

# Odnos sekstinga i psihosocijalnog funkcioniranja adolescenata

## */ The Relationship Between Adolescent Sexting and Psychosocial Functioning*

Ana Kvesić<sup>1</sup>, Arta Dodaj<sup>2</sup>, Karla Krešo<sup>3</sup>, Kristina Sesar<sup>3</sup>

<sup>1</sup>Fakultet zdravstvenih studija, Sveučilište u Mostaru, Mostar, Bosna i Hercegovina; <sup>2</sup>Odjel za psihologiju, Sveučilište u Zadru, Zadar, Hrvatska; <sup>3</sup>Filozofski fakultet, Sveučilište u Mostaru, Mostar, Bosna i Hercegovina

*/ <sup>1</sup>Faculty of Health Studies, University of Mostar, Mostar, Bosnia and Herzegovina; <sup>2</sup>Department of Psychology, University of Zadar, Zadar, Croatia; <sup>3</sup>Faculty of Humanities and Social Sciences, University of Mostar, Mostar, Bosnia and Herzegovina*

ORCID 0000-0002-8064-6666 (Arta Dodaj)

ORCID 0000-0003-2406-7114 (Kristina Sesar)

Porast učestalosti razmjene seksualno eksplicitnog sadržaja među adolescentima utjecao je i na sve veći interes istraživača za proučavanje posljedica ovog ponašanja na psihosocijalno funkcioniranje adolescenata. Cilj rada bio je utvrditi jesu li rod, status intimne veze, te različiti oblici sekstinga prediktori psihosocijalnog funkcioniranja. U istraživanju je sudjelovalo 598 hrvatskih srednjoškolaca u dobi od 16 do 18 godina ( $M = 17,035$ ;  $SD = 0,753$ ). Sudionici su sudjelovali u *online* istraživanju u kojem su ispitane demografske varijable (rod, status intimne veze), varijable sekstinga (slanje, primanje i prosljeđivanje seksualno eksplicitnih sadržaja) te varijable psihosocijalnog funkcioniranja (optimizam i strategije suočavanja, opće psihosocijalno disfunkcioniranje, te problemi u ponašanju i odnosima). Regresijskom analizom utvrđeno je da muški sudionici i oni koji nisu u vezi postižu više rezultate na mjerama psihosocijalnog disfunkcioniranja. Stanje disfunkcioniranja povezano je s višim rezultatima optimizma i strategije suočavanja, općeg psihosocijalnog disfunkcioniranja i problemima u ponašanju. Primanje sekstova povezano je s problemima u ponašanju i odnosima, dok prosljeđivanje nije povezano ni s jednim od ispitivanih aspekata psihosocijalnog funkcioniranja. Dobiveni rezultati mogu biti osnova za različite programe intervencije usmjerene smanjenju negativnih aspekata psihološkog funkcioniranja adolescenata.

*/ The increase in the frequency of sharing sexually explicit content among adolescents has also influenced the increasing interest of researchers to study the consequences of this behavior on the psychosocial functioning of adolescents. The aim of this study was to establish if gender, intimate relationship status and different types of sexting represent predictors of psychosocial functioning. A total of 598 high school students from Croatia took part in this study, all between 16 and 18 years of age ( $M = 17.035$ ;  $SD = 0.753$ ). The participants took part in the online study which examined the demographic variables (gender, intimate relationship status), sexting variables (sending, receiving and forwarding of sexually explicit content), and psychosocial functioning variables (optimism and coping strategies, general psychosocial dysfunction, as well as behavior and relationship problems). The results of regression analysis showed that male participants and those not involved in a relationship score higher on measures of psychosocial dysfunction. Sending sexts is associated with higher scores in terms of optimism and coping strategies, general psychosocial dysfunction and behavior problems. Receiving sexts is associated with behavior and relationship problems, while forwarding them is not associated with any of the examined variables of psychosocial functioning. The obtained results could serve as the basis for various intervention programs aimed at reducing the negative aspects of the psychological functioning of adolescents.*

**ADRESA ZA DOPISIVANJE /****CORRESPONDENCE:**

Kristina Sesar  
 Filozofski fakultet,  
 Sveučilište u Mostaru  
 Matice hrvatske  
 88220 Mostar, Bosna i Hercegovina  
 E-pošta: kristina.sesar@ff.sum.ba  
 +387 63 313831

**KLJUČNE RIJEČI / KEY WORDS:**

Seksting / *Sexting*  
 Psihosocijalno funkcioniranje / *Psychosocial Functioning*  
 Optimizam / *Optimism*  
 Strategije suočavanja / *Coping Strategies*  
 Problemi u ponašanju / *Behavior Problems*  
 Adolescenti / *Adolescents*

**TO LINK TO THIS ARTICLE:** <https://doi.org/10.24869/spsih.2024.28>

## INFORMACIJE O FINANCIRANJU

Ovaj je rad rezultat znanstvenog projekta Priroda i determinante sekstinga među adolescentima i mladima: međunacionalna studija financirana od Hrvatske zaklade za znanost (Grant broj 3553).

## UVOD

Upotreba digitalne tehnologije postala je sastavni dio života adolescenata (1). Mladi često upotrebljavaju svoje elektroničke uređaje kako bi istraživali svoju seksualnost i razmjenjivali seksualno eksplicitni sadržaj, sudjelujući u praksi poznatoj kao seksting (2,3).

Prema recentnoj metaanalizi (4) istraživanja učestalosti sekstinga, 14,8 % adolescenata sudjelovalo je u slanju seksualno eksplicitnog sadržaja, 27,4 % u primanju takvog sadržaja, 12 % u prosljeđivanju takvog sadržaja bez pristanka osobe čiji je sadržaj prosljeđen, te 8,4 % u primanju prosljeđenog sadržaja bez pristanka. Nalazi o učestalosti sekstinga s obzirom na rod sudionika su nekonzistentni. Primjerice, neka istraživanja (5) ističu kako su djevojke sklonije slanju poruka seksualnog sadržaja, dok rezultati drugih istraživanja (6-9) pokazuju da su mladići skloniji slanju, primanju i objavljivanju seksualno eksplicitnih sadržaja, te da

## GRANT NUMBERS AND/OR FUNDING INFORMATION

This paper is an output of the science project “Nature and Determinants of Sexting Among Adolescents and Youth: A Cross-National Study” funded by the Croatian Science Foundation (Grant number 3553).

## INTRODUCTION

The use of digital technology has become an integral part of adolescent life (1). Young people often use their electronic devices to explore their sexuality and exchange sexually explicit content, thereby participating in the practice known as sexting (2, 3).

According to a recent meta-analysis (4) of studies addressing sexting prevalence, 14.8% of adolescents have participated in sending sexually explicit content, 27.4% participated in receiving such content, and 12% participated in forwarding such content without the consent of the person whose content was being forwarded, while 8.4% received forwarded unconsented content. Findings regarding the prevalence of sexting in terms of the gender of participants are inconsistent. For example, some studies (5) point out that girls are more inclined to send sexts, while the results of other studies (6-9) suggest that

su skloniji sudjelovati u nekonzenzualnom sekstingu (10). Postoje i rezultati istraživanja (2,4,11,12) koji ukazuju da ne postoje razlike s obzirom na rod što upućuje na pretpostavku da bi takvo ponašanje zapravo moglo biti uobičajeno i prihvatljivo među mladima (13).

U kontekstu razvojne dobi mladih u kojoj se istraživanje seksualnosti ističe kao temeljno područje, seksting se može smatrati samo jednim od načina na koje to oni mogu ostvariti. U prilog ovome idu istraživanja koja pokazuju da je sudjelovanje u sekstingu uobičajeno kako među mladima u vezama radi ostvarivanja bliskosti i seksualnog uzbuđenja (14), tako i među onima koji nisu u vezama radi potencijalnog ostvarivanja intimne veze, flertovanja, stvaranja veza ili jednostavno doživljavanja seksualnog uzbuđenja (15-17). Ponekad mladi percipiraju sudjelovanje u sekstingu kao pozitivno iskustvo jer dobivaju pozitivnu potvrdu o vlastitom tijelu, ili se zabavljaju kada takve sadržaje dijele s vršnjacima i prijateljima (18). Stoga seksting ne bi trebao nužno biti promatran kao rizično ponašanje, već, kako ističe Naezer (19), sve *online* seksualne aktivnosti trebaju se promatrati kao "avanture" koje donose određeno iskustvo s neizvjesnim ishodima. Takve aktivnosti možemo promatrati na kontinuumu između rizika i njihove povezanosti s negativnim ishodima s jedne, ali i sigurnosti i njihove povezanosti s ugodnim ishodima, s druge strane.

Ako promatramo seksting kao oblik seksualnog ponašanja, iako doprinosi pozitivnim ishodima, ne možemo tvrditi da je nužno siguran, jer ne postoji seksualna aktivnost koja je sama po sebi potpuno sigurna, budući da uvijek nosi određeni rizik. Potencijalni rizici povezani s psihološkim posljedicama prepoznati su kao relevantni u dominantnom diskursu istraživanja sekstinga i često se istražuju. Međutim, nalazi istraživanja su nekonzistentni. Primjerice, transverzalna istraživanja pružaju raznolike uvide u povezanost sekstinga sa psihosocijal-

boys are more inclined to send, receive and post sexually explicit content, and that they are more likely to participate in nonconsensual sexting (10). Some study results (2, 4, 11, 12) also suggest that there are no differences with regard to gender, which leads to an assumption that such behavior might, in fact, be common and acceptable among young people (13).

In the context of the developmental phase of adolescents, in which the exploration of sexuality is emphasized as a fundamental area, sexting can be regarded as one of the ways to achieve this. This notion is supported by studies showing that sexting is common among adolescents involved in intimate relationships so as to achieve intimacy and sexual arousal (14), as well as among adolescents who are not in a relationship for the purpose of achieving an intimate relationship, flirting, engaging in a relationship or simply experiencing sexual arousal (15-17). The young sometimes perceive sexting as a positive experience because they receive validation with regard to their bodies or have fun when sharing such content with peers and friends (18). Sexting should, therefore, not necessarily be viewed as risky behavior, but as presented by Naezer (19), all sexual activities online should be viewed as "adventures" that bring a certain experience with uncertain outcomes. Such activities can be observed on a continuum between risk and their connection with negative outcomes on the one hand, but also safety and their connection with pleasant outcomes on the other.

If we view sexting as a form of sexual behavior, even though it contributes to positive outcomes, we cannot claim that it is necessarily safe because no sexual activity is completely safe in itself, as it always carries some risk. Potential risks associated with psychological consequences have been recognized as relevant in the prevailing discourse of sexting research and are frequently explored. However, the research results are inconsistent. For example, cross-sectional studies have yielded different

nim zdravljem. Nalazi istraživanja upućuju na značajno izražene simptome depresije, pokušaje suicida i samoozljeđivanja kod sudionika koji sudjeluju u sekstingu (14, 20,21). Temple i sur. (22) su utvrdili pozitivnu povezanost između sekstinga i varijabli impulzivnosti, konzumacije štetnih tvari, te i depresije. Međutim, nakon kontroliranja važnih demografskih varijabli i prethodnog seksualnog ponašanja, povezanost između sekstinga i depresije nije bila statistički značajna. Unatoč postojanju pozitivne povezanosti između slanja i primanja poruka seksualno eksplicitnog sadržaja i psiholoških poteškoća ne možemo pouzdano utvrditi uzročnost jer adolescenti koji su sudjelovali u sekstingu mogli su iskusiti negativne društvene posljedice i posljedično lošije psihološki funkcionirati. Isto je tako, moguće da su adolescenti s određenim psihičkim poteškoćama, iz različitih motiva kao što su potreba za ostvarivanjem socijalnih odnosa ili poboljšanje raspoloženja, skloniji sudjelovanju u sekstingu. Nužna su daljnja longitudinalna istraživanja kako bismo provjerili ovaj odnos. Uz to, socijalna anksioznost bila je negativno povezana sa sekstingom, dok su poremećaji u ponašanju bili pozitivno povezani sa sekstingom (23). Međutim, postoje istraživanja (22) koja pokazuju kako sudjelovanje u sekstingu među adolescentima nije nužno bilo pozitivno povezano s mentalnim poteškoćama. Prema nekim nalazima istraživanja samo je nekonsenzualni seksting (seksting pod pritiskom), ali ne i konzensualni, bio pozitivno povezan s psihološkim poteškoćama (10,24). Nekonsenzualni seksting bio je povezan s neprijateljstvom i agresivnim temperamentom. Nadalje, primanje neželjenih seksualnih sadržaja bilo je povezano s višom razinom depresije, anksioznosti, impulzivnosti, neprijateljstva, emocionalne disregulacije i agresivnog temperamenta (24) te sklonosti nesuicidalnom samoranjavanju (10). Slični su rezultati dobiveni i u istraživanju Klettke i sur. (25). Primanje neželjenih seksualnih poruka i slanje seksualnih poruka pod prisilom bilo je povezano s višim

insights into the relationship between sexting and psychosocial health. Study findings suggest that participants involved in sexting show significantly more pronounced depression symptoms, suicide attempts and self-harm behaviors (14, 20, 21). Temple et al. (22) found a positive correlation between sexting and variables such as impulsivity, substance abuse and depression. However, after controlling for important demographic variables and previous sexual behavior, the correlation between sexting and depression was not statistically significant. Despite the existence of a positive correlation between sending and receiving messages with sexually explicit content and psychological difficulties, we cannot establish reliable causality because adolescents who have engaged in sexting may have experienced negative social consequences, resulting in poorer psychological functioning. Similarly, adolescents with certain psychological difficulties, driven by different motives such as the need to build social relationships or improve their mood, may have been more inclined to engage in sexting. Further longitudinal studies are necessary in order to verify this relationship. Furthermore, social anxiety was negatively associated with sexting, while conduct disorders were positively associated with sexting (23). On the other hand, there are studies (22) which show that adolescent sexting was not necessarily positively associated with mental difficulties. According to some study findings, only non-consensual (pressured) sexting was positively associated with psychosocial difficulties, while consensual sexting was not (10, 24). Non-consensual sexting was associated with hostility and aggressive temperament (24). In addition, receiving unsolicited sexual content was associated with higher levels of depression, anxiety, impulsivity, hostility, emotional dysregulation and aggressive temperament (24), as well as a tendency towards non-suicidal self-harm (10). Similar results were also obtained in the study conducted by Klettke et al. (25). Receiving unsolicited sexts and sexting under coercion were

razinama depresije, anksioznosti, simptoma stresa, te nižim samopoštovanjem. U pogledu longitudinalnih istraživanja (26) adolescenti koji sudjeluju u slanju ili objavljivanju seksualno eksplicitnih sadržaja pokazuju nakon jedne godine višu razinu depresije i anksioznosti. Međutim, dugoročni negativni učinci sekstinga na psihosocijalno funkcioniranje, uključujući simptome depresije (27,28) i anksioznosti (27), nisu evidentirani u drugim longitudinalnim istraživanjima. Za razliku od nekonsenzualnog sekstinga, konsenzualni seksting, u većem broju istraživanja nije bio povezan sa lošijim psihosocijalnim zdravljem (10,24,29-31).

Nekonzistentni nalazi istraživanja u ovom području ističu potrebu za daljnjim razumijevanjem složenoga odnosa sekstinga i psihosocijalnog funkcioniranja, ali i učestalosti sekstinga među sudionicima različitoga roda i statusa veze.

## CILJ ISTRAŽIVANJA

Sve većim porastom tehnologije i njenom sve većom primjenom u istraživanju seksualnosti, poput sudjelovanja u sekstingu, povećava se zabrinutost istraživača i praktičara zbog rizika takvog ponašanja. Trenutno u znanstvenim područjima dominiraju nalazi o pozitivnoj povezanosti sekstinga s negativnim aspektima psihosocijalnog funkcioniranja. Unatoč tome, ti nalazi su uglavnom korelacijske prirode. U ovom radu usmjeravamo se na povezanost sekstinga s negativnim aspektima psihosocijalnog funkcioniranja kao što su opće psihosocijalno disfunkcioniranje te problemi u ponašanju i odnosima. Međutim, istražujemo i pozitivne psihosocijalne aspekte funkcioniranja u kontekstu psihološke dobrobiti poput optimizma i strategija suočavanja. Naš je cilj jasnije ispitati složeni fenomen aspekta seksualnosti vezan uz seksting kroz prizmu riskantnog ponašanja, ali isto tako i pozitivnog ponašanja za pojedinca. Od druš-

associated with higher levels of depression, anxiety, stress symptoms and lower self-esteem. According to longitudinal studies (26), adolescents who participated in sexting and posting sexually explicit content showed higher levels of depression and anxiety one year later. However, long-term negative effects of sexting on psychosocial functioning, including depression symptoms (27, 28) and anxiety (27), were not recorded in other longitudinal studies. Unlike nonconsensual sexting, a large number of studies found no association between consensual sexting and poor psychosocial health (10, 24, 29-31).

Inconsistent findings in this area highlight the need for further understanding of the complex relationship between sexting and psychosocial functioning, as well as the frequency of sexting among participants of different genders and relationship status.

## AIM

With the advances in technology and its increasing use in the research of sexuality, such as engaging in sexting, there is increasing concern among the researchers and practitioners about the risks associated with such behavior. The literature is currently dominated by findings that emphasize a positive association between sexting and the negative aspects of psychosocial functioning. Nevertheless, these findings are largely correlational in nature. This study focuses on the association between sexting and the negative aspects of psychosocial functioning, such as general psychosocial dysfunction, and behavioral and relationship problems. However, we have also investigated the positive psychosocial aspects of functioning in the context of psychological well-being, such as optimism and coping strategies. Our aim is to take a closer look at the complex phenomenon of the aspect of sexuality in the context of sexting through the lens of risky behaviors and positive behaviors in individuals. It is of

tvene je važnosti bolje razumjeti kako se u digitalnom dobu istražuje seksualnost putem sekstinga te proširiti razumijevanje percepcije sekstinga u društvu kao fenomena seksualnosti prizmom potencijalno štetnog, ali i potencijalno korisnog ponašanja za osobu. Time se praktičarima pruža prostor za bolje razumijevanje kada djelovati u smjeru zaštite mladih od negativnih posljedica istraživanja seksualnosti, a kada pristupiti i pružiti smjernice za poticanje zdravog i relativno sigurnog načina istraživanja seksualnosti.

U skladu s tim, cilj ovoga istraživanja jest utvrditi postoje li razlike u sudjelovanju u sekstingu s obzirom na rod i status intimne veze sudionika, kao i ispitati povezanost slanja, primanja i prosljeđivanja seksualno eksplicitnih sadržaja s različitim aspektima psihosocijalnog funkcioniranja. Ne očekujemo razlike s obzirom na rod sudionika u učestalosti sekstinga (H1), ali očekujemo veću učestalost sekstinga među onima u vezi u odnosu na one koji nisu u vezi (H2). Na kraju, u ispitivanju doprinosa varijabli sekstinga (slanju, primanju te prosljeđivanju seksualno eksplicitnih sadržaja) u objašnjenju svih ispitivanih aspekata psihosocijalnog funkcioniranja (optimizam i strategije suočavanja, opće psihosocijalno disfunkcioniranje te problemi u ponašanjima i odnosima), postavljena je nulta hipoteza o nepostojanju značajne povezanosti (H3).

## METODOLOGIJA

### Sudionici

U istraživanju je sudjelovao prigodni uzorak od 654 srednjoškolaca iz Republike Hrvatske. Međutim, isključeni su podatci 54 sudionika koji nisu u potpunosti ispunili upitnike, kao i podatci 42 sudionika homoseksualne orijentacije. Odlučeno je isključiti podatke sudionika s homoseksualnom orijentacijom zbog njihovog malog broja u uzorku što bi moglo utjecati na

societal importance to better understand how sexuality is explored through sexting in the digital age, and to broaden the understanding of society's perception of sexting as a sexual phenomenon, taking into account the potentially harmful, but also the potentially positive behaviors in individuals. This offers practitioners the opportunity to better understand when they should act to protect young people from the negative consequences of sexual exploration, and when they should approach and provide guidance to encourage healthy and relatively safe sexual exploration.

Accordingly, the aim of this study is to determine whether there are differences in sexting in terms of gender and intimate relationship status of participants, as well as to examine the associations between sending, receiving and forwarding sexually explicit content with different aspects of psychosocial functioning. We do not expect to find differences when it comes to the frequency of sexting in terms of participants' gender (H1), but we do expect a higher frequency of sexting among the participants who are involved in romantic relationships as opposed to those who are not (H2). Finally, when examining the contribution of sexting variables (sending, receiving and forwarding sexually explicit content) in the explanation of all assessed aspects of psychosocial functioning (optimism and coping strategies, general psychosocial dysfunction, as well as behavioral and relationship problems), a null hypothesis of no significant association has been postulated (H3).

## METHOD

### Participants

A convenience sample of 654 high school students from the Republic of Croatia took part in the study. However, the data of 54 participants who did not completely fill out the questionnaires were excluded, as were the data of 42

daljnje statističke analize. Također, njihovim isključivanjem smo usmjerili fokus istraživanja na većinsku populaciju srednjoškolaca u Republici Hrvatskoj koja je heteroseksualne orijentacije.

U konačnici, analizirani su rezultati ukupno 598 srednjoškolaca iz Hrvatske, od kojih je 372 (62,207 %) djevojaka i 226 (37,779 %) mladića. Dob sudionika kretala se u rasponu od 16 do 18 godina, s prosječnom dobi od 17,035 godina (SD = 0,753). Među sudionicima je ukupno 184 (30,777 %) bilo u intimnoj vezi u vrijeme provedbe istraživanja.

## MJERNI INSTRUMENTI

### Seksting ponašanje

Upitnik seksting ponašanja i motiva (*Sexting Behaviour and Motives Questionnaire*, SBM-Q) (32) namijenjen je za procjenu učestalosti seksting ponašanja među adolescentima i sastoji se od 39 čestica, a sastoji se od šest ljestvica: Slanje, Razlozi slanja, Žrtva nekonzenzualnog prosljeđivanja, Primanje seksualnog sadržaja, Aktivno prosljeđivanje i pasivno prosljeđivanje, Razlozi u pozadini aktivnog prosljeđivanja. Čestice se odnose na vremenski okvir koji obuhvaća posljednjih dvanaest mjeseci. Sudionici istraživanja na ljestvici Likertovog tipa od pet stupnjeva procjenjuju učestalost seksting ponašanja (0-nikada, 1-manje od jednom mjesečno, 2-mjesečno, 3-tjedno, 4-dnevno). Odgovori na ponašanje vezano uz seksting su dihotominizirani: 0 za nesudjelovanje u sekstingu i 1 za sudjelovanje u barem jednom obliku tijekom protekle godine pri računanju učestalosti sekstinga. U ovom istraživanju korištene su ljestvice Slanje, Primanje seksualnog sadržaja, Prosljeđivanje. Izvorne ljestvice (32) imale su dobru pouzdanost i valjanost. U našem istraživanju Cronbach  $\alpha$  bile su za slanje 0,889, primanje 0,922, i prosljeđivanje 0,882.

participants with a homosexual orientation. The decision to exclude the data of participants with homosexual orientation was made due to their small number in the sample, which could affect further statistical analyses. Furthermore, by excluding these participants, we focused the study on the majority of high school students in Croatia, who are heterosexual.

Finally, the results of a total of 598 high school students from Croatia were analyzed, of which 372 (62.207%) were girls and 226 (37.779%) were boys. The participants were between 16 and 18 years old, with the average age of 17.035 years (SD = 0.753). A total of 184 (30.777%) participants were involved in a romantic relationship at the time of the study.

## MEASURING INSTRUMENTS

### Sexting behavior

The purpose of the Sexting Behavior and Motives Questionnaire (SBM-Q) (32) is to examine the prevalence of sexting behavior among adolescents, and it consists of 39 items and has six subscales: sending, reasons for sending, victim of nonconsensual forwarding, receiving of sexual content, active forwarding and passive forwarding, reasons for active forwarding. All items refer to a time frame covering the past 12 months. The participants rated the frequency of their sexting behavior on a 5-point Likert scale (0-never, 1-less than once a month, 2-monthly, 3-weekly, 4-daily). Their responses with regard to sexting behavior were dichotomized: 0 for not sexting, and 1 for participating in at least one form of sexting during the past year when calculating the frequency of sexting. The subscales used in this study included sending, receiving sexual content and forwarding. The original scales (32) had good reliability and validity. In this study, the Cronbach coefficient  $\alpha$  for sending was 0.889, for receiving it was 0.922, while for forwarding it amounted to 0.882.

## Psihosocijalno funkcioniranje

Psihosocijalno funkcioniranje adolescenata procijenjeno je Inventarom za psihosocijalno funkcioniranje adolescenata (*The Adolescents' Psychosocial Functioning Inventory*, APFI). APFI mjeri psihosocijalna pitanja povezana s adolescencijom (dob od 10 do 19 godina). APFI se uglavnom sastoji od internaliziranih atributa osim ljestvice za procjenu problema u ponašanju i odnosima. Inventar se sastoji od 23 čestice podijeljene u tri ljestvice: Optimizam i strategije suočavanja – OCS (4 čestice; npr. „Nadam se da će se dogoditi čudo.“), Opće psihosocijalno disfunkcioniranje – GPD (15 čestica; npr. „Osjećam da sam sramota za svoju obitelj.“) i Problemi u ponašanju i odnosima – BRP (4 čestice; npr. „Osjećam da će me ljudi mojih godina doživjeti zdravo za gotovo.“). Ukupni rezultat na inventaru (TFS) predstavlja sumu individualnih rezultata na ljestvicama OCS, GPD i BRP. Prema autorima, pouzdanost cijelog inventara je  $\alpha = 0,83$  dok pouzdanosti za tri ljestvice) imaju umjerenu do visoku pouzdanost ( $\alpha = 0,59$  za OCS,  $\alpha = 0,57$  za BRP i  $\alpha = 0,90$  za GPD). Tri faktorski model APFI inventara pokazao se kao pouzdana mjera za procjenu psihosocijalnog funkcioniranja adolescenata (33). U našem istraživanju pouzdanosti ljestvica izražene Cronbach alfa koeficijentom su u rasponu od umjerene do visoke ( $\alpha = 0,601$  za OCS,  $\alpha = 0,599$  za BRP i  $\alpha = 0,91$  za GPD).

## Demografske varijable

Od demografskih varijabli ispitivane su varijable rod, dob, status intimne veze, seksualna orijentacija. Sudionici su odgovarali na pitanje o rodu birajući jednu od ponuđenih kategorija, muški spol ili ženski spol. Na pitanje o dobi, naveli su svoju dob u godinama. Kada je riječ o statusu intimne veze, sudionici su odgovarali s kategorijama *nisam u vezi* ili *u vezi sam*. Na pitanje o seksualnoj orijentaciji, imali su na

## Psychosocial functioning

Psychosocial functioning was assessed using the Adolescents' Psychosocial Functioning Inventory (APFI). APFI measures the psychosocial questions associated with adolescence (ages from 10 to 19). APFI consists mainly of items assessing internalized attributes, except for the subscale assessing the behavior and relationship problems. The inventory has 23 items divided into three subscales: optimism and coping strategies – OCS (4 items; e.g., “I hope a miracle will happen.”), general psychosocial dysfunction – GPD (15 items; e.g., “I feel I am a disgrace to my family.”) and behavior and relationship problems - BRP (4 items; e.g., “I feel people of my age will take me for granted.”). The total score at the inventory (TFS) represents the sum of individual results on the OCS, GPD and BRP scales. According to the authors, the reliability of the entire inventory amounts to  $\alpha = 0.83$ , while the three subscales have moderate to high reliability ( $\alpha = 0.59$  for OCS,  $\alpha = 0.57$  for BRP, and  $\alpha = 0.90$  for GPD). The three-factor model of APFI has proved to be a reliable measure for the assessment of the adolescent psychosocial functioning (33). In our study, reliabilities of the scales expressed in the Cronbach alpha coefficient range from moderate to high ( $\alpha = 0.601$  for OCS,  $\alpha = 0.599$  for BRP, and  $\alpha = 0.91$  for GPD).

## Demographic variables

The examined demographic variables included those of gender, age, intimate relationship status and sexual orientation. The participants responded to the question about gender by selecting one of the given categories, male or female. They indicated their age in years when asked about their age. When asked about their intimate relationship status, the participants responded by selecting the category *not in a relationship* or *in a relationship*. When asked about their sexual orientation, they had the following options: heterosexual, bisexual, pansexual, asexual and other.



raspolaganju ponuđene kategorije: heteroseksualna, biseksualna, panseksualna, aseksualna i ostalo.

## POSTUPAK

Istraživanje je dio međunarodnog projekta o sekstingu, koji je odobren od strane Etičkog povjerenstva Sveučilišta u Zadru i Ministarstva znanosti i obrazovanja Republike Hrvatske. Podatci su prikupljeni u školama koje su odobrile provedbu istraživanja. Rekrutacija sudionika provedena je putem školskih psihologa koji su distribuirali informacije učenicima o provedbi istraživanja i prikupili informirane pristanke od učenika mlađih od 16 godina. Sudionici zainteresirani za sudjelovanje u istraživanju i oni koji su dali informirani pristanak dobili su *online* poveznicu za provođenje istraživanja. Prije početka istraživanja sudionici su detaljno informirani o svrsi istraživanja, anonimnosti te dobrovoljnosti sudjelovanja. Nakon toga su pristupili *online* ispunjavanju upitnika. Ispunjavanje upitnika trajalo je 15 minuta, a sudionici su nakon završetka dobili kontakte istraživača i relevantnih institucija u slučaju doživljavanja neugode.

## REZULTATI

Prije glavnih analiza provedene su preliminarne analize testiranja razlika u aspektima psihosocijalnog zdravlja s obzirom na rod i status intimne veze. Jednosmjernom analizom varijance nisu utvrđene statistički značajne razlike u ispitivanim aspektima psihosocijalnoga funkcioniranja između adolescentica i adolescenata (tablica 1).

Daljnjom obradom rezultata nisu utvrđene ni razlike u psihosocijalnom funkcioniranju između onih sudionika koji su bili u vezi te onih koji nisu bili u vezi (tablica 2).

## PROCEDURE

This study is part of an international project about sexting, which was approved by the Ethics Committee of the University of Zadar and the Ministry of Science and Education of the Republic of Croatia. Data were collected at schools that approved the implementation of the study. The recruitment of participants was carried out through school psychologists who informed students about the study and collected informed consent documents from the students under the age of 16. The participants interested in taking part in the study and those who presented the informed consent documents were provided with an online link to complete the survey. Before the start of the study, the participants were informed in detail about the purpose of the study, their anonymity and voluntary participation, after which they proceeded to fill out the online questionnaire. It took 15 minutes on average to complete the questionnaires, and after completing them, the participants were given the contact information of the researchers and the relevant institutions in case they felt uncomfortable.

## RESULTS

Prior to the main analyses, preliminary analyses were conducted to examine whether there were differences in aspects of psychosocial functioning with regard to gender and intimate relationship status. The one-way analysis of variance revealed no statistically significant differences in the examined aspects of psychosocial functioning between female and male adolescents (Table 1).

Further analysis of the results also revealed no differences in psychosocial functioning between the participants who were in a relationship and those who were not (Table 2).

In terms of the main findings regarding the frequency of sexting, the results show that a

**TABLICA 1.** Testiranje razlika u psihosocijalnom funkcioniranju s obzirom na rod sudionika**TABLE 1.** Examining the differences in psychosocial functioning according to the gender of participants

Psihosocijalno funkcioniranje / Psychosocial functioning	Rod / Gender				
	Adolescence / Girls		Adolescenti / Boys		F (p)
	M	SD	M	SD	
Optimizam i strategije suočavanja / Optimism and coping strategies	0,813	1,518	0,818	1,657	0,001(0,971)
Opće psihosocijalno disfunkcioniranje / General psychosocial dysfunction	0,472	0,606	0,400	0,592	1,923 (0,166)
Poteškoće u ponašanju i odnosima / Behavior and relationship problems	0,377	0,647	0,467	0,721	0,023 (0,878)

**TABLICA 2.** Testiranje razlika u psihosocijalnom funkcioniranju s obzirom na status intimne veze**TABLE 2.** Examining the differences in psychosocial functioning according to intimate relationship status

Psihosocijalno funkcioniranje / Psychosocial functioning	Status intimne veze / Intimate relationship status				
	ne / no		da / yes		F (p)
	M	SD	M	SD	
Optimizam i strategije suočavanja / Optimism and coping strategies	0,781	1,343	0,897	2,039	0,615 (0,433)
Opće psihosocijalno disfunkcioniranje / General psychosocial dysfunction	0,422	0,541	0,483	0,721	1,188 (0,276)
Poteškoće u ponašanju i odnosima / Behavior and relationship problems	0,298	0,574	0,701	0,884	0,399 (0,528)

Što se tiče glavnih nalaza o učestalosti sekstinga, rezultati pokazuju kako u sekstingu sudjeluje značajan broj adolescenata (tablica 3). Ukupno 30,100 % sudionika sudjeluje u slanju, 48,662 % primanju, te 8,361 % u prosljeđivanju seksualno eksplicitnih sadržaja. Hi-kvadrat testom nisu utvrđene značajne razlike u sudjelovanju u sekstingu s obzirom na rod sudionika.

significant number of adolescents participate in sexting (Table 3). A total of 30.100% of participants engage in sending, 48.622% engage in receiving, and 8.361% engage in forwarding sexually explicit content. The chi-square test did not reveal any significant differences in participation in sexting according to the participants' gender.

**TABLICA 3.** Učestalost sekstinga s obzirom na rod sudionika**TABLE 3.** Frequency of sexting according to participants' gender

Seksting / Sexting		Rod / Gender								
		Adolescence / Girls				Adolescenti / Boys				χ <sup>2</sup> (p)
		N	%	M	SD	N	%	M	SD	
Slanje / Sending	ne / no	263	70,699	0,345	0,667	155	68,584	0,367	0,815	0,299 (0,584)
	da / yes	109	29,301			71	31,416			
Primanje / Receiving	ne / no	180	48,387	0,692	1,039	127	56,195	0,635	1,036	3,430 (0,064)
	da / yes	192	51,613			99	43,805			
Prosljeđivanje / Forwarding	ne / no	346	93,011	0,160	0,538	202	89,381	0,139	0,521	2,418 (0,120)
	da / yes	26	6,989			24	10,619			

Daljnjom obradom utvrđene su statistički značajne razlike u sudjelovanju u sekstingu s obzirom na status intimne veze (tablica 4). Ukupno 54,348 % osoba u vezi sudjelovalo je u slanju seksualno eksplicitnih sadržaja, dok je u ovakvom obliku sekstinga sudjelovalo samo 19,324 % onih koji nisu u vezi. Slično tome, 69,565 % osoba u vezi sudjelovalo je u primanju sekstova, te 39,372 % onih koji nisu u vezi. Osim toga, 14,130 % osoba u vezi sudjelovalo je u prosljeđivanju sekstova, te 5,797 % onih koji nisu u vezi.

Povezanost između roda, statusa intimne veze, varijabli sekstinga i varijabli psihosocijalnog funkcioniranja ispitivana je Pearsonovim koeficijentom korelacije. Statistički značajna pozitivna korelacija utvrđena je između varijable primanja seksualno eksplicitnog sadržaja i varijable prosljeđivanja. Drugim riječima, sudionici koji sudjeluju u primanju sekstinga sudjeluju i u prosljeđivanju. Primanje seksualno eksplicitnog sadržaja pozitivno je povezano sa svim ispitivanim aspektima psihosocijalnog funkcioniranja, dok je prosljeđivanje seksualno eksplicitnog sadržaja pozitivno povezano s općim psihosocijalnim disfunkcioniranjem. Interkorelacije različitih aspekata psihosocijalnog funkcioniranja su statistički značajne i pozitivne. Ostale korelacije nisu se pokazale statistički značajne. Dobivene korelacije prikazane su u tablici 5.

Further analysis determined statistically significant differences when it comes to participating in sexting according to the intimate relationship status (Table 4). A total of 54.348% of participants who are in a relationship engaged in sending sexually explicit content, while only 19.324% of participants who are not in a relationship engaged in this form of sexting. Similarly, 69.565% of participants in a relationship have received sexts, as opposed to 39.372% of participants who are not in a relationship. Moreover, 14.130% of participants in a relationship have forwarded sexts, and 5.797% of participants not in a relationship have done the same.

The Pearson correlation coefficient was used to analyse the connection between gender, intimate relationship status, sexting variables and psychosocial functioning variables. A statistically significant positive correlation was found between the variable of receiving sexually explicit content and the variable of forwarding. In other words, participants who receive sexts also participate in forwarding them. Receiving sexually explicit content is positively associated with all aspects of psychosocial functioning examined, while forwarding sexually explicit content is positively associated with overall psychosocial dysfunction. The intercorrelations between the different aspects of psychosocial functioning are statistically significant and positive. Other correlations were not found to be statistically significant. The correlations obtained are presented in Table 5.

**TABLICA 4.** Učestalost sekstinga s obzirom na status intimne veze  
**TABLE 4.** Frequency of sexting according to intimate relationship status

Seksting / Sexting	Status intimne veze / Intimate relationship status									
		ne / no				da / yes				χ <sup>2</sup> (p)
		N	%	M	SD	N	%	M	SD	
Slanje / Sending	ne / no	334	80,676	0,335	0,740	84	45,652	0,403	0,778	74,269 (0,000)
	da / yes	80	19,324			100	54,348			
Primanje / Receiving	ne / no	251	60,628	0,625	1,004	56	30,435	0,767	1,109	46,484 (0,000)
	da / yes	163	39,372			128	69,565			
Prosljeđivanje / Forwarding	ne / no	390	94,203	0,142	0,510	158	85,870	0,173	0,576	11,545 (0,000)
	da / yes	24	5,797			26	14,130			

**TABLICA 5.** Povezanost između roda, statusa intimne veze, sekstinga i psihosocijalnog funkcioniranja  
**TABLE 5.** Correlations between gender, intimate relationship status, sexting and psychosocial functioning

	1	2	3	4	5	6	7	8
1	-	0,059	-0,014	0,027	0,019	-0,002	0,059	-0,007
2	-	-	0,042	0,062	0,027	0,034	0,047	0,027
3	-	-	-	-	-	-	-	-
4	-	-	-	0,665***	0,376***	0,297***	0,411***	0,294***
5	-	-	-	-	-	-0,002	0,143**	-0,034
6	-	-	-	-	-	-	0,724***	0,962***
7	-	-	-	-	-	-	-	0,714***
8	-	-	-	-	-	-	-	-

Napomena: 1 = rod; 2 = status intimne veze; 3 = slanje, 4 = primanje; 5 = prosljeđivanje; 6 = optimizam i strategije suočavanja; 7 = opće psihosocijalno disfunkcioniranje; 8 = poteškoće u ponašanju i odnosima; \*\* p <.01; \*\*\* p <.001.

/ Note: 1 = gender, 2 = intimate relationship status; 3 = sending; 4 = receiving; 5 = forwarding; 6 = optimism and coping strategies; 7 = general psychosocial dysfunction; 8 = behavior and relationship problems; \*\* p <.01; \*\*\* p <.001.

Nadalje, provedena je regresijska analiza kako bi se utvrdilo doprinose li demografske varijable (rod i status intimne veze) te različiti oblici sekstinga (primanje, slanje, prosljeđivanje) objašnjenju različitih oblika psihosocijalnog funkcioniranja (Optimizam i strategije suočavanja, Problemi u ponašanju i odnosima, Opće psihosocijalno disfunkcioniranje) (tablica 6). Rezultati su pokazali da su rod i status veze značajni prediktori općeg psihosocijalnog disfunkcioniranja pri čemu adolescenti i osobe u vezama pokazuju više razine disfunkcije. Slanje je značajan prediktor sva tri aspekta psihosocijalnog funkcioniranja ukazujući da osobe koje šalju seksualno eksplicitne sadržaje imaju više

Furthermore, a regression analysis was performed in order to determine whether demographic variables (gender and intimate relationship status) and different forms of sexting (receiving, sending, forwarding) contribute to the explanation of different forms of psychosocial functioning (optimism and coping strategies, behavior and relationship problems, general psychosocial dysfunction) (Table 6). The obtained results showed that gender and relationship status were significant predictors of general psychosocial dysfunction, whereas boys and individuals in a relationship had higher levels of dysfunction. Sending was a significant predictor of all three aspects of psychosocial functioning,

Tablica 6. Regresijska analiza prediktora demografskih varijabli i varijabli sekstinga u objašnjenju psihosocijalnog funkcioniranja  
 Table 6. Regression analysis of demographic variable and sexting variable predictors in the explanation of psychosocial functioning

	Optimizam i strategije suočavanja / Optimism and coping strategies			Opće psihosocijalno disfunkcioniranje / General psychosocial dysfunction			Poteškoće u ponašanju i odnosima / Behavior and relationship problems		
	β	SE	p	β	SE	p	β	SE	p
Rod / Gender	-0,008	0,041	0,838	0,137	0,040	0,001	0,003	0,039	0,944
Status intimne veze / Intimate relationship status	-0,068	0,042	0,107	-0,084	0,041	0,042	-0,036	0,041	0,374
Slanje / Sending	0,127	0,057	0,027	0,227	0,055	0,000	0,230	0,054	0,000
Primanje / Receiving	0,087	0,055	0,111	0,069	0,053	0,196	0,169	0,052	0,001
Prosljeđivanje / Forwarding	0,027	0,044	0,540	0,029	0,043	0,498	-0,019	0,042	0,650
R2	3,956 %			8,909 %			12,157 %		

razine optimizma i strategija suočavanja, općeg psihosocijalnog disfunkcioniranja te problema u ponašanju i odnosima. Primanje je značajan prediktor problema u ponašanju i odnosima pri čemu su adolescenti koji primaju sekstove skloniji takvim poteškoćama. Međutim, prosljeđivanje sekstova nije bilo značajan prediktor niti jedne od ispitivanih varijabli psihosocijalnog funkcioniranja. Ispitivani prediktori objasnili su 3,956 %, 8,909 % i 12,157 % ukupne varijance optimizma i strategija suočavanja, općeg psihosocijalnog disfunkcioniranja odnosno problema u ponašanju i odnosima.

## DISKUSIJA

Cilj ovog istraživanja bio je ispitati moguće razlike u sudjelovanju u sekstingu s obzirom na rod i status intimne veze sudionika, te ispitati prikladnost varijabli slanja, primanja i prosljeđivanja seksualno eksplicitnih sadržaja kao prediktora psihosocijalnog funkcioniranja adolescenata.

Rezultati o tome da ne postoje statistički značajne razlike u sekstingu, odnosno slanju, primanju i prosljeđivanju seksualno eksplicitnih sadržaja s obzirom na spol sudionika, podržavaju dosadašnja istraživanja (2,34) i metaanalize (4,28). Međutim, ovi rezultati o rodnim usporedbama sekstinga su ograničeni na općenito djevojke i mladiće te se ne mogu generalizirati na ostalu populaciju mladih. Time ovi rezultati ne prikazuju nužno prevalenciju ovakvog ponašanja. Dodatno, unatoč istraživanjima koja pronalaze razlike u učestalosti sekstinga među rodovima (5,8), York i sur. (13) navode da je moguće da je seksting postao uobičajen i prihvatljiv među mladima, te se možda zbog toga ne pronalaze rodne razlike u slanju, primanju i prosljeđivanju seksualno eksplicitnih sadržaja.

Rezultati istraživanja također pokazuju da je učestalost svih oblika sekstinga veća kod sudionika i sudionica koji su u intimnoj vezi,

suggesting that participants who send sexually explicit content have higher levels of optimism and coping strategies, general psychosocial dysfunction, and behavior and relationship problems. Receiving was a significant predictor of behavior and relationship problems, meaning that adolescents who receive sexts are more likely to experience those problems. However, forwarding of sexts was not a significant predictor of any of the examined psychosocial functioning variables. The examined predictors explained 3.956%, 8.909% and 12.157% of the total variance of optimism and coping strategies, general psychosocial dysfunction, i.e. problems in behavior and relationships.

## DISCUSSION

The aim of this study was to examine the possible differences in the engagement in sexting with regard to the gender and intimate relationship status, as well as to examine the appropriateness of the variables of sending, receiving and forwarding sexually explicit content as predictors of adolescent psychosocial functioning.

The results which show that there are no statistically significant differences in sexting, i.e. sending, receiving and forwarding sexually explicit content depending on the gender of the participants, are consistent with previous studies (2, 34) and meta-analyses (4, 28). However, these results on gender comparisons in sexting are generally limited to girls and boys, and cannot be generalized to the rest of the youth population. These results, thereby, do not necessarily represent the prevalence of such behavior. Additionally, despite studies that have observed gender differences in the frequency of sexting (5, 8), York et al. (13) state that it is possible that sexting has become customary and acceptable among young people, and this might be the reason why no gender differences have been observed in terms of sending, receiving and forwarding of sexually explicit content.

naspram onih koji nisu, što je u skladu s prijašnjim istraživanjima (5-7,11). Istraživanja sugeriraju da je seksting unutar romantične veze prihvaćeno i normalno ponašanje (7), pomoću njega partneri pokazuju da vjeruju jedni drugima, te je on jedan od načina romantične komunikacije i flertovanja (6).

Kada se analizira povezanost između sekstinga i psihosocijalnog funkcioniranja sudionika utvrđeno je da slanje seksualno eksplicitnog sadržaja, iako u niskim veličinama, ipak značajno predviđa sve ispitivane varijable psihosocijalnog funkcioniranja.

Povezanost slanja seksualno eksplicitnog sadržaja sa aspektom optimizma i strategijama suočavanja ukazuje na to da je seksting zapravo povezan i s pozitivnim aspektom psihosocijalnog funkcioniranja. Ovo je u skladu s istraživanjima koja naglašavaju pozitivne ishode sudjelovanja u sekstingu, kao što su doživljavanje intimnosti, seksualne uzbuđenosti, učenje o seksualnom ponašanju, flertovanje, primanje komplimenata. (34). Kada se uzmu u obzir nalazi istraživanja koja ukazuju na nepovezanost sekstinga s lošijim psihosocijalnim blagostanjem kada je dobrovoljan (10,24), te na čestu pojavu sekstinga u romantičnim vezama (7), gdje mladi često primaju zahtjeve partnera za slanjem seksualnog sadržaja (17), postaje jasno da je osjećaj poželjnosti (10) jedan od glavnih motiva adolescenata za sudjelovanje u takvim aktivnostima. U tom kontekstu slanje sekstinga može pozitivno utjecati na percepciju o sebi i okolini, što ide u prilog našim rezultatima. Međutim, važno je s oprezom tumačiti dobivene rezultate i razumjeti da postoje i potencijalni rizici povezani sa sekstingom. Neki istraživači ističu kako su osobe sklone optimističnom uvjerenju o rjeđem doživljavanju negativnih životnih ishoda sklonije sudjelovati u rizičnim ponašanjima (35) te su posebno podložne riziku od *online* seksualne viktimizacije (36).

Naši nalazi dodatno ukazuju da sudjelovanje u slanju seksualno eksplicitnih poruka istovre-

Study findings also show a higher frequency of all types of sexting among the participants who are in an intimate relationship, as opposed to those who are not, which is in accordance with the previous studies (5-7, 11). Studies suggest that in the context of a romantic relationship sexting is an accepted and normal form of behavior (7), a way for partners to show trust in each other, and a means of romantic communication and flirtation (6).

When analyzing the relationship between sexting and psychosocial functioning of the participants, it was determined that sending sexually explicit content, albeit to a lesser extent, still significantly predicted all the psychosocial functioning variables examined.

The association between sending sexually explicit content and aspects of optimism and coping strategies suggests that sexting is in fact associated with positive aspects of psychosocial functioning as well. This is consistent with the studies that emphasize the positive effects of sexting, such as experiencing intimacy, sexual arousal, learning about sexual behavior, flirting and receiving compliments (34). Considering the study findings which suggest that there is no connection between sexting and poorer psychosocial well-being when it is voluntary (10, 24), as well as the common practice of sexting in romantic relationships (7) where young people are often asked by their partners to send sexual content (17), it is clear that the sense of desirability (10) is one of the main motives for adolescents to engage in such activities. In this context, sending sexts can positively influence self-perception and the perception of one's environment, which supports our findings. However, it is important to interpret the obtained results with caution, and to understand that there are potential risks associated with sexting. Some researchers point out that individuals who tend to have optimistic beliefs about having fewer negative life experiences are more likely to engage in risky behavior (35) and are

meno predviđa i negativne aspekte psihosocijalnog funkcioniranja, uključujući više razine općeg psihosocijalnog disfunkcioniranja te problema u ponašanju i odnosima. Sukladno našim nalazima neka istraživanja ističu povezanost sekstinga s negativnim aspektima psihosocijalnog funkcioniranja, poput depresije, anksioznosti, impulzivnosti, neprijateljstva, emocionalne disregulacije i agresivnog temperamenta (10,20,24,26), posebno u kontekstu nedobrovoljnog sekstinga (10,24) gdje se zahtjev za sudjelovanjem u takvoj aktivnosti može doživjeti kao pritisak (14). Međutim, ne smijemo zanemariti činjenicu da naši rezultati ukazuju da je slanje seksualnih poruka povezano i s pozitivnim i s negativnim aspektima psihosocijalnog funkcioniranja. Primjerice, sudjelovanjem u slanju seksualno eksplicitnih poruka osoba može doživjeti pozitivno iskustvo ostvarivanja bliskosti ili primanja pozitivnih informacija, ali isto tako može doživjeti negativno iskustvo ako se poruke prosljede ili ako povratne informacije nisu pozitivne. U budućim istraživanjima je važno promatrati *online* aktivnost slanja seksualno eksplicitnog sadržaja kao kontinuum aktivnosti koja može imati različite ishode, od pozitivnih i ugodnih do negativnih (odnosno rizičnih) i potpuno neugodnih. Također, u budućim istraživanjima treba uzeti u obzir kontekst slanja seksualno eksplicitnog sadržaja, dobrovoljnost sudjelovanja u takvom slanju, te njihov odnos s različitim pozitivnim i negativnim aspektima psihosocijalnog funkcioniranja.

Rezultati našeg istraživanja ukazuju na značajnu, ali umjerenu predikciju primanja seksualno eksplicitnog sadržaja objašnjenju problema u ponašanju i odnosima kod adolescenata. Ovo je u skladu s prethodnim istraživanjima (23,24,37) koja su utvrdila povezanost između primanja seksualno eksplicitnih poruka i lošijeg psihosocijalnog funkcioniranja mladih. Međutim, važno je također uzeti u obzir mogućnost da je primanje ovih poruka bilo ne-

particularly vulnerable to the risk of online sexual victimization (36).

Our findings additionally suggest that participation in sending sexually explicit messages at the same time also predicts the negative aspects of psychosocial functioning, including higher levels of general psychosocial dysfunction and problems in behavior and relationships. Consistent with our findings, some studies emphasize the association between sexting and the negative aspects of psychosocial functioning such as depression, anxiety, impulsivity, hostility, emotional dysregulation and aggressive temperament (10, 20, 24, 26), particularly in the context of involuntary sexting (10, 24), where being asked to participate in such activities can be perceived as pressure (14). However, we must not overlook the fact that our results suggest that sending sexts is associated with both positive and negative aspects of psychosocial functioning. For example, participating in sending sexually explicit messages may result in the positive effect of creating intimacy or receiving positive feedback for the individual, but it may also bring about negative experiences if the messages are forwarded or the feedback is not positive. In future research, it is important to consider the online activity of sending sexually explicit content as a continuum of activities that can have different outcomes, ranging from positive and pleasurable to negative (or risky) and completely unpleasant. Furthermore, future research should consider the context of sending sexually explicit content, the voluntary nature of participation in such sending, and its relationship with various positive and negative aspects of psychosocial functioning.

The results of our study indicate a significant, albeit moderate, prediction of receiving sexually explicit content as an explanation for behavior and relationship problems in adolescents. This is consistent with previous studies (23, 24, 37) that have observed an association between receiving sexually explicit messages and poor-

željeno na što ukazuju rezultati nekih studija (24) koji ističu da samo primanje neželjenih poruka može biti povezano s lošijim psihosocijalnim funkcioniranjem, osobito u kontekstu depresije, impulzivnosti, hostilnosti, emocionalne disregulacije i agresivnog temperamenta. Stoga adolescenti mogu doživjeti primanje takvih poruka kao emocionalno uznemirujuće, što može rezultirati određenim poteškoćama u socijalnim odnosima. Ipak, potrebna su daljnja istraživanja, posebice longitudinalna, kako bi se testirala ova pretpostavka te kako bi se bolje razumjeli mehanizmi putem kojih primanje ovakvih poruka utječe na psihosocijalno zdravlje.

Naš nalaz koji pokazuje da prosljeđivanje tuđih seksualnih sadržaja nije povezano s psihosocijalnim funkcioniranjem može se objasniti na nekoliko načina. Prvo, važno je razmotriti motive zbog kojih se prosljeđivanje događa. Često mladi prosljeđuju tuđe sadržaje najčešće što smatraju da je to zabavno ili šaljivo te to ne smatraju velikim problemom (38,39). U takvim situacijama prosljeđivanje tuđih sadržaja, koje je uobičajena zabavna interakcija među mladima, ne mora nužno biti povezano sa psihosocijalnim funkcioniranjem, kako negativnim aspektom u kontekstu općeg psihosocijalnog disfunkcioniranja ili poteškoćama u odnosima, tako i pozitivnim aspektom u smislu budućih pozitivnih ishoda ili očekivanja. Drugo, posljedice prosljeđivanja tuđeg sadržaja mogu biti negativne za osobu koja je doživjela iskustvo dijeljenja takvog sadržaja bez pristanka (40), ali ne i za osobu koja je prosljedila takav sadržaj. Vrlo često mladi prosljeđivanje vide kao i svaki drugi digitalni sadržaj te ga impulzivno dijele jedni s drugima, budući da smatraju da je takvo ponašanje prihvaćeno unutar vršnjačke skupine (41).

Na kraju, bitno je istaknuti neka ograničenja ovog istraživanja. Prvo, istraživanje je koristilo transverzalni pristup kako bi istražilo odnos između sekstinga i psihosocijal-

er psychosocial functioning in young people. However, it is also important to consider the possibility that receiving these messages was unsolicited, as indicated by the results of some studies (24) which point out that receiving unsolicited sexual messages alone may be associated with poorer psychosocial functioning, particularly within the context of depression, impulsivity, hostility, emotional dysregulation, and aggressive temperament. Adolescents may, therefore, perceive receiving such messages as emotionally distressing, which could lead to certain difficulties in social relationships. Nevertheless, further research, particularly longitudinal studies, is necessary in order to test this assumption and to better understand the mechanisms by means of which receiving such messages affects psychosocial well-being.

Our results which suggest that forwarding the sexual content of others is not associated with psychosocial functioning can be explained in several ways. First, it is important to consider the motives for forwarding. Adolescents often forward the content of others because they find it entertaining or funny, and do not view it as a big problem (38, 39). In such situations, forwarding the content of others, which is a common form of fun among adolescents, is not necessarily associated with psychosocial functioning, both the negative aspects in terms of general psychosocial dysfunction or difficulties in relationships, and the positive aspects relating to future positive outcomes or expectations. Second, the consequences of forwarding the content of others can be negative for the person who has experienced their content of this type being shared without consent (40), but not for the person who has forwarded it. Very often, young people view forwarding as similar to any other digital content and impulsively share it with others because they believe that such behavior is accepted within their peer group (41).

Finally, some limitations of this study should be noted. First, the study used a cross-section-



nog funkcioniranja pa nije moguće donositi uzročno-posljedične zaključke. Na primjer, iako smo utvrdili povezanost između slanja seksualnih poruka i optimizma, ne možemo sa sigurnošću tvrditi da sudjelovanje u takvoj aktivnosti djeluje pozitivno potkrepljujuće na optimizam, ili da pojedinci s optimističnim stavom prema ishodu određenog ponašanja odabiru sudjelovanje u sekstingu. Potrebna su daljnja longitudinalna istraživanja kako bi se istražile navedene pretpostavke. Drugo, ovo istraživanje je provedeno na prigodnom uzorku heteroseksualnih adolescenata, s osobito visokim udjelom djevojaka, pa se podatci ne mogu generalizirati na cjelokupnu populaciju adolescenata. Treće, u ovom istraživanju nije kontroliran utjecaj nekih drugih varijabli, poput ranijih psiholoških teškoća što otežava jasnije razumijevanje odnosa između sekstinga i psihosocijalnog funkcioniranja. Četvrto, istraživanjem smo dobili niske do umjerene povezanosti između sekstinga i psihosocijalnog funkcioniranja, što ukazuje da vjerojatno postoje druge varijable koje bi mogle posredovati ili moderirati ovaj odnos. Na primjer, odnos između sekstinga i psihosocijalnog funkcioniranja može varirati ovisno o situacijskim odrednicama kao što su motivi za sudjelovanje u sekstingu ili individualnim odrednicama poput samokontrole, što bi trebalo istražiti u budućim studijama.

Zaključno, ovo istraživanje pokazuje da adolescenti, bez obzira na spol, sudjeluju u praksi sekstinga, posebice oni koji su u intimnim vezama. Također, utvrdili smo kako sudjelovanje u sekstingu, pogotovo slanju seksualno eksplicitnoga sadržaja, može biti povezano kako s lošijim, tako i s boljim psihosocijalnim funkcioniranjem. Ovakvi nalazi ističu važnost edukacije koja ne ističe samo potencijalno negativne aspekte *online* istraživanja seksualnosti, već i pozitivne, naglašavajući pritom moguće rizike kao i pružajući informacije o načinima sigurnog korištenja interneta u svrhu istraživanja seksualnosti.

al approach in order to explore the relationship between sexting and psychosocial functioning, therefore no causal conclusions can be drawn. For example, even though we have determined that there is a correlation between sending sexts and optimism, we cannot claim with certainty that engaging in such activities has a positive reinforcing effect on optimism, or that individuals with an optimistic attitude towards the outcome of certain behaviors choose to engage in sexting. Further longitudinal studies are necessary in order to test these assumptions. Second, this study was conducted on a convenience sample of heterosexual adolescents, with a particularly high proportion of girls, therefore the data cannot be generalized to the entire adolescent population. Third, the effect of some other variables, such as previous mental health problems, was not controlled in this study, which hinders a clearer understanding of the relationship between sexting and psychological functioning. Fourth, we have observed low to moderate connections between sexting and psychological functioning, suggesting that there are likely other variables that could mediate or moderate this relationship. For example, the relationship between sexting and psychosocial functioning might vary depending on situational determinants such as motives for engagement in sexting or individual determinants such as self-control, which should be investigated in future studies.

In conclusion, this study has shown that adolescents, regardless of gender, participate in sexting practices, especially when they are involved in intimate relationships. Furthermore, we have observed that engaging in sexting, particularly in the sending of sexually explicit content, can be associated with both poorer and better psychosocial functioning. These findings emphasize the importance of education that highlights not only the potentially negative, but also the positive aspects of exploring sexuality online, while also highlighting the potential risks and providing information on the safe use of the internet for the purpose of sexual exploration.

1. Allen KA, Ryan T, Gray DL, McLnerney DM, Waters L. Social media use and social connectedness in adolescents: The positives and the potential pitfalls. *Aust J Educ Dev Psychol* 2014; 31(1): 18-31. <https://doi.org/10.1017/edp.2014.2>.
2. Gámez-Guadix M, De Santisteban P, Resett S. Sexting among Spanish adolescents: Prevalence and personality profiles. *Psicothema* 2017;29(1):29-34. <https://doi.org/10.7334/psicothema2016.222>.
3. Molla Esparza C, Nájera P, López-González E, Losilla JM. Development and validation of the Adolescent Sexting Scale (A-SextS) with a Spanish Sample. *Int J Environ Res Public Health* 2020;17(21):8042. <https://doi.org/10.3390/ijerph17218042>.
4. Madigan S, Ly A, Rash CL, Van Ouytsel J, Temple JR. Prevalence of multiple forms of sexting behavior among youth: A systematic review and meta-analysis. *JAMA Paediatrics* 2018;172(4):327-35. <https://doi.org/10.1001/jamapediatrics.2017.5314>.
5. Ybarra ML, Mitchell KJ. "Sexting" and its relation to sexual activity and sexual risk behavior in a national survey of adolescents. *J Adolesc Health* 2014;55(6):757-64. <https://doi.org/10.1016/j.jadohealth.2014.07.012>.
6. Yépez-Tito P, Ferragut M, Blanca MJ. Prevalence and profile of sexting among adolescents in Ecuador. *J Youth Stud* 2018;22(4):505-19. <https://doi.org/10.1080/13676261.2018.1515475>.
7. Yeung TH, Horyniak DR, Vella AM, Hellard ME, Lim MSC. Prevalence, correlates and attitudes towards sexting among young people in Melbourne, Australia. *Sex Health* 2014;11:332-39. <https://doi.org/10.1071/SH14032>.
8. Strassberg DS, Cann D, Velarde V. Sexting by high school students. *Arch Sex Behav* 2017;46(6):1667-72. <https://doi.org/10.1007/s10508-016-0926-9>.
9. Gargano M, Tomassoni R, Zanon A, Lungu MA, Infurna MR. Sexting in adolescence: what are the reasons? An empirical study. *La Clinica Terapeutica* 2022;173(5):407-13. <https://doi.org/10.7417/CT.2022.2455>.
10. Wachs S, Wright MF, Gámez-Guadix M, Döring N. How are consensual, non-consensual, and pressured sexting linked to depression and self-harm? The moderating effects of demographic variables. *Int J Environ Res Public Health* 2021;18(5):2597. <https://doi.org/10.3390/ijerph18052597>.
11. Beckmeyer JJ, Herbenick D, Fu TCJ, Dodge B, Reece M, Fortenberry JD. Characteristics of adolescent sexting: Results from the 2015 national survey of sexual health and behavior. *J Sex Marital Ther* 2019;45:767-80. <https://doi.org/10.1080/0092623X.2019.1613463>.
12. Sesar K, Dodaj A, Prijatelj K, Novak T, Coric M, Crnjac I. The relationship between sexting and gender roles in high school students. 4th International Conference on Social Sciences in the 21st Century, 26–36. 2022. Preuzeto s 14. prosinca 2023. <https://www.dpublication.com/wp-content/uploads/2022/01/4122-620.pdf>.
13. York L, MacKenzie A, Purdy N. Sexting and institutional discourses of child protection: The views of young people and providers of relationship and sex education. *Br Educ Res J* 2021;47:17-34. <https://doi.org/10.1002/berj.3751>.
14. Van Ouytsel J, Van Gool E, Walrave M, Ponnet K, Peeters E. Sexting: adolescents' perceptions of the applications used for, motives for, and consequences of sexting. *J Youth Stud* 2017;20(4):446-70. <https://doi.org/10.1080/13676261.2016.1241865>.
15. Benotsch EG, Snipes DJ, Martin AI, Bull SS. Sexting, substance use, and sexual risk behavior in young adults. *J Adolesc Health* 2013;52:307-13. <https://doi.org/10.1016/j.jadohealth.2012.06.011>.
16. Henderson L, Morgan E. Sexting and sexual relationships among teens and young adults. *McNair Scholars Res J* 2011;7:9. Preuzeto s 14. prosinca 2023. [http://scholarworks.boisestate.edu/mcnair\\_journal/vol7/iss1/9](http://scholarworks.boisestate.edu/mcnair_journal/vol7/iss1/9).
17. Drouin M, Vogel KN, Surbey A, Stills JR. Let's talk about sexting, baby: Computer-mediated sexual behaviors among young adults. *Comput Hum Behav* 2013;29: A25-A30. <https://doi.org/10.1016/j.chb.2012.12.030>.
18. Anastassiou, A. Sexting and young people: a review of the qualitative literature. *Qual Rep* 2017;22:2231-39. <https://doi.org/10.46743/2160-3715/2017.2951>.
19. Naezer M. From risky behaviour to sexy adventures: reconceptualising young people's online sexual activities. *Cult Health Sex* 2017; 715-29. <https://doi.org/10.1080/13691058.2017.1372632>.
20. Frankel AS, Bass SB, Patterson F, Dai T, Brown D. Sexting, risk behavior, and mental health in adolescents: An examination of 2015 Pennsylvania youth risk behavior survey data. *J Sch Health* 2018;88(3):190-9. <https://doi.org/10.1111/josh.12596>.
21. Dake JA, Price JH, Maziarz L. Prevalence and correlates of sexting behavior in adolescents. *Am J Sex Educ* 2012;7:1–15. <https://doi.org/10.1177/0706743719895205>.
22. Temple JR, Le VD, van den Berg P, Ling Y, Paul JA, Temple BW. Brief report: Teen sexting and psychosocial health. *J Adolesc Health* 2014;37(1):33-6. <https://doi.org/10.1016/j.adolescence.2013.10.008>.
23. Kim S, Martin-Storey A, Drossos A, Barbosa S, Georgiades K. Prevalence and correlates of sexting behaviors in a provincially representative sample of adolescents. *Can J Psychiatry* 2019;65(6):401-8. <https://doi.org/10.1177/0706743719895205>.
24. Lu Y, Baumler E, Temple JR. Multiple forms of sexting and associations with psychosocial health in early adolescents. *Int J Environ Res Public Health* 2021;18(5): 2760. <https://doi.org/10.3390/ijerph18052760>.
25. Klettke B, Hallford DJ, Clancy E, Mellor DJ, Toumbourou JW. Sexting and psychological distress: the role of unwanted and coerced sexts. *Cyberpsychology Behav Soc Netw* 2019;22(4):237-42. <https://doi.org/10.1089/cyber.2018.0291>.
26. Chaudhary P, Peskin M, Temple JR, Addy RC, Baumler E, Ross S. Sexting and mental health: A school-based longitudinal study among youth in Texas. *J Appl Res Child* 2017;8(1):1-29. Preuzeto s 10. prosinca 2023. <https://digitalcommons.library.tmc.edu/cgi/viewcontent.cgi?article=1329&context=childrenatrisk>.
27. Buric J, Garcia JR, Stulhofer A. Is sexting bad for adolescent girls' psychological well-being? A longitudinal assessment in middle to late adolescence. *New Media Soc* 2020;23(7):1-20. <https://doi.org/10.1177/1461444820931091>.

28. Mori C, Choi HJ, Temple JR, Madigan S. Patterns of sexting and sexual behaviors in youth: A latent class analysis. *J Adolesc* 2021;88:97-106. <https://doi.org/10.1016/j.adolescence.2021.01.010>.
29. Del Rey R, Ojeda M, Casas J, Mora-Merchan JA, Felipe P. Sexting among adolescents: the emotional impact and influence of the need for popularity. *Front Psychol* 2019;10:1828. <https://doi.org/10.3389/fpsyg.2019.01828>.
30. Gordon-Messer D, Bauermeister JA, Grodzinski A, Zimmerman M. Sexting among young adults. *J Adolesc Health* 2013;52:301-6. <https://doi.org/10.1016/j.jadohealth.2012.05.013>.
31. Morelli M, Bianchi D, Baiocco R, Pezzuti L, Chirumbolo A. Sexting, psychological distress and dating violence among adolescents and young adults. *Psicothema* 2016;28(2):137-42. <https://doi.org/10.7334/psicothema2015.193>.
32. Del Rey R, Ojeda M, Casas JA. Validation of the Sexting Behavior and Motives Questionnaire (SBM-Q). *Psicothema* 2021;33(2):287-95. <https://doi.org/10.7334/psicothema2020.207>.
33. Akpa OM, Bamgboye EA, Baiyewu O. The Adolescents' Psychosocial Functioning Inventory (APFI): scale development and initial validation using Exploratory and Confirmatory Factor Analysis. *Afr J Psychol Study Soc Issues* 2015;18(1):1-21.
34. Naezer M, Rommes E, Jansen W. Empowerment through sex education? Rethinking paradoxical policies. *Sex Educ* 2017;17(6):712-28. <https://doi.org/10.1080/14681811.2017.1362633>.
35. Knight TJ. Predicting online sexual victimization among college students: Sexting, solicitations, and other risky online behaviors. Masters Theses 839. Preuzeto s 14. prosinca 2023. <https://digitalcommons.liberty.edu/masters/839/>.
36. Chapin J. It won't happen to me: The role of optimistic bias in African American teens' risky sexual practices. *Howard J Commun* 2001;12(1):49-59. <https://doi.org/10.1080/10646170119661>.
37. Woodward VH, Evans M, Brooks M. Social and psychological factors of rural youth sexting: An examination of gender-specific models. *Dev Behav* 2017;38(4):461-76. <https://doi.org/10.1080/01639625.2016.1197020>.
38. Clancy EM, Klettke B, Hallford DJ. The dark side of sexting – factors predicting the dissemination of sexts. *Comput Hum Behav* 2019;92:266-72. <https://doi.org/10.1016/j.chb.2018.11.023>.
39. Walker K, Sleath E, Hatcher R, Hine B, Crookes R. Nonconsensual sharing of private sexually explicit media among university students. *J Interpers Violence* 2019;36(17-18): 9078–108 <https://doi.org/10.1177/0886260519853414>.
40. Clancy EM, Klettke B, Hallford DJ, Crossman AM, Maas MK, Toumbourou JW. Sharing is not always caring: Understanding motivations and behavioural associations with sext dissemination. *Comput Hum Behav* 2020;112:106460. <https://doi.org/10.1016/j.chb.2020.106460>.
41. Schokkenbroek JM, Ponnet K, Van Ouytsel J, Walrave M, Hardyns W. Receive, forward, repeat: the link between sexting intention, sexting attitudes, and non-consensual sexting behaviours. *Telemat Inform* 2023;84(3):102036. <https://doi.org/10.1016/j.tele.2023.102036>.