% ($n = 91$) spent more than 8 hours online per day.

Since 138 of the initial participants did not participate in the research at the second time point,

prosječnim odgovorima sudionika koji su ostali u konačnom uzorku ($N = 667$). Rezultati t -testa pokazali su kako se sudionici koji nisu sudjelovali u drugoj točki mjerenja ne razlikuju statistički značajno u ovoj varijabli od sudionika koji su ostali u konačnom uzorku ($t_{(803)} = 1,20, p > 0,05$).

Instrumenti

U istraživanju su se primjenjivali upitnici koji su konstruirani za potrebe ovog istraživanja na temelju predistraživanja i modifikacije instrumenta primijenjenih u istraživanjima rizičnog *online* ponašanja adolescenata (Gool i sur., 2015; Ouytsel i sur., 2020; Paluckaitė i Žardeckaitė-Matulaitienė, 2021; Walrave i sur., 2015), a to su Upitnik stavova prema kontaktnom rizičnom *online* ponašanju (Borić Letica i Kuterovac Jagodić, 2024; prema Borić Letica, 2024) i Upitnik kontaktnog rizičnog *online* ponašanja (Borić Letica i Kuterovac Jagodić, 2024; prema Borić Letica, 2024). Da bismo provjerili faktorsku strukturu, provedene su eksploratorne faktorske analize. U svrhu provjere pouzdanosti upitnika računati su Cronbach α koeficijenti unutarnje konzistencije i McDonaldsov omega (ω) koeficijent.

Upitnik sociodemografskih karakteristika

Ovaj upitnik sadržavao je šest čestica, odnosno pitanja o dobi, spolu, razredu, općem školskom uspjehu prošle školske godine, vrsti srednje škole sudionika i prosječnom vremenu u danu provedenom *online*.

Upitnik stavova prema kontaktnom rizičnom *online* ponašanju

Stavovi prema rizičnom *online* ponašanju operacionalizirani su kao percepcija potencijalnih pozitivnih i negativnih posljedica uspostavljanja rizičnih *online* kontakata i procijenjeni pomoću Upitnika stavova prema kontaktnom rizičnom *online* ponašanju. Upitnik se sastojao od ukupno 12 čestica formiranih na temelju rezultata predistraživanja. U odnosu na prethodna istraživanja rizičnih *online* ponašanja (npr. Gool i sur., 2015; Ouytsel i sur., 2020; Walrave i sur., 2015) u ovom istraživanju potencijalne posljedice rizičnog ponašanja

a comparison was made between their average responses corresponding to the variable attitudes towards risky online contacts with the average responses of the participants who remained in the final sample ($n = 667$). The results of the t -test showed that participants who did not participate in the second time point did not differ significantly in this variable compared to participants who remained in the final sample ($t_{(803)} = 1.20, p > 0.05$).

Instruments

The research used two questionnaires that were constructed for the purpose of this study based on preliminary research and modifications of instruments used in research on risky online behaviour among adolescents (Gool et al., 2015; Ouytsel et al., 2020; Paluckaitė & Žardeckaitė-Matulaitienė, 2021; Walrave et al., 2015): Attitudes Towards Risky Online Contacts Questionnaire (Borić Letica & Kuterovac Jagodić, 2024; according to Borić Letica, 2024) and Risky Online Contacts Questionnaire (Borić Letica & Kuterovac Jagodić, 2024; according to Borić Letica, 2024). In order to examine factor structure, exploratory factor analyses were conducted. In order to check the reliability of the questionnaire, Cronbach α coefficients of internal consistency and McDonald's omega (ω) coefficients were calculated.

Sociodemographic characteristics questionnaire

This questionnaire consisted of six items, i.e., questions about age, gender, grade, general academic achievement in the previous school year, type of high school attended by the participants, and average daily time spent online.

Attitudes towards risky online contacts questionnaire

Attitudes towards risky online contacts were operationalised as the perception of potential positive and negative consequences of establishing risky online contacts and these attitudes were assessed using the Attitudes Towards Risky Online Contacts Questionnaire. The questionnaire consisted of a total of 12 items formed according to the results of

specifičnije su određene. Svoje odgovore sudionici su davali na skali Likertovog tipa od sedam stupnjeva, pri čemu su brojevi značili sljedeće: 1 - uopće se ne slažem, 2 - uglavnom se ne slažem, 3 - djelomično se ne slažem, 4 - niti se slažem niti se ne slažem, 5 - djelomično se slažem, 6 - uglavnom se slažem, 7 - u potpunosti se slažem. Čestice koje se odnose na negativne posljedice rekodirane su, njihove su se vrijednosti dodale pozitivnima te viši rezultat ukazuje na pozitivniji stav adolescenata prema rizičnom *online* ponašanju. KMO test i Bartlettov test sfericiteta pokazali su kako su podaci pogodni za faktorsku analizu (KMO = 0,771, $\chi^2_{(66)} = 4032,245$, $p < 0,01$). Zbog lakše interpretabilnosti napravljena je faktorska analiza s unaprijed zadanim dvama faktorima (Tablica 1) koji su zajedno objasnili 58,73 % varijance. Faktore smo s obzirom na sadržaj nazvali: (1) negativne posljedice uspostavljanja *online* kontakata s nepoznatim osobama i (2) pozitivne posljedice uspostavljanja *online* kontakata s nepoznatim osobama. Vrijednost Cronbach α koeficijenta pouzdanosti cijelog upitnika prihvatljiv je i iznosi $\alpha = 0,782$ ($\omega = 0,877$). Vrijednosti Cronbach α koeficijenata pouzdanosti subskala dobre su i iznose $\alpha = 0,849$ za subskalnu pozitivne posljedice i $\alpha = 0,860$ za subskalnu negativne posljedice ($\omega = 0,839$, $\omega = 0,850$).

the preliminary research. Compared to previous research on risky online behaviour (e.g., Gool et al., 2015; Ouytsel et al., 2020; Walrave et al., 2015), in the present study, the potential consequences of risky behaviour were more specifically determined. Participants indicated their responses on a 7-point Likert-type scale, where the values corresponded to the following statements: 1 - *I completely disagree*, 2 - *I mostly disagree*, 3 - *I partially disagree*, 4 - *I neither agree nor disagree*, 5 - *I partially agree*, 6 - *I mostly agree*, and 7 - *I completely agree*. The items related to negative consequences were recoded, their values were added to the positive ones, and a higher score was considered to indicate a more positive attitude towards risky online behaviour. The KMO (Kaiser–Meyer–Olkin) test and Bartlett’s test of sphericity showed that the data were suitable for factor analysis (KMO = 0.771, $\chi^2(66) = 4032.245$, $p < 0.01$). For easier interpretability, a factor analysis was performed with two predefined factors (Table 1), which, taken together, explained 58.73% of the total variance. We named the factors based on their content: (1) negative consequences of establishing online contacts with strangers, and (2) positive consequences of establishing online contacts with strangers. The Cronbach α reliability coefficient value calculated for the total questionnaire was acceptable ($\alpha = 0.782$, $\omega = 0.877$). The Cronbach α reliability coefficients of the subscales showed good values ($\alpha = 0.849$ and $\omega = 0.839$ for the positive consequences subscale; $\alpha = 0.860$ and $\omega = 0.850$ for the negative consequences subscale).

Tablica 1. Rezultati faktorske analize glavnih komponenata Upitnika stavova prema kontaktnom rizičnom online ponašanju uz Varimax rotaciju i unaprijed zadana dva faktora / **Table 1.** Factor analysis (Principal components) of results of the Attitudes Towards Risky Online Contacts Questionnaire with Varimax rotation and two predefined factors

Characteristic root value			Factors	
			1.	2.
			3.62	3.43
Items	<i>M</i>	<i>SD</i>		
12. Adding a stranger to my social network profile can risk my online privacy and security.*	5.15	1.844	0.812	
6. Private online communication with a stranger via social networks can risk my online privacy and security.*	5.51	1.718	0.809	
7. Adding a stranger (a person I don't know in real life) to my social network profile can make me a victim of cyberbullying.*	4.62	1.966	0.793	
9. Adding a stranger to my social network profile can make me a victim of public humiliation.*	4.15	1.887	0.748	
3. Private online communication with a stranger via a social network can make me a victim of public humiliation.*	4.72	1.869	0.724	
1. Private online communication (chat/messenger, etc.) with a stranger (a person I don't know in real life) via a social network can make me a victim of cyberbullying.*	5.01	1.869	0.710	
11. Adding a stranger to my social network profile can improve my communication skills.	3.59	1.934		0.811
5. Private online communication with a stranger via a social network can improve my communication skills.	3.95	1.903		0.808
8. Adding a stranger to a social network profile can be fun for me.	3.94	1.978		0.790
2. Private online communication with a stranger through a social network can be fun for me.	4.15	1.967		0.748
10. Adding an unknown person to a social network profile can make me more popular among my peers.	2.67	1.717		0.689
4. Private online communication with an unknown person through a social network can bring me more popularity among my peers.	2.51	1.680		0.669
Variance explained (%)			30.2	28.6

Note: Factors: (1) negative consequences of risky online behaviour, (2) positive consequences of risky online behaviour, *recoded items

Upitnik kontaktnog rizičnog *online* ponašanja

Uspostavljanje kontakata s nepoznatim osobama procijenjeno je Upitnikom kontaktnog rizičnog *online* ponašanja koji se sastojao od osam čestica; četiri čestice koje se odnose na *online* komunikaciju s nepoznatom osobom i četiri čestice koje se odnose na dodavanje nepoznatog kontakta na profil društvene mreže. Sudionicima su ponuđeni sljedeći odgovori: „0 - ni jednom u dva mjeseca, 1 - jednom u dva mjeseca, 2 - dva puta u dva mjeseca, 3 - tri puta u dva mjeseca, 4 - četiri puta u dva mjeseca ili češće“. Čestice su uključivale ponašanja koja možemo okarakterizirati kao „aktivno rizična“, a podrazumijevaju ponašanja kojima adolescenti iniciraju kontakt, šalju poruke i zahtjeve za prijateljstvom nepoznatim osobama te „reaktivno rizična“, odnosno ponašanja kojima adolescenti odgovaraju na poruke i zahtjeve

Risky online contacts questionnaire

Establishing online contact with strangers was assessed using the Risky Online Contacts Questionnaire, which consisted of eight items: four items related to online communication with a stranger and four items related to adding an unknown contact to a social network profile. Participants rated their responses based on the following statements: “0 - never in two months, 1 - once in two months, 2 - twice in two months, 3 - three times in two months, and 4 - four times in two months or more often”. The items included behaviours that can be characterised as “actively risky”, i.e., behaviours in which adolescents initiate contact, send messages, and friend requests to strangers, and “reactively risky”, i.e., behaviours in which adolescents respond to messages and friend requests sent by strangers on a social network. The responses related to dif-

za prijateljstvom koje su poslale nepoznate osobe na društvenoj mreži. Čestice su zbrojene te viši rezultat ukazuje na učestalije uspostavljanje rizičnih *online* kontakata. U prethodnim istraživanjima rizično ponašanje adolescenata uglavnom se procjenjivalo pomoću jedne čestice (npr. Kalebić Maglica, 2011; Ouytsel i sur., 2020; Walrave i sur., 2015), a u ovom istraživanju nastojalo se osmisliti više čestica kako bi varijabla rizičnog *online* ponašanja postigla što veći varijabilitet. KMO test iznosi 0,874, a Bartlettov test je značajan $\chi^2_{(28)} = 4044,409$, $p < 0,01$. Faktorska analiza dala je jasnu jednodimenzionalnu strukturu (Tablica 2). Jedan faktor objasnio je 65,85 % varijance. Cronbach α koeficijent pouzdanosti upitnika visok je ($\alpha = 0,925$, $\omega = 0,926$).

ferent items were added, and a higher score was considered to indicate more frequent risky online contacts. In previous studies, risky adolescent behaviour was mainly assessed using a single item scale (e.g., Kalebić Maglica, 2011; Ouytsel et al., 2020; Walrave et al., 2015). In the present study, an effort was made to design more items so that the variable of risky online behaviour could achieve greater variability. The KMO test showed that the data were suitable for factor analysis (KMO = 0.874), and the Bartlett test was significant ($\chi^2(28) = 4044.409$, $p < 0.01$). Factor analysis yielded a clear unidimensional structure (Table 2). One factor explained 65.85% of the variance. The Cronbach α reliability coefficient of the questionnaire was high ($\alpha = 0.925$, $\omega = 0.926$).

Tablica 2. Rezultati faktorske analize glavnih komponenata Upitnika kontaktnog rizičnog online ponašanja / **Table 2.** Factor analysis of results (Principal components) of the Risky Online Contacts Questionnaire

	TR	M	SD	Factor loadings
2. In the past two months, I have responded to a message from a stranger on a social network.	0-4	1.15	1.405	0.868
3. In the past two months, I have corresponded briefly with a stranger on a social network – we have exchanged a few messages.	0-4	1.06	1.352	0.869
8. In the past two months, I have become friends with a stranger on a social network and have exchanged comments or messages with them.	0-4	0.83	1.287	0.844
7. In the past two months, I have become friends with a stranger on a social network and have kept them on my friends list.	0-4	0.97	1.348	0.823
4. In the past two months, I have corresponded intensively with a stranger on a social network – we have exchanged a lot of messages.	0-4	0.64	1.179	0.822
6. In the past two months, I have accepted a friend request from a stranger.	0-4	1.30	1.430	0.770
1. In the past two months, I was the first to send a message to a stranger on a social network.	0-4	0.73	1.221	0.754
5. In the past two months, I have sent a friend request to a stranger on a social network.	0-4	0.99	1.321	0.728
Characteristic root value				5.286
Variance explained (%)				65.85

Note: TR = total range

Postupak

Prije provedbe predistraživanja i glavnog istraživanja zatražene su i dobivene suglasnosti Etičkog povjerenstva Odsjeka za psihologiju Filozofskog fakulteta Sveučilišta u Zagrebu, Ministarstva znanosti i obrazovanja Vlade Republike Hrvatske i ravnatelja škola koje su sudjelovale u istraživanju. Budući da su sudjelovali učenici stariji od 14 godina, oni su sami dali svoj pristanak za sudjelovanje, dok su roditelji učenika bili obaviješteni o

Procedure

Before conducting the preliminary research and the main research, consent was requested and obtained from the Ethics Committee of the Department of Psychology, Faculty of Humanities and Social Sciences, University of Zagreb, the Ministry of Science and Education, the Government of the Republic of Croatia, and the principals of schools participating in the research. Since students over 14 years of age participated, they gave

istraživanju. Upotrebljavao se kratkotrajni longitudinalni nacrt s dvije točke mjerenja u razmaku od dva mjeseca. Istraživanje je provedeno u rujnu i studenome 2022. godine. Podaci su prikupljeni grupno, uz prisutnost glavnog istraživača, za vrijeme nastave. Sudjelovanje je bilo dobrovoljno i anonimno. Učenici su upitnike ispunjavali *online*, putem svojih mobilnih uređaja sjedeći u učionici. U prvoj točki mjerenja, sudionici su ispunjavali Upitnik sociodemografskih karakteristika i Upitnik stavova prema kontaktnom rizičnom *online* ponašanju, a u drugoj točki mjerenja ispunjavali su Upitnik kontaktnog rizičnog *online* ponašanja. U objema točkama mjerenja upisali su šifre uz upitnike prema jednakoj uputi kako bi se njihovi odgovori mogli povezati.

REZULTATI

Metode obrade podataka

U obradi rezultata primjenjivao se statistički program JASP 0.17.1.0. Osim eksploratornih faktorskih analiza čiji su rezultati navedeni u opisima instrumenata, provedene su deskriptivne analize, korelacijska analiza i dvije regresijske analize.

Deskriptivni podaci za stavove prema rizičnom *online* ponašanju i rizično *online* ponašanje

Kako bismo dobili odgovor na prvi dio prvog postavljenog problema istraživanja (P1) i utvrdili učestalost rizičnog *online* ponašanja adolescenata te njihove stavove prema rizičnom ponašanju, napravljena je deskriptivna analiza rezultata upitnika. U Tablici 3 prikazane su aritmetičke sredine i standardne devijacije varijabli, teorijski i postignuti rasponi rezultata, posebno za ženske i muške sudionike te za ukupni uzorak. Provjerena je normalnost distribucija Shapiro-Wilk testom te indeksima asimetričnosti i spljoštenosti. Utvrđeno je kako distribucije rezultata u određenoj mjeri odstupaju od normalne. Međutim, kako kod nijedne distribucije rezultata nema ozbiljne narušenosti normalnosti jer vrijednosti asimetričnosti nikada ne prelaze 3, niti vrijednosti spljoštenosti ne prelaze 10, zaključeno je da je značajnost testa normalnosti vjerojatno posljedica velikog uzorka

their consent to participate, while the students' parents were informed about the research. The study used a short-term longitudinal design with two measurement points that were two months apart. The research was conducted in September and November 2022. Data were collected in groups, in the presence of the researcher, during school classes. Participation was voluntary and anonymous. Students completed the questionnaires online using their mobile devices while sitting in their classrooms. At the first time point, participants completed the Sociodemographic Characteristics Questionnaire and the Attitudes Towards Risky Online Contacts Questionnaire, and at the second time point, they completed the Risky Online Contacts Questionnaire. At both time points, they entered their codes along with the questionnaires and followed the same instructions, in order to ensure that their responses could be matched.

RESULTS

Data processing methods

The statistical software programme JASP (Ver. 0.17.1.0) was used for data analysis. In addition to exploratory factor analyses (the results of which are presented in the instrument descriptions), descriptive analyses, correlation analyses, and two regression analyses were conducted.

Descriptive data on attitudes towards and establishing risky online contacts

In order to answer the first part of the first research objective (O1) (i.e., to determine the frequency of adolescents' risky online behaviour and their attitudes towards this risky behaviour), a descriptive analysis of the results of the questionnaires was conducted. Table 3 shows arithmetic means and standard deviations of variables, theoretical and achieved ranges of results, specifically derived for female and male participants, as well as for the entire sample. The normality of the distributions was assessed using the Shapiro-Wilk test, as well as the skewness and kurtosis indices. It was found that the distributions of the results deviated to a certain extent from the normal distribution. However, since the kurtosis

(Kline, 2016). Promatramo li visine aritmetičkih sredina novokonstruiranih upitnika (Tablica 3), uočavamo kako sudionici prema uspostavljanju *online* kontakata s nepoznatim osobama imaju u prosjeku djelomično negativan stav. Također, sudionici u prosjeku uspostavljaju rizične *online* kontakte tek povremeno (Tablica 3).

values were found to be below 10 and the skewness values were below 3, it was concluded that the significance of the normality test was probably due to the large sample size (Kline, 2016). If we look at the mean values of the newly constructed questionnaires (Table 3), we see that, on average, participants had partially negative attitudes towards establishing online contacts with strangers. Additionally, participants, on average, established risky online contacts only occasionally (Table 3).

Tablica 3. Prikaz deskriptivnih podataka za varijable primjenjivane u istraživanju s obzirom na spol sudionika / **Table 3.** Descriptive statistics of the study variables in relation to participants' gender and total results

Instrument		TR	AR	M	SD	K	S	SW
Attitudes Towards	f		12-72	37.52	11.611	0.036	- 0.228	0.992
Risky Online Contacts	m	12-84	16-76	44.57	11.894	- 0.072	- 0.051	0.979**
Questionnaire	Total		12-76	39.64	12.127	- 0.051	- 0.338	0.993**
	f		0-32	7.24	8.307	1.194	0.531	0.828**
Risky Online Contacts	m	0-32	0-32	8.65	9.029	0.939	- 0.118	0.862**
Questionnaire	Total		0-32	7.67	8.548	1.112	0.297	0.839**

Note: f, female (n = 466); m, male (n = 201); **p < 0.01

AR, achieved range; K, kurtosis; M, mean; S, skewness; SD, standard deviation; SW, Shapiro-Wilk test; TR, total range.

U Tablici 4 prikazani su prosječni odgovori po čestici dviju subskala Upitnika stavova prema kontaktnom rizičnom *online* ponašanju. Sudionici su svoje odgovore davali na skali od sedam stupnjeva, pri čemu su brojevi od 1 - 3 označavali neslaganje, 4 je označavao neutralni stav, a brojevi od 5 - 7 su označavali slaganje s česticama. Promotrimo li aritmetičke sredine, možemo uočiti kako se sudionici u prosjeku djelomično ne slažu s tvrdnjama o pozitivnim posljedicama rizičnog *online* ponašanja, odnosno u manjoj mjeri smatraju da uspostavljanje kontakata s nepoznatim osobama može biti zabavno, unaprijediti njihove komunikacijske vještine te im donijeti veću popularnost među vršnjacima. Sudionici se u većoj mjeri slažu s tvrdnjama o negativnim posljedicama uspostavljanja rizičnih kontakata, odnosno djelomično smatraju kako ih ono može učiniti žrtvom nasilja, ugroziti njihovu *online* sigurnost i privatnost i dovesti do toga da se osramote.

Table 4 shows average responses per item for the two subscales of the Attitudes Towards Risky Online Contacts Questionnaire. Participants rated their answers on a 7-point Likert-type scale, where 1 to 3 indicated disagreement, 4 indicated a neutral attitude, and 5 to 7 indicated agreement with the items. If we look at the arithmetic means, we can see that participants, on average, partially disagree with the statements about the positive consequences of risky online behaviour. In addition, they believe, to a limited extent, that establishing contacts with strangers can be fun, improve their communication skills, and bring them greater popularity among their peers. Participants largely agree with the statements about the negative consequences of establishing risky contacts, i.e., they partly believe that it can make them victims of cyberbullying, threaten their online safety and privacy, as well as lead to public humiliation.

Tablica 4. Deskriptivni podaci za subskele Upitnika stavova prema kontaktnom rizičnom ponašanju (prosjeci po čestici) / **Table 4.** Descriptive data for subscales of the Attitudes Towards Risky Online Contacts Questionnaire (averages per item)

Subscale	TR	M	SD	S	K
Positive consequences (communication skills, fun, popularity among peers)	1-7	3.46	1.409	0.102	- 0.683
Negative consequences (cyberbullying, public humiliation, privacy and security threat)	1-7	4.86	1.426	- 0.520	- 0.383

Note: K, kurtosis; M, mean; S, skewness; SD, standard deviation; TR, total range.

Nadalje, iz deskriptivnih podataka prikazanih posebno za svaku česticu Upitnika kontaktnog rizičnog *online* ponašanja (Tablica 2) uočavamo kako se, od ponuđenih rizičnih ponašanja, sudionici najčešće upuštaju u prihvaćanje zahtjeva za prijateljstvom nepoznatih osoba ($M = 1,30$, $SD = 1,450$) i odgovaranje na poruku nepoznatoj osobi ($M = 1,22$, $SD = 1,439$), a najrjeđe sami prvi šalju poruku nepoznatoj osobi, odnosno iniciraju komunikaciju ($M = 0,72$, $SD = 1,192$) i intenzivno se dopisuju s nepoznatim osobama ($M = 0,74$, $SD = 1,258$).

Povezanost stavova prema *online* rizičnom ponašanju, rizičnog ponašanja i karakteristika učenika

Kako bismo dobili odgovor na drugi dio prvog problema istraživanja (P1) i prvu hipotezu (H1), odnosno utvrdili postoji li povezanost stavova i rizičnog *online* ponašanja učenika s njihovom dobi, spolom, vrstom srednje škole koju pohađaju, školskim uspjehom te dnevnim vremenom provedenim u *online* aktivnostima, napravljena je korelacijska analiza (Tablica 5). Dob sudionika nije statistički značajno povezana s varijablama koje su se primjenjivale. Stavovi prema rizičnom *online* ponašanju statistički su značajno povezani s učestalošću rizičnog *online* ponašanja ($r = 0,379$; $p < 0,01$), spola ($r = 0,267$; $p < 0,01$), školskog uspjeha ($r = -0,113$; $p < 0,01$) i vremena provedenog *online* ($r = 0,105$; $p < 0,01$), dok nisu povezani s vrstom škole koju adolescenti pohađaju ($r = 0,065$; n.s.). Učenici koji uspostavljaju više rizičnih *online* kontakata, imaju lošiji školski uspjeh i provode više vremena *online* te imaju pozitivnije stavove prema rizičnom *online* ponašanju. Nadalje, djevojke imaju negativnije stavove

From the descriptive data presented separately for each item of the Risky Online Contacts Questionnaire (Table 2), we observe that, of the listed risky behaviours, participants engage more often in accepting friend requests from strangers ($M = 1.30$, $SD = 1.450$) and replying to messages from an unknown person ($M = 1.22$, $SD = 1.439$). Furthermore, they are the least likely to be the first to send a message to an unknown person (i.e.) initiate communication ($M = 0.72$, $SD = 1.192$) and to correspond intensively with unknown persons ($M = 0.74$, $SD = 1.258$).

Relationship between attitudes towards risky online behaviour, participation in risky online behaviour, and student characteristics

A correlation analysis was conducted in order to answer the second part of the first research objective (O1), as well as to test the first hypothesis (H1) and to determine whether there is a connection between attitudes towards and participation in risky online behaviour among students and their age, gender, type of school attended, academic achievement, and daily time spent in online activities (Table 5). The age of the participants was not significantly related to the variables being assessed. Attitudes towards risky online behaviour showed significant associations with the frequency of risky online behaviour ($r = 0.379$, $p < 0.01$), gender ($r = 0.267$, $p < 0.01$), academic achievement ($r = -0.113$, $p < 0.01$), and time spent online ($r = 0.105$, $p < 0.01$). However, attitudes towards risky online behaviour were not associated with the type of school that the adolescents attended ($r = 0.065$, $p > 0.01$). Students who establish risky online contacts have lower academic achievement and spend more time online and they have more positive atti-

od mladića. Povezanost stavova i rizičnog *online* ponašanja umjerena je, a povezanosti stavova sa školskim uspjehom, spolom i vremenom provedenim *online* niske su. Također, adolescenti koji se češće upuštaju u rizično *online* ponašanje, imaju slabiji školski uspjeh, pri čemu je povezanost ovih dviju varijabli niska ($r = -0,104$; $p < 0,01$), te provode više vremena *online* ($r = 0,323$; $p < 0,01$), pri čemu je riječ o umjerenj povezanosti. Konačno, čini se kako djevojke imaju nešto bolji školski uspjeh ($r = 0,109$; $p < 0,01$), međutim provode više vremena *online* ($r = -0,078$; $p < 0,05$) od mladića, iako je važno naglasiti da se radi o vrlo niskim korelacijama. Više vremena provedenog u *online* aktivnostima povezano je sa slabijim školskim uspjehom ($r = -0,096$; $p < 0,05$). Pohađanje strukovne škole povezano je sa slabijim školskim uspjehom ($r = -0,153$; $p < 0,01$) i više vremena provedenog u *online* aktivnostima ($r = 0,096$; $p < 0,05$).

tudes towards risky online behaviour. Furthermore, girls have more negative attitudes than boys. The association between attitudes and risky online behaviour is moderate, while the associations between attitudes, academic achievement, gender, and time spent online are low. Additionally, adolescents who engaged in risky online behaviour were more likely to have lower academic achievement, with the correlation between these two variables being low ($r = -0.104$, $p < 0.01$). They were also likely to spend more time online (moderate correlation; $r = 0.323$, $p < 0.01$). Although girls appear to have slightly higher academic achievement ($r = 0.109$, $p < 0.01$), they spent more time online ($r = -0.078$, $p < 0.05$) compared to boys, and it is important to emphasise that these correlations are very low. We found that higher amounts of time spent in online activities was associated with lower academic achievement ($r = -0.096$, $p < 0.05$), and that attending vocational school was associated with lower academic achievement ($r = -0.153$, $p < 0.01$) and more time spent in online activities ($r = 0.096$, $p < 0.05$).

Tablica 5. Korelacije varijabli stavova prema rizičnom *online* ponašanju, rizičnog *online* ponašanja, dobi, spola, školskog uspjeha, vrste škole i vremena provedenog *online* / **Table 5.** Correlations of attitudes towards risky online behaviour, participation in risky online behaviour, age, gender, academic achievement, type of school attended, and time spent online

	Risky online behaviour	Age	Gender	Academic achievement	School type	Time spent online
Attitudes	0.379**	0.067	0.267**	- 0.113**	0.065	0.105**
Risky online behaviour		0.034	0.075	- 0.104**	0.001	0.323**
Age			- 0.010	- 0.041	0.070	0.044
Gender				- 0.109**	- 0.032	- 0.078*
Academic achievement					- 0.153**	- 0.096*
Type of school						0.096*

Note: ** $p < 0.01$, * $p < 0.05$; female - 1, male - 2; grammar school - 1, vocational school - 2

Prediktori stavova prema rizičnom *online* ponašanju i učestalosti rizičnog *online* ponašanja

Kako bismo dobili odgovore na drugi i treći postavljeni problem (P2 i P3) i hipoteze (H2 i H3), odnosno bismo smo utvrdili prediktore stavova prema rizičnom *online* ponašanju i učestalosti rizičnog *online* ponašanja provedene su dvije regresijske analize. U prvoj regresijskoj analizi kao prediktore uvrstili smo dob, spol, vrstu škole,

Predictors of attitudes towards risky online behaviour and frequency of risky online contacts

In order to address the second and third objectives (O2 and O3) (i.e., to determine the predictors of attitudes towards risky online behaviour and frequency of risky online behaviour), two regression analyses were conducted. In the first regression analysis, we included age, gender, type of school attended, academic achievement, and

školski uspjeh adolescenata i vrijeme provedeno *online*, a kao kriterij varijablu stavova prema rizičnom *online* ponašanju (P2). U drugoj regresijskoj analizi kao prediktor uvrstili smo varijable dobi, spola, vrste škole, školskog uspjeha adolescenata i vremena provedenog *online* u prvom koraku (P2) te varijablu stavova prema rizičnom *online* ponašanju u drugom koraku (P3), a kao kriterij varijablu rizičnog *online* ponašanja.

Budući da su u ovom istraživanju vrijednosti Durbin-Watson testa iznosile 1,955 i 2,033, a sve su VIF vrijednosti niske (VIF = 1,007 do VIF = 1,109), zaključuje se da multikolinearnost nije prisutna, čime je zadovoljen uvjet za provedbu regresijskih analiza. Rezultati prve regresijske analize (Tablica 6) pokazali su kako stavove prema rizičnom *online* ponašanju značajno predviđaju spol učenika i vrijeme provođenja u *online* aktivnostima. Pritom mladići imaju pozitivnije stavove prema *online* kontaktima s nepoznatim osobama, od djevojaka ($\beta = 0,271$; $p < 0,01$). Također, što više vremena adolescenti provode na internetu, to imaju pozitivnije stavove prema rizičnom *online* ponašanju ($\beta = 0,113$; $p < 0,01$). Veličina učinka je mala (Cohenov f^2 je manji od 0,25), odnosno spol učenika i vrijeme provedeno u *online* aktivnostima objašnjavaju 9,8 % varijance njihovih stavova prema uspostavljanju kontakata s nepoznatim osobama. Dob, školski uspjeh i vrsta srednje škole nisu bili statistički značajni prediktori stavova prema rizičnom *online* ponašanju.

time spent online as predictors, and the variable of attitudes towards risky online behaviour (O2) as the criterion. In the second regression analysis, we included age, gender, type of school attended, academic achievement, and time spent online as predictors in the first step (O2), the variable of attitudes towards risky online behaviour in the second step (O3), and the variable of risky online behaviour as the criterion.

Durbin-Watson test values were between 1.955 and 2.033, and all VIF (Variance Inflation Factor) values were low (from VIF = 1.007 to VIF = 1.109), indicating that there is no multicollinearity in the present study and that the prerequisites for carrying out the analysis have been met. The results of the first regression analysis (Table 6) showed that attitudes towards risky online behaviour are significantly predicted by the gender of the students and time spent in online activities. Boys have more positive attitudes towards online contact with strangers than girls ($\beta = 0.271$, $p < 0.01$). Additionally, the more time adolescents spend on the Internet, the more positive their attitudes were towards risky online behaviour ($\beta = 0.113$, $p < 0.01$). However, the effect size is small (Cohen's $f^2 < 0.25$), and the gender of the students and the time spent in online activities explained only 9.8% of the variance in their attitudes towards establishing contacts with strangers. Age, academic achievement, and type of school attended had no significant effect on attitudes towards risky online behaviour.

Tablica 6. Rezultati regresijske analize: dob, spol, vrsta škole, školski uspjeh i vrijeme provedeno online kao prediktori stavova prema rizičnom online ponašanju / **Table 6.** Results of regression analysis testing the effects of age, gender, school type, academic achievement, and time spent online as predictors of attitudes towards risky online behaviour

Variable	B	SE	β	<i>t</i>	
Age	0.597	0.381	0.058	1.569	$R = 0.314$
Gender	7.159	0.986	0.271	7.263**	$R^2 = 0.098$
Type of school	1.493	0.141	0.049	1.309	
Academic achievement	- 1.093	0.653	- 0.063	- 1.674	$F_{(4,662)} = 14.430$, $p < 0.01$
Time spent online	1.118	0.370	0.113	3.023**	Cohen's $f^2 = 0.11$

Note: ** $p < 0.01$

β , standardised regression coefficient beta; B, unstandardised regression coefficient; Cohen's f^2 , effect size; R^2 , coefficient of determination; SE, standard error.

Rezultati druge regresijske analize (Tablica 7) pokazali su da učestalost uspostavljanja kontakata s nepoznatima predviđaju stavovi mladih prema takvom ponašanju i vrijeme provođenja u *online* aktivnostima. Naime, rezultati pokazuju da što adolescenti imaju pozitivnije stavove prema uspostavljanju rizičnih *online* kontakata ($\beta = 0,352$; $p < 0,01$) i što više vremena provode u *online* aktivnostima ($\beta = 0,289$; $p < 0,01$), češće uspostavljaju takve kontakte. Vrijeme provedeno u *online* aktivnostima objašnjava 12,2 % varijance, stavovi učenika dodatnih 11,2 % varijance njihovog rizičnog *online* ponašanja, a kumulativna veličina učinka ovih dviju varijabli umjerena je (Cohenov f^2 iznosi 0,31). Dob, spol, školski uspjeh i vrsta srednje škole nisu bili statistički značajni prediktori rizičnog *online* ponašanja.

The results of the second regression analysis (Table 7) showed that both adolescents' attitudes towards risky online contacts and time spent in online activities predicts their contact with strangers. Moreover, the results show that the more positive attitudes towards establishing risky online contacts ($\beta = 0.352$, $p < 0.01$) and the more time spent in online activities ($\beta = 0.289$, $p < 0.01$), the more often adolescents establish such contacts. Time spent in online activities explains 12.2% of the variance, students' attitudes explain an additional 11.2% of the variance of their risky online behaviour, and the cumulative effect size of these two variables is moderate (Cohen's $f^2 = 0.31$). Age, gender, academic achievement, and type of high school attended do not contribute to significantly predicting risky online behaviour.

Tablica 7. Rezultati regresijske analize: dob, spol, vrsta škole, školski uspjeh, vrijeme provedeno online i stavovi prema rizičnom online ponašanju (1. točka mjerenja) kao prediktori budućeg rizičnog online ponašanja (2. točka mjerenja) / **Table 7.** Results of regression analysis testing the effects of age, gender, type of school attended, academic achievement, time spent online, and attitudes towards risky online behaviour (1st measurement time point) as predictors of risky online behaviour (2nd measurement time point)

	<i>B</i>	se	β	<i>t</i>	
1. step					
Age	- 0.349	0.265	- 0.048	- 1.320	$R = 0.350$
Gender	1.710	0.686	0.092	2.495	$R^2 = 0.122$
Type of school	- 0.775	0.793	- 0.036	- 0.976	$F_{(5,661)} = 18.405$, $p < 0.01$
Academic achievement	- 0.856	0.454	- 0.070	- 1.884	Cohen's $f^2 = 0.14$
Time spent online	2.294	0.257	0.329	8.921**	
2. step					
Age	- 0.498	0.248	- 0.069	- 2.007	$R = 0.484$
Gender	- 0.067	0.666	- 0.004	- 0.100	$R^2 = 0.234$
Type of school	- 1.145	0.743	- 0.054	- 1.542	$F_{(6,660)} = 33.605$, $p < 0.01$
Academic achievement	- 0.585	0.426	- 0.048	- 1.374	Cohen's $f^2 = 0.31$
Time spent online	2.017	0.242	0.289	8.331**	
Attitudes	0.248	0.025	0.352	9.815**	

Note: ** $p < 0.01$

β , standardised regression coefficient beta; *B*, unstandardised regression coefficient; Cohen's f^2 , effect size; R^2 , coefficient of determination; SE, standard error.

RASPRAVA

Dosadašnja istraživanja rizičnog *online* ponašanja adolescenata često su fokusirana na *online* nasilje i objavu osobnih informacija putem društvenih mreža (npr. Gool i sur., 2015; Livingstone i sur., 2011; Ouytsel i sur., 2020; Schyff i Flowerday, 2023; Walrave i sur., 2015). Ipak, istraživa-

DISCUSSION

Previous research on adolescents' risky online behaviour has often focused on cyberbullying via social networks and personal information sharing (e.g., Gool et al., 2015; Livingstone et al., 2011; Ouytsel et al., 2020; Schyff & Flowerday, 2023; Walrave et al., 2015). However, research on ad-

nja o navikama *online* komunikacije adolescenata malobrojna su i uglavnom deskriptivna i upravo zbog toga su rizični *online* kontakti odabrani kao predmet ovog istraživanja. Opći cilj istraživanja bio je ispitati učestalost *online* rizičnog ponašanja i stavove prema takvom ponašanju uz metodološko unaprjeđenje mjera stavova prema uspostavljanju rizičnih *online* kontakata i uspostavljanja rizičnih *online* kontakata. Novokonstruirani upitnici pokazali su teorijski očekivane faktorske strukture i zadovoljavajuće do visoke koeficijente unutarnje pouzdanosti. Prema dobivenim rezultatima sudionici u prosjeku imaju samo djelomično negativne stavove prema uspostavljanju nepoznatih *online* kontakata te opažaju blaže pozitivne posljedice takvog ponašanja. Naime, rizično *online* ponašanje za adolescente nije isključivo rizično, već donosi i određene dobiti, npr. može biti zabavno, poboljšati njihove komunikacijske vještine ili povećati popularnost među vršnjacima. Ovi rezultati u skladu su s rezultatima prethodnih istraživanja koji govore o tome kako adolescenti uočavaju i prednosti i rizike rizičnih *online* ponašanja (Schyff i Flowerday, 2023; Steijn i sur., 2016). Dakle, u mjerama stavova prema rizičnom ponašanju, osim negativnih posljedica trebalo bi uključiti i pozitivne posljedice takvog ponašanja, što smo u ovom istraživanju i učinili.

Dobiveni rezultati u skladu su s rezultatima prethodnih istraživanja koji govore o tome kako se adolescenti povremeno upuštaju u rizična *online* ponašanja (Ciboci i sur., 2020; Dumas i sur., 2019; Schyff i Flowerday, 2023). Nadalje, prema našim rezultatima moguće je zaključiti kako se, od ponuđenih rizičnih ponašanja, adolescenti najčešće upuštaju u reaktivno rizična ponašanja, odnosno ponašanja u kojima odgovaraju na zahtjev za prijateljstvom ili poruku nepoznate osobe, a najrjeđe sami prvi šalju poruku nepoznatoj osobi i intenzivno se dopisuju s nepoznatim osobama, tj. rjeđe sami iniciraju rizične kontakte. Dakle, adolescenti vrlo rijetko sami iniciraju *online* kontakte s nepoznatim osobama.

U okviru prvog postavljenog problema (P1) i hipoteze (H1) utvrđene su slabe do umjerene povezanosti stavova i rizičnog ponašanja s karakteristikama učenika, osim s varijablom dobi koja

olescents' online communication habits is rare and mostly descriptive, which is why risky online contact was chosen as the subject of the present study. The primary goal of the research was to determine the frequency of online risky behaviour and attitudes towards such behaviour, while using newly, methodologically improved measures of attitudes and risky online behaviour. The newly constructed questionnaires showed theoretically expected factor structures and satisfactory to high internal reliability coefficients. According to the results, participants, on average, have partially negative attitudes towards establishing unknown online contacts and perceive milder positive consequences of such behaviour. Risky online behaviour is not only risky for adolescents, but also brings certain benefits, e.g., it can be fun, improve their communication skills, or increase popularity among peers. These results are consistent with the results of previous research on how adolescents perceive both the benefits and risks of such online behaviours (Schyff & Flowerday, 2023; Steijn et al., 2016). Therefore, in measures of attitudes towards risky behaviour, we believe that, in addition to negative consequences, the positive consequences of such behaviour should also be included, as we did in this research study.

The results are consistent with the results of previous research that indicate adolescents occasionally engage in risky online behaviours (Ciboci et al., 2020; Dumas et al., 2019; Schyff & Flowerday, 2023). Furthermore, according to our results, it is possible to conclude that adolescents are more likely to engage in reactive risky behaviours, i.e., behaviours in which they respond to a friend request or a message from an unknown person, and they are less likely to be the first to send a message to an unknown person and correspond intensively with strangers. Therefore, it seems that adolescents very rarely initiate risky online contacts with strangers.

Within the framework of the first problem (P1) and hypothesis (H1), weak to moderate correlations were observed between attitudes, risky behaviour, and student characteristics, except in relation to age, which did not show a correlation with any of the variables analysed. Therefore, the

nije pokazala povezanost ni s jednom varijablom. Dakle, prva hipoteza (H1) djelomično je potvrđena. Povezanost ovih varijabli bila je preduvjet za provođenje regresijskih analiza u nastavku koje nam daju odgovor na drugu i treću hipotezu (H2 i H3). Utvrđene povezanosti bit će detaljnije komentirane u nastavku.

Podciljevi ovog istraživanja bili su utvrditi možemo li na temelju, dobi, spola, vrste škole, školskog uspjeha i vremena provedenog *online* predvidjeti stavove adolescenata prema ovom rizičnom *online* ponašanju i njihovo rizično *online* ponašanje (P2) te možemo li na temelju njihovih stavova prema *online* rizičnom ponašanju predvidjeti njihovo uspostavljanje rizičnih *online* kontakata (P3). Pretpostavili smo da će mladići (u usporedbi s djevojkama) i učenici strukovnih srednjih škola (u usporedbi s učenicima gimnazija) imati pozitivnije stavove i češće se upuštati u rizično ponašanje; također pretpostavili smo da što su učenici stariji, što imaju slabiji školski uspjeh i provode više vremena u *online* aktivnostima, imaju i pozitivnije stavove i uspostavljati više rizičnih *online* kontakata (H2). Nadalje, pretpostavili smo da stavovi prema rizičnim *online* kontaktima predviđaju uspostavljanje takvih kontakata i po vrh sociodemografskih karakteristika, dnevnog vremena provedenog u *online* aktivnostima i škole koju adolescenti pohađaju (H3). Druga je hipoteza (H2) djelomično, a treća (H3) u potpunosti potvrđena. Naime, prema rezultatima, dob nije bila statistički značajni prediktor stavova prema rizičnom *online* ponašanju ni rizičnog *online* ponašanja adolescenata, iako podaci različitih istraživanja generalno sugeriraju kako postoji porast rizičnog *online* ponašanja adolescenata u funkciji dobi te kako stariji adolescenti imaju pozitivnije stavove prema rizičnom *online* ponašanju od mlađih adolescenata (Benvenuti i sur., 2023; Ciboci i sur., 2020; Livingstone i sur., 2011; Paluckaitė & Žardeckaitė-Matulaitienė, 2021). Ipak, Walrave i suradnici (2015), kao i Ouytsel i suradnici (2020) koji su svojim uzorkom obuhvatili učenike srednje škole u dobi od 15 do 19 godina nisu pronašli značajnu povezanost dobi, stavova prema rizičnom *online* ponašanju i rizičnog *online* ponašanja. Moguće objašnjenje ovih rezultata činjenica

first hypothesis was partially confirmed. The correlation of these variables was a prerequisite for conducting the regression analyses, which provided us with an answer to the second and third hypotheses (H2 and H3). The established correlations will be explained in more detail below.

The sub-goal of this research was to determine whether we can predict adolescents' attitudes towards and their participation in risky online behaviour (O2) based on age, gender, type of school attended, academic achievement, and time spent online, as well as whether we can predict if they would establish risky online contacts (O3) based on their attitudes towards online risky behaviour. We hypothesised that boys (compared to girls) and vocational high school students (compared to grammar school students) have more positive attitudes and engage in risky online behaviour more frequently. In addition, we assumed that the older the students are, the lower their academic achievement is, and the more time they spend online, the more positive their attitudes become towards risky online behaviour and the more likely they are to establish risky online contacts. Furthermore, we hypothesised that attitudes toward risky online contacts predict the establishment of such contacts in addition to sociodemographic characteristics, daily time spent online, and the school that adolescents attend. The second hypothesis (H2) was partially confirmed, and the third (H3) was fully confirmed. According to the results, age was not a significant predictor of attitudes towards risky online behaviour or participation in risky online behaviour in adolescents, although data from various studies generally suggest that there is an increase in risky online behaviour in adolescents as a function of age and that older adolescents have more positive attitudes towards risky online behaviour than younger ones (Benvenuti et al., 2023; Ciboci et al., 2020; Livingstone et al., 2011; Paluckaitė & Žardeckaitė-Matulaitienė, 2021). However, Walrave et al. (2015), as well as Ouytsel et al. (2020), who included high school students aged 15 to 19 years in their sample, did not find a significant association between age, attitudes towards risky online behaviour, and participation in risky online behaviour. A possible expla-

je da smo uzorkom obuhvatili premali raspon dobi adolescenata, samo učenike srednje škole. U budućim bi istraživanjima bilo dobro uključiti i učenike osnovne škole te provjeriti razlikuju li se oni u stavovima prema rizičnom *online* ponašanju od srednjoškolaca.

Dobiveni rezultati u skladu su s podacima iz literature (Chen i sur., 2019; Ouytsel i sur., 2020; Walrave i sur., 2015); mladići imaju statistički značajno pozitivnije stavove prema rizičnom *online* ponašanju od djevojaka, no veličina učinka je mala. Prema brojnim nalazima, mladići su skloniji različitim vrstama rizičnih *offline* i *online* ponašanja te prema njima imaju pozitivnije stavove vjerojatno zbog toga što se tipična muška adolescentna ponašanja često povezuju s istraživanjem i riskiranjem (Amini i sur., 2018). Međutim, u regresijskoj se analizi spol nije pokazao značajnim prediktorom rizičnog *online* ponašanja adolescenata. Dakle, iako imaju negativnije stavove prema rizičnom *online* ponašanju, djevojke se ponašaju jednako rizično kao i mladići. Ovaj rezultat može se objasniti nalazima koji govore o tome da djevojke češće od mladića slijede socijalne norme i svoje ponašanje prilagođavaju socijalnim očekivanjima (Amini i sur., 2018). Moguće je kako će djevojke svoje ponašanje češće prilagođavati socijalnim očekivanjima, neovisno o tome kakav stav imaju prema nekom ponašanju, pa će stoga biti spremne prihvatiti zahtjev za prijateljstvom ili odgovoriti na poruku nepoznatoj osobi. Prema nekim nalazima, stavovi prema rizičnom ponašanju i rizično *online* ponašanje često nisu usklađeni, a na samo ponašanje, osim kognitivne sastavnice stava prema ponašanju, utječu i socijalni čimbenici, trenutačne emocije i obilježja same situacije u kojoj se pojedinac nađe (Acquisti i sur., 2015). Izostanak prediktivnosti spola može se objasniti i time što je muški spol povezan i s nešto manje vremena provođenja u *online* aktivnostima te varijabla vremena provedenog *online* ostaje jedini značajni prediktor stavova prema rizičnom ponašanju.

Školski uspjeh i vrsta srednje škole nisu bili statistički značajni prediktori stavova prema rizičnom *online* ponašanju i rizičnog *online* ponašanja u ovom istraživanju, premda je u korelacij-

nation for these results is the fact that the present study included a narrow age range of adolescents in the sample, i.e., only high school students. In future research, it would be useful to include elementary school students and check whether their attitudes towards and participation in risky online behaviour differ from that of high school students.

The results are consistent with data from the literature (Chen et al., 2019; Ouytsel et al., 2020; Walrave et al., 2015) showing that boys have more positive attitudes towards risky online behaviour than girls, but the effect size is small. According to numerous findings, boys are more prone to various types of risky offline and online behaviours, and have more positive attitudes towards them, probably because typical male adolescent behaviours are often associated with exploration and risk-taking (Amini et al., 2018). However, in our research, based on the regression analysis, gender was not a significant predictor of risky online behaviour in adolescents. Therefore, although girls have more negative attitudes towards online risks, they participate in equally risky behaviour as boys. This result can be explained by findings suggesting that girls are more likely to follow social norms and adapt their behaviour to social expectations than boys (Amini et al., 2018). It is possible that girls will often adapt their behaviour to social expectations, regardless of their attitude towards a certain behaviour, and will therefore be willing to accept a friend request or respond to a message from a stranger. According to some findings, attitudes towards and participation in risky online behaviour are often inconsistent, and the behaviour itself, in addition to the cognitive component of the attitude towards the behaviour, is also influenced by social factors, current emotions, and characteristics of the situation in which the individual finds himself/herself (Acquisti et al., 2015). The lack of predictability regarding gender can also be explained by the fact that the male gender is associated with slightly less time spent in online activities, and the variable of time spent online remains the only significant predictor of attitudes towards risky online behaviour.

Academic achievement and type of high school attended did not play a significant role

skoj analizi utvrđena povezanost lošijeg školskog uspjeha s pozitivnijim stavovima. Izostanak povezanosti stavova s vrstom škole može se objasniti utvrđenom korelacijom pohađanja strukovne škole s nižim školskim uspjehom. Neka istraživanja govore kako se učenici strukovnih škola upuštaju u više rizičnih *online* ponašanja, od učenika gimnazija (Đuranović i Klasnić, 2016; Hajar i sur., 2022; Velki, 2018). Važno je napomenuti kako vrsta rizičnog *online* ponašanja koja se ispitala u ovom istraživanju predstavlja samo potencijalno rizično ponašanje, odnosno negativne posljedice nakon upuštanja u njega ne moraju uvijek nastupiti (Livingstone i sur., 2011; Valkenburg i Peter, 2011). Kada govorimo o rizičnim ponašanjima u stvarnom životu, negativne posljedice obično su izraženije i javljaju se češće. Uspostavljanje rizičnih *online* kontakata među adolescentima je uobičajeno i oni takvo ponašanje ne smatraju posebno rizičnim, kao što je to slučaj s rizičnim ponašanjima u stvarnom životu, npr. konzumacijom alkohola ili droga. Zbog složenog odnosa vrste škole, školskog uspjeha i vremena provedenog *online*, koji se može vidjeti u međusobnim korelacijama tih varijabli postignutih u ovom istraživanju (Tablica 5), školski uspjeh ni vrsta škole nisu bili značajni prediktori stavova i rizičnog ponašanja adolescenata.

U ovom je istraživanju utvrđeno kako je više vremena provođenja u *online* aktivnostima povezano s pozitivnijim stavovima prema uspostavljanju rizičnih *online* kontakata i češćem uspostavljanju takvih kontakata. Ovakav je rezultat očekivan jer prema rezultatima prethodnih istraživanja, adolescenti koji provode više vremena *online* sudjeluju u više *online* aktivnosti i imaju više prilika za upuštanje u rizično ponašanje te precjenjuju svoje digitalne vještine, što može dovesti do osjećaja lažne sigurnost, neranjivosti i previsokog samopouzdanja u *online* situacijama (Gámez-Guadix i sur., 2016; Meter i Bauman, 2015). Također, kada provode mnogo qh vremena *online* i često se upuštaju u rizično *online* ponašanje, adolescenti mogu smatrati da je takvo ponašanje uobičajeno i prihvatljivo, što može utjecati na to da njihovi stavovi prema tom ponašanju postanu pozitivniji.

in predicting attitudes towards risky online behaviour and participation in risky online behaviour in the present study, although the correlation analysis found a weak correlation between lower academic achievement and more positive attitudes towards such behaviour. The lack of a correlation between attitudes and type of school attended can be explained by the established correlation between attending vocational school and lower academic achievement. Some studies show that vocational school students engage in riskier online behaviour than grammar school students (Đuranović & Klasnić, 2016; Hajar et al., 2022; Velki, 2018). It is important to note that the type of risky online behaviour examined in this study is only potentially risky behaviour, meaning that negative consequences after engaging in it do not always (or necessary) occur (Livingstone et al., 2011; Valkenburg & Peter, 2011). When it comes to risky behaviours in real life, negative consequences are usually more pronounced and occur more frequently. Establishing risky online contacts is common among adolescents, and they do not consider this behaviour to be particularly risky, especially in comparison to risky behaviours in real-life contexts, such as alcohol or substance consumption. Due to the complex relationship between school type, academic achievement, and time spent online (see Table 5), neither academic achievement nor school type were significant predictors of adolescents' attitudes and their risky online behaviour.

Our study found that adolescents who spent more time in online activities were observed to have more positive attitudes toward establishing risky online contacts and participated more frequently in establishing such contacts. This result is expected because, according to previous research, adolescents who spend more time online participate in more online activities and have more opportunities to engage in risky behaviour and overestimate their digital skills, which can lead to a sense of false security, invulnerability, and overconfidence in online situations (Gámez-Guadix et al., 2016; Meter & Bauman, 2015). Additionally, when adolescents spend a lot of time online and frequently engage in risky online behaviour, they

U skladu s trećom hipotezom (H3), utvrđeno je kako što su pozitivnije stavove prema rizičnim *online* kontaktima adolescenti imali dva mjeseca prije, to su kasnije izvještavali o češćem uspostavljanju rizičnih *online* kontakata. Vrijeme provedeno u *online* aktivnostima objašnjava 12,2 % varijance, a stavovi učenika dodatnih 11,2 % varijance njihovog rizičnog *online* ponašanja. Navedeni rezultati u skladu su s prethodnim istraživanjima o povezanosti stavova prema rizičnom *online* ponašanju i rizičnog *online* ponašanja (Gool i sur., 2015; Ouytsel i sur., 2020; Paluckaitė i Žardeckaitė-Matulaitienė, 2021; Walrave i sur., 2015). Stavovi i ponašanje osobe općenito su povezani, pa će adolescenti koji percipiraju pozitivnije posljedice, više koristi i manje rizika od ponašanja biti skloniji upustiti se u njega. Budući da smo mjerili stavove prije ponašanja, možemo s nešto većom sigurnošću govoriti o smjeru povezanosti stavova i ponašanja, odnosno da su stavovi utjecali na ponašanja, a ne obrnuto. Utjecaj stavova prema rizičnom *online* ponašanju na rizično *online* ponašanje adolescenata razmjerno je mali, ali podjednak doprinosu vremena provedenog u *online* aktivnostima. Naime, ovi nalazi podupiru pretpostavke kako veća prisutnost u *online* svijetu izlaže mlade većem riziku, pa onda i kontaktnom riziku (Livingstone i sur., 2011; Velki i sur., 2017). Nadalje, budući da dva značajna prediktora objašnjavaju oko 23 % varijance rizičnog kontaktnog ponašanja, vjerojatno postoje brojni drugi čimbenici koji mogu utjecati na odluku adolescenta o tome hoće li se upustiti u rizično *online* ponašanje ili ne. Prema nekim istraživanjima, čini se kako upuštanje adolescenata u rizično *online* ponašanje često nije promišljeno, već je rezultat spontane odluke te su adolescenti često ambivalentni prema rizičnim ponašanjima (Acquisti i sur., 2015; Ouytsel i sur., 2020). Stoilova i suradnici (2019) proveli su metaanalizu čiji rezultati upozoravaju na to kako socijalne posljedice za koje adolescenti pretpostavljaju da će uslijediti nakon nekog rizičnog ponašanja utječu na to hoće li se oni upustiti u neko ponašanje, vjerojatno i više nego što na njihovo ponašanje utječu njihovi stavovi prema tom ponašanju.

may view such behaviour as normal and acceptable, which may influence their attitudes towards such behaviour as being more positive.

In accordance with the third hypothesis (H3), it was found that adolescents who had more positive attitudes toward risky online contacts two months before participating in the study were more likely to report that they frequently established risky online contacts. Time spent in online activities explained 12.2% of the variance, and attitudes towards such behaviour explained an additional 11.2% of the variance in their risky online behaviour. These results are consistent with previous research on the relationship between attitudes towards risky online behaviour and participation in risky online behaviour (Gool et al., 2015; Ouytsel et al., 2020; Paluckaitė & Žardeckaitė-Matulaitienė, 2021; Walrave et al., 2015). A person's attitudes and behaviour are generally related, so adolescents who perceive more positive consequences, more benefits, and less risk from a behaviour will be more likely to engage in it. Since we measured attitudes before behaviour, we can derive conclusions about the direction of the relationship between attitudes and behaviour with somewhat greater certainty, i.e., we assume that attitudes influenced behaviour, and not vice versa. The influence of attitudes towards risky online behaviour on adolescents' risky online behaviour is relatively small, but equal to the contribution of time spent in online activities. Namely, these findings support the assumptions that a greater presence in the online world exposes young people to greater risk and subsequently, to greater contact risk (Livingstone et al., 2011; Velki et al., 2017). Furthermore, since two significant predictors explained about 23% of the variance in risky contact behaviour, there are probably numerous other factors that can influence adolescents' decisions about whether to engage in risky online behaviour. According to some research, adolescents' engagement in risky online behaviour often appears to be unplanned, but rather a spontaneous decision, and adolescents are often ambivalent about risky behaviours (Acquisti et al., 2015; Ouytsel et al., 2020). Stoilova et al. (2019) conducted a meta-analysis, the results of which indi-

Metodološki doprinos ovog istraživanja čini razvoj novih instrumenata za specifičan oblik rizičnog *online* ponašanja – rizičnim *online* kontaktima. Dodatni doprinos donio je i kratkotrajni longitudinalni nacrt pomoću kojega smo dobili pouzdanije zaključke o smjeru veze između stavova i rizičnog *online* ponašanja. Naime, kratkotrajna longitudinalna istraživanja daju veću osnovu za razmatranje uzročno-posljedičnih odnosa, nego transverzalna istraživanja. No, još uvijek moramo biti oprezni u zaključivanju o kauzalnosti jer sam temporalni poredak varijabli nije dovoljan, budući da može postojati utjecaj neobjašnjenih trećih varijabli koje utječu na obje varijable (npr. socijalni ili emocionalni faktori koji mijenjaju stavove i ponašanja istovremeno) (Cohen i sur., 2013). Nađene su i naznake složene povezanosti školskog uspjeha, vrste škole, spola i vremena provođenja u *online* aktivnostima koje je potrebno dalje razmatrati kako bi se razjasnilo što je zapravo u podlozi povezanosti tih varijabli s rizičnim kontaktnim ponašanjem.

Ograničenja istraživanja i praktične implikacije rezultata

Postoje i neki metodološki nedostaci ovog istraživanja koji mogu pomoći pri budućem planiranju istraživanja u ovome području. Istraživanje je bilo kratkotrajno longitudinalno, a bilo bi potrebno mjeriti stavove mladih o rizičnim *online* ponašanjima u mnogo ranijoj dobi i prije većeg upuštanja u rizična ponašanja kako bismo bili sigurni da stavovi utječu na ponašanje, a moguće je i da se oni ciklički podupiru – stav utječe na češće ponašanje, a izostanak loših iskustava popravlja stav prema rizičnom ponašanju u budućnosti. Nadalje, svi konstrukti mjereni su metodom samoprocjene. U budućim bi istraživanjima bilo korisno uključiti i druge izvore procjene, poput dnevničkog praćenja vlastitog *online* ponašanja ili softvera koji će objektivnije pratiti *online* aktivnosti adolescenata. Također, novokonstruirani upitnici sadrže čestice čija su faktorska zasićenja visoka, no postoji još mjesta za njihovo usavršavanje. Važno je naglasiti da se istraživanje temeljilo na prigodnom uzorku iz samo jednog grada. U istraživanje je bilo uključeno znatno više dje-

cate that the social consequences that adolescents expect to follow a risky behaviour can influence whether they engage in that behaviour, and this is more likely to have an influence than their attitudes towards that behaviour. The methodological contribution of the present research study is the development of new instruments for a specific form of risky online behaviour – risky online contacts. An additional contribution was made by the short-term longitudinal design, which allowed us to obtain more reliable conclusions about the direction of the relationship between attitudes and participation in risky online behaviour. Namely, short-term longitudinal studies provide a greater basis for considering cause-and-effect relationships than cross-sectional studies. However, we still need to be cautious in drawing conclusions about causality because the temporal order of variables alone is not sufficient, since there may be an influence of other unexplained variables that affect both variables studied (e.g., social or emotional factors that change attitudes and behaviour simultaneously; Cohen et al., 2013). There are also indications of a complex relationship between academic achievement, type of school attended, gender, and time spent in online activities, which needs to be further examined to clarify the underlying relationships between these variables and risky contact behaviour.

Research limitations and practical implications

The present study has some methodological limitations that should be considered when planning future research in this area. The study was based on a short-term longitudinal design, but in order to better understand the influence of attitudes on behaviour, it would be necessary to measure adolescents' attitudes toward risky online behaviours at an earlier age, before they have engaged in such behaviours. Additionally, it is possible that attitudes and behaviours have a cyclical relationship - attitudes influence behaviour, and the absence of negative experiences may subsequently improve attitudes toward risky behaviour. Furthermore, all constructs were measured through self-reports, which can introduce

vojaka (70 %), od mladića (30 %). U budućim istraživanjima trebalo bi uključiti reprezentativniji uzorak sudionika te uključiti učenike osnovne škole. Također, čini se korisnim uključiti i neke dodatne varijable koje bi mogle biti povezane s rizičnim *online* ponašanjem, kao što su osobine ličnosti, socijalna podrška, usamljenost i depresivnost adolescenata.

Praktična implikacija rezultata ovog istraživanja očituje se u potencijalnoj izradi smjernica za buduće preventivne programe usmjerene ka sigurnijem *online* ponašanju. Dakle, unutar prevencije rizičnog *online* ponašanja adolescenata potrebno je utjecati na njihove stavove prema rizičnom *online* ponašanju, posebno budući da prema našim rezultatima, adolescenti opažaju samo umjerene rizike takvog ponašanja. Informacije o potencijalnim rizicima mogu osvijestiti adolescentima posljedice uspostavljanja rizičnih *online* kontakata i potaknuti ih na opreznije ponašanje. Razvoj digitalnih vještina, poticanje vještina kritičkog mišljenja, prepoznavanja *online* opasnosti i sudjelovanja u pozitivnim *online* aktivnostima mogu smanjiti njihovu sklonost rizičnom *online* ponašanju.

ZAKLJUČAK

Rezultati ukazuju kako adolescenti uspostavljaju *online* kontakte s nepoznatim osobama i često podcjenjuju negativne posljedice koje mogu proizaći iz takvog ponašanja, što upućuje na potrebu za kontinuiranim informiranjem stručnjaka i roditelja koji će pratiti navike adolescenata, kao i na važnost usvajanja kritičkog mišljenja adolescenata za vrijeme *online* aktivnosti. Važno je napomenuti i da je svako rizično *online* ponašanje, uključujući uspostavljanje rizičnih *online* kontakata, samo potencijalno rizično ponašanje te osim potencijalnih negativnih posljedica za adolescente može imati i neke pozitivne posljedice kao što je pronalazak osoba sličnih interesa i dobivanje socijalne podrške koja im nedostaje u stvarnom životu. Dobiveni rezultati ukazuju na to kako mladići imaju pozitivnije stavove prema uspostavljanju rizičnih *online* kontakata od djevojaka te kako što više vremena adolescenti provode u *online* aktivnostima, to su njihovi stavovi

bias. Future research should incorporate additional data sources, such as diary monitoring of online behaviour or a software that objectively tracks adolescents' online activities. While the newly developed questionnaires demonstrated high factor loadings, there is still room for refinement. It is also important to note that the sample was a convenience sample from a single city and it included significantly more girls (70%) than boys (30%). Future studies should aim for a more representative sample, including elementary school students. Moreover, it would be beneficial to examine additional variables that are potentially associated with risky online behaviour, such as personality traits, social support, loneliness, and depression.

The practical implications of the study's findings relate to the development of guidelines for preventive programmes aimed at promoting safer online behaviour. Preventive efforts should target adolescents' attitudes toward risky online behaviour, especially since our results show that adolescents perceive only moderate risks associated with such behaviour. Providing information about potential risks can raise their awareness of the consequences of engaging with risky online contacts and encourage more cautious behaviour. Enhancing digital skills, fostering critical thinking, recognising online dangers, and promoting positive online activities can help reduce adolescents' propensity to engage in risky online behaviour.

CONCLUSION

The results indicate that adolescents sometimes establish online contacts with strangers and that they tend to underestimate the negative consequences of such behaviour, which highlights the need for the continuous education of experts and parents who monitor adolescents' habits, as well as the importance of adopting a critical mindset among adolescents during online activities. It is also important to note that any risky online behaviour, including establishing risky online contacts, is only potentially risky. In addition to potential negative consequences for adolescents, it can also have some positive aspects, such as meeting peers with similar interests and receiving social support that may be lacking in real-life

pozitivniji. Također, što više vremena provode u *online* aktivnostima te što pozitivnije stavove prema rizičnim *online* kontaktima adolescenti imaju, češće ih uspostavljaju. U budućim istraživanjima bilo bi korisno uključiti i neke dodatne varijable koje bi mogle biti povezane s rizičnim *online* ponašanjem. Indikatori dobiveni u ovom istraživanju, odnosno indikatori o stavovima adolescenata prema uspostavljanju rizičnih *online* kontakata, kao i čimbenicima povezanim s takvim oblikom rizičnog ponašanja adolescenata daju nam smjernice koje se mogu upotrijebiti prilikom kreiranja sadržaja edukacijskih programa u ovom području.

contexts. The results indicate that boys have more positive attitudes towards establishing risky online contacts than girls and that the more time adolescents spend in online activities, the more positive their attitudes are. Additionally, the more time they spend in online activities and the more positive attitudes they have towards risky online contacts, the more often they establish these contacts. Understanding adolescents' attitudes toward risky online contacts and the factors associated with this behaviour provides valuable guidance for developing educational programmes focused on online safety.

REFERENCES/LITERATURA

- Acquisti, A., Brandimarte, L., & Loewenstein, G. (2015). Privacy and human behaviour in the age of information. *Science*, 347(6221), 509-514. <https://doi.org/10.1126/science.aaa1465>
- Ajzen, I. (1991). The theory of planned behaviour. *Organ Behav Hum*, 50(2), 179–211. [https://doi.org/10.1016/0749-5978\(91\)90020-T](https://doi.org/10.1016/0749-5978(91)90020-T)
- Amin, A., Kågesten, A., Adebayo, E., & Chandra-Mouli, V. (2018). Addressing Gender Socialization and Masculinity Norms Among Adolescent Boys: Policy and Programmatic Implications. *Journal of Adolescent Health*, 62(3), 72-80. <https://doi.org/10.1016/j.jadohealth.2017.06.022>
- Anderson, M., Vogels, E.A., Perrin, A., & Rainie, L. (2022). *Connection, Creativity and Drama: Teen Life on Social Media in 2022*. Pew Reserch Center.
- Banks, M., Shane, O., Colin, G., & Meservy, T. O. (2010). Risky behaviour in online social media: protection motivation and social influence. *AMCIS 2010 Proceedings*, 372. <https://aisel.aisnet.org/amcis2010/372>
- Benvenuti, M., Wright, M., & Naslund, J. (2023). How technology use is changing adolescents' behaviours and their social, physical, and cognitive development. *Current Psychology*, 42, 16466–16469. <https://doi.org/10.1007/s12144-023-04254-4>
- Borić Letica, I. (2024). *Provjera Modela prototipova ili spremnosti na rizično ponašanje za objašnjenje ponašanja adolescenata na društvenim mrežama* (unpublished doctoral dissertation). Filozofski fakultet u Zagrebu.
- Bronfenbrenner, U. (1979). *The ecology of human development: experiments by nature and design*. Harvard University Press.
- Cernikova, M., Dedkova, L., & Smahel, D. (2018). Youth interaction with online strangers: experiences and reactions to unknown people on the Internet. *Information, Communication. & Society*, 21(1), 94-110. <https://doi.org/10.1080/1369118X.2016.1261169>
- Chen, S., Schreurs, L., Pabian, S., & Vandenbosch, L. (2019). Daredevils on Social Media: A Comprehensive Approach towards Risky Selfie Behaviour among Adolescents. *New Media & Society*, 21(4), 1-32. <https://doi.org/10.1177/1461444819850112>
- Chou, H.L., & Chou, C. (2023). How teens negotiate privacy on social media proactively and reactively. *New Media & Society*, 25(6), 1290–1312. <https://doi.org/10.1177/14614448211018797>
- Ciboci, L., Ćosić Predrag, I., Kanižaj, I., Potočnik, D., & Vinković, D. (2020). *Nacionalno istraživanje o sigurnosti djece na internetu: HR Kids Online*. Društvo za komunikacijsku i medijsku kulturu. <https://hrkids.online/prez/EUKidsOnlineHRfinal.pdf>
- Cohen, J., Cohen, P., West, S. G., & Aiken, L. S. (2013). *Applied multiple regression/correlation analysis for the behavioural sciences*. Routledge.
- Crone, E. A., & Duijvenvoorde, A.C.K. (2021). Multiple pathways of risk taking in adolescence. *Developmental Review*, 62. <https://doi.org/10.1016/j.dr.2021.100996>
- Dumas, T. M., Davis, J. P., & Ellis, W. E. (2019). Is it good to be bad? A longitudinal analysis of adolescent popularity motivations as a predictor of engagement in relational aggression and risk behaviours. *Youth & Society*, 51(5), 659–679. <https://doi.org/10.1177/0044118X17700319>
- Đuranović, M., & Klasnić, I. (2016). Povezanost školskog uspjeha irizičnih ponašanja srednjoškolaca na internetu. *Napredak*, 157(3), 263-281.
- Festinger, L.A. (1957). *Theory of Cognitive Dissonance*. Row, Peterson and Company. <https://doi.org/10.1002/9781405165518.wbeosc058.pub2>
- Gámez-Guadix, M., Borrajo, E., & Almendros, C. (2016). Risky online behaviours among adolescents: Longitudinal relations among problematic Internet use, cyberbullying perpetration, and meeting strangers online. *Journal of Behavioural Addictions* 5(1), 100–107. <https://doi.org/10.1556/2006.5.2016.013>

- Gerrard, M., & Gibbons, F.X. (1995). Predicting young adults' health risk behaviour. *Journal of Personality and Social Psychology*, 69(3), 505–517. <https://doi.org/10.1037/0022-3514.69.3.505>
- Gibbons, F.X., Gerrard, M., Houlihan, A.E., Stock, M.L., & Pomery, E.A. (2008). A dual-process approach to health risk decision making: The prototype willingness model. *Developmental Review*, 28(1), 29–61. <https://doi.org/10.1016/j.dr.2007.10.001>
- Gool, E., Ouytsel, V.J, Ponnet, K., & Walrave, M. (2015). To share or not to share? Adolescents' self-disclosure about peer relationships on Facebook: An application of the Prototype Willingness Model. *Computers in Human Behaviour*, 44, 230-239. <https://doi.org/10.1016/j.chb.2014.11.036>
- Gremmen, M.C., Berger, C., Ryan, A.M., Steglich, C.E.G., Veenstra, R., & Dijkstra, J.K. (2019). Adolescents' Friendships, Academic Achievement, and Risk Behaviours: Same-Behaviour and Cross-Behaviour Selection and Influence Processes. *Child Dev*, 90, 192-211. <https://doi.org/10.1111/cdev.13045>
- Gupta, C., Jogdand, D.S., & Kumar M. (2022). Reviewing the impact of social media on the mental health of adolescents and young adults. *Cureus*, 14(10). <https://doi.org/10.7759/cureus.30143>
- Hajar, S., Haetami, A., & Muzini, M. (2022). The Impact of Digital Literacy and Risk Internet Behaviour on Science Learning Achievement: A Case Study of Students at Junior High School. *Prisma Sains: Jurnal Pengkajian Ilmu dan Pembelajaran Matematika dan IPA IKIP Mataram*, 10(4), 831-841. <https://doi.org/10.33394/j-ps.v10i4.5783>
- Hawkins, G.T., Lee, S.H., & Michael, S.L. (2002). Individual and Collective Positive Health Behaviours and Academic Achievement Among U.S. High School Students, Youth Risk Behaviour Survey 2017. *American Journal of Health Promotion*, 36(4), 651-661. <https://doi.org/10.1177/08901171211064496>
- Heirman, W., Walrave, M., Vermeulen, A., Ponnet, K., Vandebosch, H., & Hardies, K. (2016). Applying the Theory of Planned Behaviour to adolescents' acceptance of online friendship requests sent by strangers. *Telematics and Informatics*, 33. <https://doi.org/10.1016/j.tele.2016.01.002>.
- Kalebić Maglica, B. (2011). Odnos između elemenata modela prototipova/spremnosti na rizična ponašanja i učestalosti konzumacije cigareta i alkohola kod adolescenata. *Psihologijske teme*, 20(2), 337-358.
- Khalaf, A.M., Alubied, A.A., Khalaf, A.M., & Rifaey, A.A. (2023). The impact of social media on the mental health of adolescents and young adults: A systematic review. *Cureus*, 15(8), e42990. <https://doi.org/10.7759/cureus.42990>
- Klever, P. (2005). The multigenerational transmission of family unit functioning. *The American Journal of Family Therapy*, 33(1), 253-264. <https://doi.org/10.1080/01926180590952436>
- Kline, R.B. (2016). *Principles and practice of structural equation modeling (4th ed.)*. Guilford Press.
- Li, Y., & Kobsa, A. (2020). Context and Privacy Concerns in Friend Request Decisions. *Journal of the Association for Information Science & Technology*, 71(6), 632-643. <https://doi.org/10.1002/asi.24291>
- Liu, M., Kamper-DeMarco, K. E., Zhang, J., Xiao, J., Dong, D. i Xue, P. (2022). Time Spent on Social Media and Risk of Depression in Adolescents: A Dose–Response Meta-Analysis. *International Journal of Environmental Research and Public Health*, 19(9), 5164. <https://dx.doi.org/10.3390/ijerph19095164>
- Livazović, G. (2017). Role of family, peers and school in externalised adolescent risk behaviour. *Hrvatska revija za rehabilitacijska istraživanja*, 53 (Supplement), 186-203.
- Livingstone, S., & Stoilova, M. (2021). *The 4Cs: Classifying Online Risk to Children*. Leibniz-Institut für Medienforschung, Hans-Bredow-Institut (HBI). <https://doi.org/10.21241/ssoar.71817>
- Livingstone, S., Haddon, L., Görzig, A., & Olafsson, K. (2011). *Risks and safety on the internet: the perspective of European children: full findings and policy implications from the EU Kids Online survey of 9-16 year olds and their parents in 25 countries*. EU Kids Online Network.
- Maddux, J. E., & Rogers, R. W. (1983). Protection motivation and self-efficacy: A revised theory of fear appeals and attitude change. *Journal of Experimental Social Psychology*, 19(5), 469–479. [https://doi.org/10.1016/0022-1031\(83\)90023-9](https://doi.org/10.1016/0022-1031(83)90023-9)

- Meter, D., & Bauman, S. (2015). When sharing is a bad idea: the effects of online social network engagement and sharing passwords with friends on cyberbullying involvement. *Cyberpsychology, Behaviour, and Social Networking*, 18(8), 437–442. <https://doi.org/10.1089/cyber.2015.0081>
- Öncü, S. (2016). Facebook habits among adolescents: Impact of perceived social support and tablet computers. *Information Development*, 32(5), 1457–1470.
- Ouytsel, J.V., Walrave, M., Ojeda, M., & Del Rey, R. (2020). Adolescents' Sexy Self-Presentation on Instagram: An Investigation of Their Posting Behaviour Using a Prototype Willingness Model Perspective. *International Journal of Environmental Research and Public Health*, 17(21), 1-15. <https://doi.org/10.3390/ijerph17218106>
- Paluckaitė, U., & Žardeckaitė-Matulaitienė, K. (2021). Adolescents' intention and willingness to engage in risky photo disclosure on social networking sites: Testing the prototype willingness model. *Cyberpsychology: Journal of Psychosocial Research on Cyberspace*, 15(2), Article 8, 1.
- Popat, A., & Tarrant, C. (2023). Exploring adolescents' perspectives on social media and mental health and well-being – A qualitative literature review. *Clinical Child Psychology and Psychiatry*, 28(1), 323-337. <https://doi.org/10.1177/13591045221092884>
- Ricijaš, N., Krajcer, M., & Bouillet, D. (2010). Rizična ponašanja zagrebačkih srednjoškolaca – razlike s obzirom na spol. *Odgojne znanosti*, 12(1), 45-63.
- Sasson, H., & Mesch, G. (2016). Gender differences in the factors explaining risky behaviour online. *Journal of Youth and Adolescence*, 45, 973-985. <https://doi.org/10.1007/s10964-016-0465-7>
- Schyff, K., & Flowerday, S. (2023). The mediating role of perceived risks and benefits when self-disclosing: A study of social media trust and FoMO, *Computers & Security*, 126. <https://doi.org/10.1016/j.cose.2022.103071>
- Smahel, D., Machackova, H., Mascheroni, G., Dedkova, L., Staksrud, E., Ólafsson, K., Livingstone, S., & Hasebrink, U. (2020). *EU Kids Online 2020: Survey results from 19 countries*. EU Kids Online. <https://doi.org/10.21953/lse.47fdeqj01ofo>
- Steijn, W. M., Schouten, A. P., & Vedder, A. H. (2016). Why concern regarding privacy differs: The influence of age and (non-)participation on Facebook. *Cyberpsychology: Journal of Psychosocial Research on Cyberspace*, 10(1), 3. <https://doi.org/10.5817/CP2016-1-3>
- Stoilova, M., Livingstone, S., & Nandagiri, R. (2019). *Children's data and privacy online: Growing up in a digital age. Research findings*. London School of Economics and Political Science.
- Trubelja, M., & Samolec, M. (2018). Spolno ponašanje adolescenata-usporedba adolescenata drugih i četvrtih razreda strukovne škole i gimnazije. *Sestrinski glasnik*, 23(1), 18-22. <https://doi.org/10.11608/sgnj.2018.23.005>
- Valkenburg, P.M., & Peter, J. (2011). Online Communication Among Adolescents: An Integrated Model of its Attraction, Opportunities and Risks. *Journal of Adolescents Health*, 48(2), 121-127. <https://doi.org/10.1016/j.jadohealth.2010.08.020>
- Vannucci, A., Simpson, E.G., Gagnon, S., & Ohannessian, C.M. (2020). Social media use and risky behaviours in adolescents: A meta-analysis. *Journal of adolescence*, 79(1), 258-274. <https://doi.org/10.1016/j.adolescence.2020.01.014>
- Vejmelka, L., Strabić, N., & Jazvo, M. (2017). Online aktivnosti i rizična ponašanja adolescenata u virtualnom okruženju. *Društvena istraživanja*, 26(1), 159-178. <https://doi.org/10.5559/di.26.1.04>
- Velki, T. (2018). Karakteristična rizična ponašanja i znanja srednjoškolaca kao korisnika informacijskih sustava. In M. Nikolić (ed), *XXI. Dani psihologije u Zadru: Sažetci priopćenja* (pp. 102-102). Odjel za psihologiju Sveučilišta u Zadru.
- Walrave, K.P., Ouytsel, V. J., Gool, V.E., Heirman, W., & Verbeek, A. (2015). Whether or not to engage in sexting: Explaining adolescent sexting behaviour by applying the prototype willingness model. *Telematics and Informatics*, 32(4), 796-808. <https://doi.org/10.1016/j.tele.2015.03.008>