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Predicting problematic adolescent sexting: The educational aspects of socioeconomic traits, family relations and problem behaviour

Abstract: This study examines how socioeconomic traits and situational factors influence problematic adolescent sexting, drawing on the bioecological model to explore media use intensity, sexual content exposure, and general risky behaviour. These findings highlight critical educational aspects of adolescents' lives, as schools serve as key microsystems where peer norms, digital literacy gaps, and risky behaviours may intersect in daily life. The sample included 325 adolescents (247 females and 78 males), aged 14–27 years. Females reported stronger peer relations and higher general media use. Older adolescents engaged more frequently in sexting perpetration, as did those in romantic partnerships compared with those who were single. Urban youth reported better peer relations than their rural peers, while heterosexual adolescents reported higher-quality family relations than LGBT+ youth, who exhibited greater risky media use and sexting perpetration. Regression analyses revealed that age, general risky behaviour, and sexting victimization were significant predictors of sexting perpetration. For sexting victimization, significant predictors included relationship status, family relations quality, risky media use, general risky behaviour, and sexting perpetration. These findings underscore the bioecological model's emphasis on the interplay of personal characteristics, proximal processes, and contextual influences in shaping sexting behaviours among adolescents.

Keywords: sexting, adolescents, education, risky behaviour, victimization, socioeconomic traits, family, peers

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Introduction

The evolution of digital media has transformed adolescent communication, making sexting – a form of sharing sexually explicit content digitally – common among youth. Adolescent sexting has sparked debate in both academic and public spheres, raising questions about how to reduce legal consequences and negative psychological outcomes while also promoting adolescents' sexual health and empowerment. Sexting refers to the creation, sending, or sharing of sexually explicit digital content, spanning a continuum from consensual experimental practices in romantic contexts to problematic or criminalized acts involving coercion, non-consent, or exploitation (Barrense-Dias et al. 2017; Galovan et al. 2018). Prevalence among adolescents ranges from 15% to 27%, increasing with age and device use, with adolescents receiving sexts more often than sending them (Kim et al. 2019; Klettke et al. 2014; Madigan et al. 2018; Rice et al. 2012). Data from Croatia show rates of 57.4% for sending and 64.4% for receiving among youth aged 18–27 (Sesar et al. 2019). Sexting serves as a means for adolescents to express intimacy during critical phases of identity development. However, risks arise when intimate content is misused, potentially resulting in psychological and social harm. Sexting can be categorized as problematic or experimental (Mitchell et al. 2012). Experimental sexting is consensual and linked to normative behaviours, such as flirting and sexual exploration (Wolak and Finkelhor 2011). It involves low-risk, relational exchanges among peers without malice or adult involvement, whereas problematic sexting includes risky behaviours such as sharing content with strangers or sending content under pressure. Victimization arises from the non-consensual distribution of intimate content, potentially leading to harm (ibid.). Problematic sexting involves illegal activities such as non-consensual sharing, coercion, and exploitation (O'Keeffe and Clarke-Pearson 2011). Research also distinguishes aggravated (criminal/abusive) sexting from experimental cases to clarify normalized versus deviant practices (Ragona et al. 2023). Therefore, understanding the complexity of sexting requires multifaceted theoretical approaches that account for developmental and social–legal contexts.

Theoretical background

Multiple theoretical models underpin the understanding of adolescent sexting. Key theories frame adolescent sexting as being influenced by social norms, intentions, and multilevel contexts. The Theory of Planned Behaviour (TPB) posits that sexting intentions emerge primarily from subjective norms (peer/partner pressure), attitudes towards positive outcomes, and perceived behavioural control, explaining up to 80% of the variance in behaviour (Pistoni et al. 2023). Social control theory, as proposed by Gottfredson and Hirschi (1990), attributes low self-control – stemming from inadequate parental socialization – to increased engagement in risky behaviours, such as sexting. Complementary to this, crime opportunity theory (Cohen et al. 1981) and social learning theory (Akers and Jensen 2006) emphasize the influence of peer models, normative approval, and environmental factors, including substance use, on sexting engagement (Hudson et al. 2012). Ploharz (2017) introduces an evolutionary perspective, suggesting that sexting may function as a mating strategy adapted to both short-term and long-term relationships. Harris (2017) applies multiple goals theory to explain sexting as being driven by objectives such as initiating sexual contact or reducing uncertainty, facilitated by the accessibility and anonymity of digital platforms (Byers et al. 2004). The ACE model (Anonymity, Convenience, Escape), developed by Kimberly Young, explains why online environments promote cybersexual addiction and behaviours such as sexting. Anonymity allows secret interactions without real-world identity exposure; convenience provides continuous access to sexual content and online interactions through ubiquitous devices; and escape provides emotional relief from stress through immersive or dissociative online experiences. This framework links to prior theories, such as the bioecological model, by highlighting how digital contexts amplify proximal processes, including media use and risky behaviour, in adolescent sexual risk-taking (Griffiths and Griffiths 2017). Routine Activities Theory suggests that sexting occurs when motivated offenders, suitable targets, and a lack of capable guardianship converge (Martinez-Prather and Vandiver 2014). Empirical studies show that sexting serves multiple functions, including flirtation, social conformity, and revenge, but can also facilitate cyberbullying (García et al. 2020; Hollá 2020; Houck et al. 2014). The bioecological model emphasizes personal and social factors influencing sexting behaviour and advocates a comprehensive framework for understanding its aetiology (Bronfenbrenner and Morris 2007). Given the substantial heterogeneity observed in prevalence estimates and the increasing trend of sexting as a risky behaviour over time, the primary aim of this research was to extend previous findings on the role of socioeconomic traits in problematic sexting among adolescents, with particular relevance for educators. A secondary objective was to examine potential protective variables related to the quality of family and peer relations, parental education, and the intensity of general and risky social media use. The third objective was to investigate the predictive role of sexting perpetration and victimization in relation to general adolescent risky behaviours.

Research aim

The aim is to examine the educational importance of socioeconomic traits and situational factors, such as family, parental, and peer factors, in problematic adolescent sexting, with a particular focus on the role of media use intensity, sexual content exposure, and general risky behaviour in sexting from the perspective of the bioecological model (*ibid.*).

Research problem and questions

The empirical study was based on a model emphasizing the role of personal, situational, and social factors. Accordingly, the study design included: (a) personal socioeconomic and demographic factors (sex, age, sexual orientation, and relationship status), (b) personal and situational factors (family life quality, peer relations quality, and parental education level), and (c) social and behavioural factors influencing sexting behaviours (sexting perpetration, sexting victimization, social media use intensity, risky social media use, and general risky behaviour). The research focused on examining the role of socioeconomic traits in profiling and predicting the characteristics of adolescent sexters, as well as the potential role of traditional protective factors, such as positive family and peer relations and parental education levels, in the prevalence of problematic sexting. Based on the research aim and problem, the study examined the role of socioeconomic traits, the potential protective role of family and peer relations quality, the relationship between media use intensity and sexual content exposure, and the predictive importance of general risky behaviour in adolescent sexting perpetration and victimization. This study contributes to existing models by employing descriptive and inferential procedures, including a contemporary three-level hierarchical regression approach, to account for the relationships among multiple individual and social sexting variables. Ultimately, the research aims to identify the most significant risk and protective factors associated with problematic adolescent sexting. The present empirical study addresses four questions:

- RQ1: What are the typical socioeconomic characteristics of adolescent sexters?
- RQ2: Is there a protective role for family or peer relations and parental education levels in the aetiology of sexting?
- RQ3: What are the characteristics of, and the role played by, media use intensity and sexual content exposure in sexting perpetration?
- RQ4: What is the relationship between sexting perpetration, sexting victimization, and general risky behaviour among adolescents?

Methodology

Sample

A convenience sample was chosen to reflect the characteristics of the adolescent population. The sample consisted of 325 participants, including 247 females (76%) and 78 males (24%). Among the participants, 155 were upper secondary school students (47.7%) and 170 were university students (52.3%)¹. The age distribution ranged from 14 to 27 years and is presented in *Table 1*. Of the participants, 206 (636%) lived in urban areas, while 118 (364%) lived in rural areas². At the time of the survey, 134 participants (41.4%) were married or in a romantic relationship, while 190 (58.6%) reported being single³. Regarding sexual orientation, 272 participants (83.7%) identified as heterosexual, while 53 (16.3%) identified as LGBT+.

		Age															Σ
		14	15	16	17	18	19	20	21	22	23	24	25	26	27		
Male	n	0	4	16	15	6	1	2	2	5	14	8	4	1	0		78
	%	0.0	1.2	4.9	4.6	1.8	0.3	0.6	0.6	1.5	4.3	2.5	1.2	0.3	0.0		24%
Female	n	1	17	36	44	16	9	5	18	24	39	16	14	5	3		247
	%	0.3	5.2	11.1	13.5	4.9	2.8	1.5	5.5	7.4	12.0	4.9	4.3	1.5	0.9		76%
Total	N	1	21	52	59	22	10	7	20	29	53	24	18	6	3		325
	%	0.3	6.5	16.0	18.2	6.8	3.1	2.2	6.2	8.9	16.3	7.4	5.5	1.8	0.9		100

Table 1 Sample sex and age distribution (N = 325)

Participants reported the following maternal educational levels: elementary school dropout (n = 9, 2.9%), elementary school (n = 19, 6.3%), high school (n = 183, 60.4%), and master's degree (n = 92, 30.4%)⁴. Fathers' educational levels were reported as elementary school dropout (n = 9, 3.1%), high school (n = 198, 67.3%), bachelor's degree (n = 24, 8.2%), and master's degree (n = 63, 21.4%)⁵. No »bachelor's degree« category for mothers and »elementary school« category for fathers were noted in our sample.

Instrument

No standardized instruments were used. A questionnaire was developed specifically for this research and demonstrated good internal consistency and scale reliability. The online five-point Likert-scale survey consisted of 55 questions divided into three parts and covered the main variables examined in the study. The first part encompassed six sociodemographic and socioeconomic

1 The SPSS dataset originated from a graduate thesis by Ena Sečić (2024) supervised by the author and available upon request.
 2 The total number of respondents on this item was N=324.
 3 The total number of respondents on this item was N=324.
 4 The total number of respondents on this item was N=303.
 5 The total number of respondents on this item was N=294.

characteristics: sex, age, residence, relationship status, sexual orientation, and parental education level. The second part consisted of eight questions assessing family relations quality and peer relations quality. Cronbach's alpha was used to evaluate the internal consistency of the scales. The Cronbach's alpha reliability coefficient for the family relations quality scale was $\alpha = 0.77$ (4 items: »I love my family«; »I spend time with my family«; »We make decisions together«; and »I receive support from my family«). The Cronbach's alpha reliability coefficient for the peer relations quality scale was $\alpha = 0.78$ (4 items: »I have close friends«; »I can talk to my friends«; »I can confide in my friends«; and »I like to hang out with friends«). The third part consisted of 41 questions assessing general media use, risky media use, sexting perpetration, sexting victimization, and general risky behaviour. The Cronbach's alpha coefficient for the risky media use scale was $\alpha = 0.70$ (6 items: »I post pictures of myself when I am drunk«; »I post pictures of myself consuming alcohol«; »I participate in online discussions related to risky behaviours«; »I see posts from my friends that include alcohol or tobacco products«; »I play online gambling games«; and »I follow posts related to marijuana legalization«). The Cronbach's alpha coefficient for the sexting victimization scale was $\alpha = 0.79$ (3 items: »Others have sent me their explicit pictures«; »Others have sent me explicit pictures of other people«; and »I have seen someone else's intimate image without the permission of the person shown at least once«). The Cronbach's alpha coefficient for the sexting perpetration scale was $\alpha = 0.81$ (2 items: »I have sent my explicit pictures to others«; and »I have sent explicit content of other people«). The Cronbach's alpha coefficient for the general media use scale was $\alpha = 0.58$ (18 items assessing the use of or posting on Facebook, Instagram, TikTok, YouTube, Twitter (X), Snapchat, WhatsApp, Viber, and Reddit). The Cronbach's alpha coefficient for the general risky behaviour scale was $\alpha = 0.73$ (12 items: »I drink alcohol«; »I use drugs like marijuana«; »I change sexual partners«; »I do not use protection during sexual intercourse«; »I skip school or work«; »I smoke cigarettes«; »I smoke e-cigarettes«; »I gamble«; »I play the lottery«; »I am physically aggressive towards others«; »I deliberately destroy property«; and »I deliberately avoid my family«).

Normality of the outcome variables was assessed using the Kolmogorov–Smirnov test with the Lilliefors correction and the Shapiro–Wilk test. Both tests indicated significant departures from normality (Kolmogorov–Smirnov: $D(325) = 0.473$, $p < 0.001$; Shapiro–Wilk: $W(325) = 0.53$, $p < 0.001$), suggesting that the sample did not follow a normal distribution. However, when sample sizes are sufficiently large (often $N > 30$ per group), the independent-samples t-test is generally robust to moderate violations of the normality assumption. Given the significant overall departure from normality, normality assumption was also assessed separately within the male and female groups. Homogeneity of variances was assessed using Levene's test. According to Opic (2011), considering the sample size ($N > 100$), the independent-samples t-test is justified in educational research despite evidence of non-normality from the Kolmogorov–Smirnov test. Thus, with sufficiently large sample sizes and assuming no severe violations of other assumptions, the independent-samples t-test remains robust to violations of the normality assumption.

Procedure

An online survey was conducted in Croatia during 2024 using a snowball sampling method via Facebook and Google Docs. Before responding, participants were introduced to the research objectives and provided with written instructions regarding the survey procedure, as well as basic definitions of sexting perpetration and victimization in the introductory section of the survey. All participants were informed about the study and assured of anonymity in accordance with the *Ethical Code of Research with Children* (Ajduković and Keresteš 2020). The study was approved by the Institutional Research Ethics Committee. All procedures involving human participants were conducted in accordance with the ethical standards of the institutional and national research committee and with the principles of the 1964 Declaration of Helsinki and its later amendments or comparable ethical standards.

Data analysis

The data was analysed using SPSS (version 20.0.0) through descriptive and inferential statistical analyses, including the independent-samples t-test and hierarchical regression analysis. The independent-samples t-test and regression analyses were used to examine the roles of socioeconomic characteristics, general and risky media use intensity, and general risky behaviour in profiling and predicting the characteristics of the average »sexter« and »at-risk« victim. The analyses also examined the role of family and peer relationships in adolescent sexting perpetration and victimization.

Results and discussion

Frequency of sexting perpetration and victimization

This study focused on examining the roles of socioeconomic traits, family and peer relations quality, general and risky media use intensity, sexting exposure, and general risky behaviour in adolescent sexting perpetration. Regarding sexting perpetration, 66.7% (n = 52) of males denied sexting perpetration, 17.9% (n = 14) reported engaging in sexting a few times during the year, 6.4% (n = 5) reported doing so on a monthly basis, 3.8% (n = 3) reported sending sexts multiple times per week, and 5.1% (n = 4) reported doing so every day. Among females, 72.5% (n = 179) denied sexting perpetration, 12.1% (n = 30) reported engaging in sexting a few times during the year, 8.1% (n = 20) reported doing so on a monthly basis, 4% (n = 10) reported sending sexts multiple times per week, and 3.2% (n = 8) reported doing so every day. Regarding sexting victimization, 53.4% (n = 132) of females denied receiving explicit images, 14.2% (n = 35) reported receiving them a couple of times a year, 9.3% (n = 23) reported receiving them on a monthly basis, 9.7% (n = 24) reported receiving them multiple times a week, and 13.4% (n = 33) reported receiving sexts every day. Among males, 51.3%

($n = 40$) denied receiving explicit images, 19.2% ($n = 15$) reported receiving them a couple of times a year, 9% ($n = 7$) reported receiving them on a monthly basis, 6.4% ($n = 5$) reported receiving them multiple times a week, and 14.1% ($n = 11$) reported receiving sexts every day.

Socioeconomic traits in sexting perpetration and victimization

We examined the socioeconomic characteristics of our sample in relation to sexting perpetration and victimization, family and peer relations quality, risky and general media use, and general risky behaviour. Females reported significantly better peer relations quality ($p < 0.05$) and higher general media use intensity ($p < 0.01$). No significant differences were observed for the other variables (*Table 2*). When analysing sex and its contribution to sexting perpetration, sexting is often an ambiguous behaviour, perceived both as a sanction for inappropriate behaviour among girls and as a means of gaining status among boys. Some studies have shown that boys gain popularity by sharing and forwarding sexts previously sent to them (Setty 2019). Our results demonstrated that, on average, males engaged in sexting more often than females; however, we did not find significant sex differences in sexting perpetration or victimization. Some studies have identified male sex as one of the most important predictors of sexting (Marcum et al. 2014; Molla-Esparza et al. 2021). Research on the role of sex remains inconclusive, as a number of studies suggest that females are more likely to participate in sexting (Ybarra and Mitchell 2014), whereas others have found that sex is not a significant correlate (Baumgartner et al. 2014; Gámez-Guadix and Mateos-Pérez 2019). Some authors have reported a higher frequency of sexting behaviours among male adolescents (Marcum et al. 2014), while others have suggested that boys receive sexts more frequently than girls and girls receive sexting requests and send sexts more frequently (Confalonieri et al. 2020). Sex differences in adolescent sexting may manifest in different patterns of perpetration and victimization, with males potentially engaging in perpetration more frequently and females potentially experiencing greater vulnerability to victimization. These differences highlight the importance of targeted educational strategies that address sex-specific vulnerabilities. Training should include gender-responsive modules addressing consent, recognition of coercion (e.g. girls being pressured by boys), and sex-differentiated peer norms, alongside protocols for identifying sexting within the broader continuum of sexual violence. Educational strategies could include age- and gender-tailored curricula (such as early interventions addressing peer pressure among girls and healthy self-expression workshops for boys). Inclusive policies should frame sexting along a prosocial-to-harm continuum rather than relying primarily on punitive deterrence. In addition, enhanced teacher competencies in digital literacy, empathy building, and understanding heteronormative dynamics could contribute to safer digital environments in schools.

Variable	Sex	N	M	GM	SD	t
Sexting perpetration	Male	78	1.63	0.82	1.11	0.69
	Female	247	1.53	0.77	1.02	
Family relations quality	Male	78	16.46	4.12	3.26	-0.22
	Female	247	16.55	4.14	3.19	
Peer relations quality	Male	78	16.79	4.20	3.06	-2.58*
	Female	247	17.77	4.44	2.88	
Risky media use	Male	78	9.86	1.64	3.43	0.61
	Female	247	9.59	1.60	3.45	
Sexting victimization	Male	78	6.75	2.25	3.59	-0.04
	Female	247	6.77	2.26	3.73	
General media use intensity	Male	78	37.04	2.06	7.10	-3.40**
	Female	247	39.8	2.21	6.08	
General risky behaviour	Male	78	19.32	1.61	5.51	0.26
	Female	247	19.13	1.59	5.49	

Table 2 T-test for sex differences ($N = 325$). Note: $p < 0.05^*$; $p < 0.01^{**}$; $p < 0.001^{***}$; GM, grand means

Older participants reported significantly higher levels of sexting perpetration ($p < 0.05$). Variables such as risky media use, sexting victimization, and general risky behaviour did not show statistically significant age differences ($p > 0.05$). These results indicate age-related differences in several social and behavioural domains, with peer relations quality showing the strongest statistical difference (Table 3). Sexting rates appear to increase as young people reach young adulthood, both for perpetration (sending) and victimization (receiving) (Handschuh et al. 2019; Madigan et al. 2018; Van Ouytsel et al. 2020), with many researchers reporting that 50% of young adults engage in sexting (Barrense-Dias et al. 2017; Klettke et al. 2014; Madigan et al. 2018). Overall, sexting appears to be more widespread among adults than among youth (Crimmins and Seigfried-Spellar 2014). A higher rate of sexting among older adolescents was expected and corresponds with the period of sexual identity formation and exploration, as well as increased smartphone availability. These factors support the notion that adolescent sexting may represent a novel and potentially normalized component of sexual behaviour or development. Wood et al. (2015) reported a greater likelihood of sending sexual images with increasing age across all countries included in their study and among both genders. Madigan et al. (2018) reported that prevalence rates increased with age, year of data collection (i.e. prevalence increased over time), and sexting method, with higher prevalence reported for smartphones than for computers. Results from an ongoing meta-analysis suggest that sexting rates have progressively increased over the past 10 years (Molla-Esparza et al. 2021). Age differences, however, remain an inconclusive factor, as some studies suggest an increase in sexting prevalence with age (Choi et al. 2016; Molla-Esparza et al. 2021), whereas others suggest no significant correlation (Morelli et al. 2016). Training should equip educators to recognize developmental

differences in sexting, prioritizing resistance to peer pressure and basic consent education for middle school students while focusing high school programs on peer norms, motivations, and harm reduction. Protocols should emphasize the early identification of at-risk students, mental health referrals, and the integration of sexting into comprehensive sex education from middle school onward. Tiered curricula, school-wide age-appropriate modules with non-punitive disclosure tools, and parental partnerships regarding digital monitoring could help prevent escalation among vulnerable early adolescents and reduce potential long-term health risks.

Variable	Age	N	M	GM	SD	t
Sexting perpetration	Younger (14–19)	165	1.43	0.72	.98	-2.26*
	Older (20–27)	160	1.70	0.85	1.12	
Family relations quality	Younger (14–19)	165	16.17	4.04	3.44	-1.99*
	Older (20–27)	160	16.87	4.22	2.94	
Peer relations quality	Younger (14–19)	165	16.92	4.23	3.40	-3.84***
	Older (20–27)	160	18.16	4.54	2.32	
Risky media use	Younger (14–19)	165	9.39	1.57	4.14	-1.64
	Older (20–27)	160	10.06	1.68	3.02	
Sexting victimization	Younger (14–19)	165	6.62	2.21	3.92	-0.73
	Older (20–27)	160	6.92	2.31	3.48	
General media use intensity	Younger (14–19)	165	40.23	2.24	7.01	2.82**
	Older (20–27)	160	38.19	2.12	6.05	
General risky behaviour	Younger (14–19)	165	18.93	1.58	6.87	-1.11
	Older (20–27)	160	19.65	1.64	4.71	

Table 3 T-test for age differences (N = 325). Note: $p < 0.05^*$; $p < 0.01^{**}$; $p < 0.001^{***}$; GM, grand means

Our analysis of place of residence established significantly higher peer relations quality among urban youth compared with rural participants ($p < 0.05$). This finding aligns with literature showing mixed urban–rural differences in youth behaviour, with peer relationships potentially benefiting from greater social opportunities in urban areas (Carson et al. 2011). Research on urban–rural differences in adolescent sexting behaviour is limited; however, available evidence suggests no significant differences in sexting prevalence between urban and rural youth. For example, a study of Cambodian adolescents found no significant differences in sexting behaviour between participants from urban and rural areas. The authors attributed this lack of difference to similar access to mobile phones and internet services in both settings, suggesting that comparable digital access may diminish location-based disparities in sexting (Kim et al. 2020). Other variables in our study did not differ significantly by place of residence ($p > 0.05$). Urban–rural differences in adolescent sexting remain understudied. However, some literature suggests that rural youth may experience greater vulnerability to victimization and risky media use because of limited access to

digital literacy resources and more conservative community norms. These gaps may challenge educators to adapt curricula developed in urban contexts to rural settings, while addressing context-specific barriers such as parental scrutiny and social homogeneity (Jones et al. 2014).

Variable	Residence	N	M	GM	SD	t
Sexting perpetration	Urban	206	1.56	0.78	1.03	0.46
	Rural	118	1.51	0.76	1.06	
Family relations quality	Urban	206	16.61	4.15	3.11	0.09
	Rural	118	16.58	4.15	3.16	
Peer relations quality	Urban	206	17.82	4.46	2.74	2.16*
	Rural	118	17.08	4.27	3.30	
Risky media use	Urban	206	9.67	1.61	3.43	0.52
	Rural	118	9.69	1.62	3.80	
Sexting victimization	Urban	206	6.89	2.30	3.71	0.41
	Rural	118	6.43	2.14	3.61	
General media use intensity	Urban	206	38.79	2.16	6.20	0.21
	Rural	118	39.86	2.21	7.01	
General risky behaviour	Urban	206	18.93	1.58	5.49	0.97
	Rural	118	19.54	1.63	6.17	

Table 4 T-test for place of residence differences (N = 324). Note: $p < 0.05^*$; $p < 0.01^{**}$; $p < 0.001^{***}$; GM, grand means

Participants who were in a relationship reported significantly higher sexting perpetration scores than single adolescents ($p < 0.05$), indicating more sexting behaviour among partnered individuals (Table 5). In the context of youth behaviour, this finding aligns with research indicating that romantic relationship status may influence specific behavioural dimensions, such as sexting, possibly due to intimacy and trust dynamics (Honghao et al. 2021). Reed et al. (2020) showed that most adolescent sexting occurs within dating relationships, with the goals of expressing intimacy, engaging in sexual exploration, and maintaining closeness. This is consistent with the significantly higher sexting perpetration scores observed among partnered youth in our study. Handschuh et al. (2019) found that sexting was strongly associated with sexual activity. Adolescents in relationships may have more opportunities and motivations to engage in sexting because of physical and emotional intimacy, resulting in more frequent sexting behaviour than among single adolescents. Other variables did not show statistically significant differences by relationship status (Table 5). Educators require training to identify relationship-specific red flags, such as coercion in dating contexts, distinguish consensual from pressured sexting, and support students experiencing breakups or demands from partners. Sexting education should also be integrated into relationship skills curricula that emphasize consent and conflict resolution. Educational strategies could include interventions

tailored to partnered youth, with modules addressing healthy digital intimacy and safety during relationship dissolution. Role-playing scenarios could be used to develop refusal skills in situations involving relational pressure, while collaboration with school counsellors could help identify potential links between sexting and relationship conflict, thereby supporting the prevention of escalation to dating violence and reducing potential relational harms in school settings.

Variable	Relationship status	N	M	GM	SD	t
Sexting perpetration	Marriage or cohabitation	134	1.74	0.87	1.16	2.61*
	Single	190	1.43	0.72	0.96	
Family relations quality	Marriage or cohabitation	134	16.59	4.15	3.36	0.33
	Single	190	16.48	4.12	3.11	
Peer relations quality	Marriage or cohabitation	134	17.78	4.45	2.82	0.13
	Single	190	17.41	4.35	3.09	
Risky media use	Marriage or cohabitation	134	9.86	1.64	3.93	0.56
	Single	190	9.63	1.61	3.46	
Sexting victimization	Marriage or cohabitation	134	7.19	2.40	3.69	1.87
	Single	190	6.42	2.14	3.63	
General media use intensity	Marriage or cohabitation	134	39.32	2.19	6.36	0.13
	Single	190	39.22	2.18	6.86	
General risky behaviour	Marriage or cohabitation	134	19.90	1.66	6.50	1.54
	Single	190	18.88	1.57	5.42	

Table 5 T-test for relationship status differences ($N = 324$). Note: $p < 0.05^*$; $p < 0.01^{**}$; $p < 0.001^{***}$; GM, grand means

T-test results comparing sexual orientation groups showed that heterosexual youth reported significantly higher family relations quality ($p < 0.001$), while LGBT+ youth reported significantly higher risky media use intensity ($p < 0.05$) and sexting perpetration ($p < 0.001$). Consistent with our findings, Rice et al. (2012) reported that non-heterosexual participants were more likely to engage in sexting and reported more frequent sexual activity and unprotected sex. These findings are concerning in relation to LGBT+ youth particularly given the potential overlap between online sexual behaviours and other sexual health risks. Tanni et al. (2024) found that LGBT+ youth experienced significantly higher-risk online interactions than heterosexual youth. Additionally, Bauermeister et al. (2014) reported a higher prevalence of sexting among men who identified as homosexual compared with heterosexual men. This disparity may reflect the greater opportunities that online and mobile technologies provide for exploring sexuality and identifying potential partners within this population. Benotsch et al. (2013) reported that individuals who shared sexually explicit content via electronic media had a higher likelihood of contracting sexually transmitted diseases (STDs). In contrast, Ferguson (2011) found no significant association between sexting and the incidence of STDs but observed a positive correlation

between the frequency of sexting and sexual satisfaction. Ernenst (2022) found that sexual orientation did not influence online risk behaviour but had specific sample issues. Cowie et al. (2019) reported that LGBT+ youth were more likely to engage in sexting and to experience pressure to sext than heterosexual youth, consistent with existing research suggesting that sexting may be more common and socially accepted among non-exclusively heterosexual adolescents (Gámez-Guadix et al. 2017; Van Ouytsel et al. 2019). The significant results for peer relations quality may reflect unique social dynamics or challenges faced by LGBT+ youth, consistent with research showing variability in social integration. Higher media use might indicate alternative social spaces or coping mechanisms (Mustanski et al. 2014). Other factors showed no statistically significant differences ($p > 0.5$). Educators require training modules focused on recognizing LGBT+-specific sexting risks, such as identity-based coercion, building trust through diverse representations of sexuality, and addressing power dynamics, including homophobia. Such training should also incorporate anti-bullying measures, appropriate mental health support and referral, and shame-free approaches to encourage reporting among vulnerable students. Educational strategies should prioritize inclusive curricula that represent diverse relationships and emphasize consent and resistance to pressure, as well as safe spaces featuring anonymous reporting and tailored peer support. Partnerships with relevant LGBT+ organizations could provide workshops distinguishing healthy online exploration from exploitation, thereby promoting equitable protection and potentially reducing disparities in sexting-related harms.

Variable	Sexual orientation	N	M	GM	SD	t
Sexting perpetration	Heterosexual	272	1.49	0.75	0.95	-2.93**
	LGBT+	53	1.94	0.97	1.42	
Family relations quality	Heterosexual	272	16.86	4.22	2.92	4.33***
	LGBT+	53	14.85	3.71	3.92	
Peer relations quality	Heterosexual	272	17.59	4.40	2.80	-0.29
	LGBT+	53	17.47	4.37	3.46	
Risky media use	Heterosexual	272	9.49	1.58	3.37	-2.59*
	LGBT+	53	10.91	1.82	4.75	
Sexting victimization	Heterosexual	272	6.62	2.21	3.59	-1.47
	LGBT+	53	7.43	2.48	4.25	
General media use intensity	Heterosexual	272	39.24	2.18	6.51	-0.21
	LGBT+	53	39.45	2.19	7.19	
General risky behaviour	Heterosexual	272	19.01	1.58	5.39	-1.89
	LGBT+	53	20.68	1.72	8.04	

Table 6 *T*-test for sexual orientation differences ($N = 325$). Note: $p < 0.05^*$; $p < 0.01^{**}$; $p < 0.001^{***}$; GM, grand means

The education levels of mothers and fathers did not manifest statistically significant differences across examined factors ($p > 0.05$). Research exploring associations between parental education and adolescent sexting remains sparse and inconclusive, with a predominant focus directed towards parental practices and monitoring strategies. Notably, Confalonieri et al. (2020) identified parental knowledge, control, and adolescent disclosure – core components of parental monitoring – as influential determinants of sexting-related attitudes and behaviours, highlighting the primacy of open parent–child communication and calibrated parental control over parental education level per se. Broader investigations into family environment and parenting styles underscore the salience of parental social control and emotional attachment. For instance, Dolev-Cohen and Ricon (2020) demonstrated that adolescents perceiving heightened parental social control, marked by involvement and rule enforcement, exhibited reduced sexting involvement; such protective effects were attributed to parenting quality rather than parental education. Effective parental communication regarding sexuality and its associated risks correlates with favourable adolescent sexual health outcomes, including open sexual discourse with partners (Hicks et al. 2013) and increased contraceptive utilization (DiClemente et al. 2001). Empirical findings emphasize that the mode of parental communication – characterized by openness, acceptance, and absence of negative sexuality-related attitudes – exerts greater influence than content specificity, associated with a 60% reduction in adolescents' engagement in risky sexual conduct (Akers et al. 2011). Furthermore, Rodríguez-García et al. (2023), via retrospective and prospective meta-analysis of 641 studies, affirmed the pivotal role of family relationship quality in modulating sexting risk, with prominent gender and age nuances. Cumulatively, these results elucidate the critical function of parental engagement in mitigating sexting risk by fostering open and constructive dialogues on sexuality, online risks, and sexual behaviours. Empirical findings indicate that adolescents raised in two-parent households characterized by stability and positive relational dynamics experience protective effects, resulting in reduced incidences of both self-initiated and peer-influenced sexting behaviours. Conversely, youths residing within single-parent, reconstructed families or under joint custody arrangements report more complex or strained parental relationships, correlating with a statistically significant propensity towards increased engagement in various manifestations of sexting (Turzák et al. 2021). Parallel observations by Sorbring and Lundin (2012) affirm that youth involved in online romantic and sexual interactions tend to have poorer relational quality with both parents and peers. Furthermore, Jonsson (2015) documented heightened feelings of loneliness among adolescents exhibiting online sexual behaviours, potentially propelling an intensified online social engagement that may culminate in sexual encounters or transactional sex. Corroborating these associations, a meta-analysis encompassing over 70 studies and more than 200,000 participants revealed that exposure to adverse parental behaviours – characterized by abuse, neglect, or excessive restrictiveness –

increases vulnerability to peer abuse (Wolke et al. 2013). Critically, dysfunctional parenting styles were more salient in youth who functioned as both victims and perpetrators of abuse compared to those solely victimized. While negative parenting, defined by overprotection, violence, and neglect, escalates the risk of victimization and abusive behaviour, authoritative parenting marked by emotional warmth, communicative openness, involvement, supervision, and support demonstrates protective effects against peer abuse. Notably, the meta-analytic study emphasizes overprotective parenting as a significant risk factor amplifying susceptibility to abuse (ibid.). These findings underscore the nuanced impact of family structure and parenting style on adolescent sexting behaviours and broader psychosocial outcomes. Youth from lower socioeconomic status (SES) backgrounds or homes with less-educated parents may face greater sexting-related risks because of weaker parental monitoring, less frequent parental mediation and discussion, and less regulated media exposure. In contrast, more highly educated parents may provide protective factors, including open communication and clear boundaries. Educators need training to identify these SES-related digital divides, offering tailored school-based programs like media literacy workshops and peer mentoring to bridge home-school gaps through accessible outreach. Schools should implement supplemental digital safety classes for at-risk students, judgment-free family workshops, and SES-sensitive screening to proactively mitigate unmonitored sexting vulnerabilities and promote equitable digital well-being.

Hierarchical regression analysis for sexting perpetration and sexting victimization

A hierarchical regression analysis was conducted to examine predictors of adolescent sexting perpetration, with the final model explaining approximately 25.2% of the variance in sexting behaviour (adjusted $R^2 = 0.22$). Three models were constructed, progressively adding predictors from socioeconomic factors (e.g. age, gender, sexual orientation), family and peer relationship quality, behavioural factors (risky media use and general risky behaviour), followed by sexting victimization. In the initial model, age positively predicted sexual perpetration. Being married, being in a relationship, and identifying as LGBT+ were also significant predictors of sexting perpetration. Age is a significant positive predictor ($p < 0.05$), indicating that older adolescents are somewhat more likely to engage in sexting perpetration. This aligns with previous literature indicating that developmental and identity factors contribute to sexting behaviours (Mitchell et al. 2012; Van Ouytsel et al. 2019). Sex, parental education level, and place of residence were not significant predictors in this model. The model explained a modest 8.6% of the variance in sexting perpetration. Including family and peer relationship quality, as well as relationship status and sexual orientation, increased the explained variance to 10.3%. Relationship status showed a significant negative association ($p < 0.05$), suggesting that adolescents currently in relationships were more likely to perpetrate sexting. Sexual orientation was also a significant predictor

of sexting perpetration among LGBT+ youth ($p < 0.001$). Dodaj et al. (2026) suggested that factors contributing to increased sexting among LGBT+ individuals may be related to identity exploration and affirmation, reduced offline opportunities resulting from discrimination or a lack of supportive social spaces, opportunities to connect with similar peers, and greater perceived safety and control, while also being constrained by fear of exposure. Sexting may therefore serve as a means of connection while also presenting increased risks and vulnerabilities related to bullying and stigmatization. Our results showed that family and peer quality of relationships were not significant. This finding partially contrasts with some studies highlighting peer influence but may reflect measurement or sample specifics in the current research (Tokunaga 2010). Surprisingly, our study did not establish peer relationship quality as a significant predictor of sexting perpetration or victimization, even though the influence of peer groups on sharing sexual content online has been proven in various studies (Houck et al. 2014; Van Ouytsel et al. 2017). Marcum et al. (2014) found that sending unwanted images was related to associating with deviant peers. Because adolescent behaviour is strongly influenced by perceptions of normative behaviour among peers, these findings suggest that sexting and associated sexual risk behaviours may be influenced by the perception that sexting is normative (Rice et al. 2012). Adding risky behaviours and media usage substantially improved model fit ($R^2 = 0.25$). Our study did not establish social media platforms as predictors of sexting perpetration, similar to a study by Bauermeister et al. (2014), with no significant correlations identified in this regard (Molla-Esparza et al. 2021). However, a number of studies found that adolescents who used the media more were more likely to practice sexting (Baumgartner et al. 2014; García et al. 2020); the frequency of sending text messages positively correlated with the sending of sexts (Martínez-Prather and Vandiver 2014; Strassberg et al. 2017) and internet addiction issues correlated with increased sexting (García et al. 2020). These findings remain relevant given the evidence concerning the relationship between adolescent exposure to the internet and victimization through both online and offline forms of harassment, including blackmail, pressure, and coercion (Choi et al. 2016; Molla-Esparza et al. 2021). Similarly, studies have reported that adolescent social networks can promote sexualized behaviours (Sarabia and Estevez 2016). This aspect is further emphasized by research highlighting risks associated with social media use (Handschuh et al. 2019).

Sexting perpetration	Model 1 (sociodem. traits)			Model 2 (social relations quality)			Model 3 (risky be- haviour and media use)		
	<i>B</i>	<i>SE(B)</i>	β	<i>B</i>	<i>SE(B)</i>	β	<i>B</i>	<i>SE(B)</i>	β
Sex	-0.19	0.14	-0.08	-0.15	0.14	-0.06	-0.08	0.14	-0.03
Age	0.04	0.02	0.12*	0.04	0.02	0.14*	0.03	0.02	0.08
Mother's educ. level	0.01	0.07	0.01	0.01	0.06	0.01	-0.01	0.06	-0.01
Father's educ. level	-0.06	0.08	-0.06	-0.07	0.13	-0.04	-0.05	0.07	-0.04
Residence	-0.04	0.13	-0.02	-0.08	0.46	-0.05	-0.03	0.12	-0.02
Relationship status	-0.27	0.13	-0.13*	-0.28	0.13	-0.14*	-0.19	0.12	-0.09
Sexual orientation	0.69	0.17	0.22***	0.60	0.18	0.21**	0.53	0.17	0.18**
Family relat. quality				-0.04	0.02	-0.11	-0.01	0.02	-0.02
Peer relations quality				-0.02	0.02	-0.06	-0.01	0.02	-0.03
Risky media use							0.02	0.02	0.07
General risky behav.							0.07	0.03	0.17*
General media use							-0.01	-0.01	-0.04
Sexting victimization							0.04	0.01	0.25***
R ²	0.086			0.103			0.252		
R square change	0.086			0.017			0.149		
F for change in R ²	3.72**			2.62			13.48***		

Table 7 Regression analysis for sexting perpetration ($N = 285$). Note: $p < 0.05^*$; $p < 0.01^{**}$; $p < 0.001^{***}$

General risky behaviour ($\beta = 0.17$, $p < 0.05$) and sexting victimization ($\beta = 0.25$, $p < 0.001$) were significant predictors of sexting perpetration, highlighting risky behaviour and prior victimization as major factors associated with increased sexting perpetration (Table 7). Rice et al. (2012) pioneered the investigation of adolescent sexting, revealing significant associations with sexual activity, risky sexual behaviour, and social connectivity with peers who engage in sexting. Houck et al. (2014) posit that, irrespective of limited prevalence data, sexting constitutes a salient marker of risky behaviour, particularly among youth with emotional and behavioural challenges who demonstrate elevated sexual risk behaviours (CDC 2002) and substance use preceding sexual encounters (Temple et al. 2012). Although outcomes differ across studies, consistent evidence indicates that individuals who engage in sexting exhibit higher rates of sexual activity compared with their non-sexting peers (Dake et al. 2012; Dir et al. 2013; Houck et al. 2014; Rice et al. 2012; Sorbring and Lundin 2012; Temple et al. 2012). Moreover, sexting has been associated with earlier sexual debut (Perkins et al. 2014; Rice et al. 2012; Temple et al. 2012), a greater number of sexual partners, generally four or more (Benotsch et al. 2013; Dake et al. 2012; Dir et al. 2013; Dodaj et al. 2026; Henderson and Morgan 2011), and a higher frequency of oral sex compared with non-sexting adolescents (Benotsch et al. 2013; Dake et al. 2012; Ferguson 2011). In addition, individuals who engage in sexting have been reported to demonstrate less consistent contraceptive use during intercourse (Benotsch et al. 2013; Dake et al. 2012), and sexting has been reported to mediate the linkage between alcohol use and unplanned sexual encounters among college students (Dir et al. 2013). Elevated rates of

alcohol and psychoactive substance use prior to sexual activities have also been observed among youth who engage in sexting compared with their counterparts (Benotsch et al. 2013; Temple et al. 2012), thereby accentuating the interrelation between sexting and other risk behaviours. The observed victim–perpetrator overlap aligns with theoretical frameworks, such as the cycle of violence and Bandura’s social cognitive theory, which propose that victimization experiences may normalize aggressive behaviours, thus perpetuating a cycle where victims become perpetrators. Peer norms may reinforce the acceptability of non-consensual sexting, fostering a social environment in which such aggression is used as a means of power or revenge (Villa-Henao et al. 2025). Notably, the effects of sex and age were no longer statistically significant in the full model, indicating mediation via these behavioural factors.

Sexting victimization	Model 1 (sociodem. traits)			Model 2 (social relations quality)			Model 3 (risky behav. and media use)		
	<i>B</i>	<i>SE(B)</i>	β	<i>B</i>	<i>SE(B)</i>	β	<i>B</i>	<i>SE(B)</i>	β
Sex	-0.49	0.51	-0.06	-0.35	0.51	-0.04	-0.18	0.43	-0.02
Age	0.02	0.07	0.02	0.03	0.07	0.03	-0.08	0.06	0.08
Mother’s education level	0.21	0.23	0.06	0.18	0.23	0.05	0.11	0.18	0.03
Father’s education level	-0.05	0.27	-0.01	-0.07	0.27	-0.02	0.09	0.22	0.02
Residence	-0.28	0.46	-0.04	-0.41	0.46	-0.05	-0.28	0.38	-0.04
Relationship status	-0.91	0.45	-0.13*	-0.95	0.45	-0.13*	-0.61	0.37	-0.08
Sexual orientation	0.81	0.62	0.08	0.51	0.63	-0.16	-0.26	0.53	-0.03
Family relations quality				-0.19	0.08	-0.16*	-0.08	0.06	-0.07
Peer relations quality				-0.06	0.08	-0.05	0.02	0.07	0.02
Risky media use							0.33	0.07	0.29***
General media use							0.05	0.03	0.09
General risky behaviour							0.17	0.05	0.23***
Sexting perpetration							0.73	0.19	0.21***
R ²	0.167			0.239			0.607		
R square change	0.028			0.057			0.369		
F for change in R ²	1.14			4.29*			33.44***		

Table 8: Regression analysis for sexting victimization ($N = 285$). Note: $p < 0.05^*$; $p < 0.01^{**}$; $p < 0.001^{***}$

The regression analysis for sexting victimization explained a substantial portion of the variance in the behaviour, with R^2 increasing across three models from 16.7% to 60.7%. Socioeconomic factors explained a modest amount of the variance ($R^2 = 0.17$), with relationship status showing a significant negative effect on victimization ($\beta = -0.13$). Social relations quality in Model 2 increased the explained variance to 23.9%, with family relations quality showing a small negative effect ($\beta = -0.16$). Model 3, which included risky behaviour and media use indicators, substantially increased the explained variance to 60.7%. Significant predictors in this final model were risky media use ($\beta = 0.29$, $p < 0.001$), general risky behaviour ($\beta = 0.23$, $p < 0.001$) and sexting perpetration ($\beta = 0.21$, $p < 0.001$). These results align with existing research emphasizing the multifactorial nature

of sexting victimization, in which behavioural risk factors and media exposure may be associated with an increased likelihood of victimization (Cariaga and Nabe 2025). In particular, risky media use intensity and sexting perpetration reflect the growing recognition that media environments and victimization experiences critically shape youths' sexual communication behaviours (Albury et al. 2017). Our study established general risky behaviour as one of the strongest positive predictors of sexting victimization. Sexting involvement often coincides with deleterious dynamics, such as dating violence, sextortion, cyberbullying, and grooming (Bianchi et al. 2021). Associations between sexting and internalizing symptoms, including anxiety, depression, and suicidal ideation or attempts, have also been documented (Molla-Esparza et al. 2020). These findings collectively underscore sexting as a multifaceted behaviour intimately connected with adolescent sexual risk and psychosocial vulnerabilities. Given that sexting appears to be linked to sexual risk behaviour, deficits in emotion regulation may characterize teenagers who engage in sexting compared with those who do not. Sexting may therefore be associated with difficulties in managing emotions (García et al. 2020). Adolescents who report more intense and labile emotions and less effective regulation of these emotions have been found to report more problem behaviours and more sexual partners (Hessler and Katz 2010). Our results also demonstrate that more frequent risky media use positively predicts sexting victimization. Recent studies have found a significant correlation between pornography use and sending a sext (Giordano et al. 2022), as well as sexting and internet addiction (García et al. 2020). Houck et al. (2014) found that risk-related cognitions and emotional competence were important, as adolescents who sexted reported higher perceptions of approval for sexual behaviour from their environment (parents, peers, and the media), higher intentions to engage in sexual behaviour, lower emotional awareness, and lower emotional self-esteem, similarly to Marcum et al. (2014) and García et al. (2020) who established a relation between sexting and low self-control. One explanation is that these perceptions may normalize and reduce inhibitions related to sex, including sexting, or that adolescent sexters may selectively attend to attitudes that condone such behaviours. Research has demonstrated that individuals who engage in sexting exhibit higher levels of negative emotional states than those who do not. Specifically, an increased prevalence of anxiety, depression, feelings of sadness and hopelessness, distress, shame, and fear have been reported among sexting participants (Chaudhary et al. 2017; Dake et al. 2012; Dodaj et al. 2026; Klettke et al. 2014; Medrano et al. 2018; Mitchell et al. 2012; Ybarra and Mitchel 2014). Furthermore, involvement in exchanging sexually explicit content through electronic media has been associated with an elevated risk of suicide attempts and completed suicides relative to non-participants (Dake et al. 2012). However, it is important to note that some studies report no significant differences in emotional well-being or related psychological outcomes between individuals who engage in sexting and those who do not, indicating heterogeneity in the findings within this research area (Morelli et al. 2016; Temple et al. 2014; Vrselja et al. 2015). This discrepancy underscores the need for further investigation to clarify the complex relationship between sexting behaviours and emotional

health. Overall, the profile of participants who engage in sexting in our study suggests that sexting is more common among older, married or romantically involved, media-intensive LGBT+ youth who also report higher levels of risky media use and general risky behaviour. The strong effect of perpetration on victimization underlines the cyclical dynamics often observed in adolescents' online sexual behaviours (Mitchell et al. 2012). The high proportion of explained variance, exceeding 60%, suggests that the model accounts for a substantial proportion of the variation in sexting victimization within the sample, surpassing typical explanatory power found in many behavioural studies, which often range between 20% and 40% (Tokunaga 2010; Van Ouytsel et al. 2019). The negative association of relationship status and family relations with victimization may reflect protective social factors and support systems that reduce vulnerability to sexting victimization. Overall, these findings support the consideration of media use behaviour, general risky behaviour, and social relational contexts when developing preventive interventions addressing sexting victimization.

Implications for the educational context and future research

Our findings underscore the complex and multifaceted nature of adolescent sexting, particularly the roles of age, sexual orientation, media engagement, and victimization experiences. These results have important implications for adolescents' educational contexts, as schools serve as key microsystems in which peer norms, digital literacy, and risky behaviours intersect. For instance, older adolescents and LGBT+ youth, who reported higher levels of sexting perpetration, may experience heightened peer pressure and identity-related vulnerabilities within school environments. This highlights the need for age-appropriate and inclusive curricula that foster empathy and healthy digital communication. Future research should adopt longitudinal designs to elucidate causal pathways between these predictors and sexting outcomes while exploring protective factors such as empathy-building programs, parental-school partnerships, and sexting motivations. In educational contexts, schools emerge as key intervention sites. Targeted programs could integrate socio-ecological strategies, such as TPB-informed workshops on consent and norms, to counter media-driven risks, reduce victimization cycles, and promote resilience among vulnerable groups, including urban/rural and partnered youth. This research holds vital importance for educators, as it provides empirical evidence to support the implementation of digital citizenship programs in school curricula, equipping teachers with data-driven insights to address sexting as a public health concern intertwined with academic performance and mental well-being. Ultimately, embedding these findings into school policies could help prevent the escalation of risky media use into longer-term psychological harm and foster safer developmental trajectories for students. Expanding research to diverse adolescent populations and evolving digital environments will be crucial for co-developing evidence-based school policies, teacher training, and prevention strategies that integrate sexting education within broader social-emotional learning frameworks.

Study limitations

The present study is subject to several limitations inherent in its design and methodology. Given its cross-sectional nature, causal inferences regarding the relationship between sexting and engagement in sexual activity, risky behaviour, and unsafe sexual practices cannot be drawn. Reliance on self-reported measures introduces potential biases, including recall inaccuracies and social desirability effects, although assurances of anonymity were intended to mitigate these biases. The study did not investigate the motivational factors underlying sexting, limiting a comprehensive understanding of the pathways linking sexting, sexual risk behaviour, and general risk-taking. Moreover, the instruments employed were not standardized, which may have attenuated measurement validity despite demonstrating acceptable reliability coefficients. The sample, drawn exclusively from Croatian adolescents, may limit the generalizability of the findings to broader populations. We acknowledge the substantial female predominance in the sample, which reflects the demographic composition of the target population and constitutes a limitation of the study. The unequal group sizes may reduce statistical power and the precision of estimates for the underrepresented male group. Therefore, sex comparisons were interpreted cautiously, with attention to effect sizes and their 95% confidence intervals, so findings concerning sex differences should be considered preliminary and require confirmation using more balanced or stratified samples. Future research should prioritize longitudinal designs to elucidate temporal and causal relationships, incorporate motivational and contextual variables, utilize standardized measurement tools, and include diverse, nationally representative adolescent cohorts. Despite these limitations, the study provides valuable educational insights into the associations between sexting, social relations quality, risky behaviours, and media use intensity, particularly in relation to adolescents' socioeconomic characteristics.

Statement on access to research data

The data are available with restrictions (legal/ethical restrictions)

The research data used in this article are not publicly available due to restrictions related to personal data protection and/or copyright (in accordance with ZVOP-2 and/or ZASP). Access to anonymized or restricted versions of the data is possible upon justified request to the authors of the article.

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NAPOVEDOVANJE PROBLEMATIČNEGA SEKSTANJA PRI MLADOSTNIKIH: PEDAGOŠKI VIDIKI SOCIALNO-EKONOMSKIH ZNAČILNOSTI, DRUŽINSKIH ODNOSOV IN PROBLEMATIČNEGA VEDENJA

Povzetek: Ta študija proučuje, kako socialno-ekonomske značilnosti in situacijski dejavniki vplivajo na problematično sekstanje pri mladostnikih, pri čemer se opira na bioekološki model ter obravnava intenzivnost uporabe medijev, izpostavljenost seksualnim vsebinam in splošno tvegano vedenje. Ugotovitve opozarjajo na pomembne vzgojno-izobraževalne vidike življenja mladostnikov, saj so šole ključni mikrosistemi, v katerih se v vsakdanjem življenju prepletajo vrstniške norme, vrzeli v digitalni pismenosti in tvegano vedenja. Vzorec je zajemal 325 mladostnikov (247 deklet in 78 fantov), starih od 14 do 27 let. Dekleta so poročala o močnejših vrstniških odnosih in večji splošni uporabi medijev. Starejši mladostniki so pogosteje sekstali, prav tako mladostniki v romantičnih partnerskih razmerjih v primerjavi s samskimi. Mladostniki iz mestnega okolja so poročali o boljših medvrstniških odnosih kot njihovi vrstniki s podeželja, heteroseksualni mladostniki pa o kakovostnejših družinskih odnosih kot LGBT+ mladostniki, pri katerih sta bili izrazitejši tvegana raba medijev in sekstanja. Regresijske analize so pokazale, da so bili starost, splošno tvegano vedenje in viktimizacija zaradi sekstanja pomembni napovedniki sekstanja. Pomembni napovedniki viktimizacije zaradi sekstanja so bili status partnerskega razmerja, kakovost družinskih odnosov, tvegana raba medijev, splošno tvegano vedenje in sekstanje. Ugotovitve poudarjajo pomen medsebojnega vplivanja osebnih značilnosti, proksimalnih procesov in kontekstualnih vplivov pri oblikovanju vedenj, povezanih s sekstanjem, med mladostniki, kot ga predpostavlja bioekološki model.

Ključne besede: sekstanje, mladostniki, izobraževanje, tvegano vedenje, viktimizacija, socialno-ekonomske značilnosti, družina, vrstniki

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