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# Romantic Love and Involvement in Bullying and Cyberbullying in 15-year-old Adolescents from Eight European Countries and Regions

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**Abstract**

Sexual minority youth are at greater risk for bullying victimization than their heterosexual peers but data on perpetration and cybervictimization is limited. Using representative data from seven European countries and one region ( $N = 14,545$ ), this study compared traditional bullying victimization and perpetration, and cyberbullying victimization among 15-year-old adolescents who reported ever being in love with same or both gender peers (sexual minority) versus opposite gender peers (non-minority). Adolescents who have never been in love and non-respondents were also included. Analyses were stratified by gender and adjusted for country/region and family affluence. Traditional bullying perpetration was more likely to be reported by both-gender attracted girls, while bullying victimization was more likely to be reported by both-gender attracted girls and both- and same-gender attracted boys. All sexual minority youth were more likely to report cybervictimization compared to their non-minority peers. Adolescents who have never been in love reported lower levels of bullying involvement than all other youth. Sexual minority stigma may contribute to higher risk of bullying involvement among adolescents. Interventions need to specifically address bullying involvement and associated health risks of sexual minority youth. Available evidence shows that explicit school policies and interventions tailored to local settings are particularly effective.

Keywords: adolescents; romantic love; same-gender love; sexual minority youth; bullying; victimization; cyberbullying; HBSC

### Introduction

Despite increased efforts at national and international levels, school bullying remains a problem that has a detrimental impact on the daily lives of young people worldwide (Cosma et al., 2020). Bullying is defined as a repeated aggressive behavior, with an imbalance of power between the aggressor and the victim (Olweus, 1997). Several risk factors have been identified that make young people more vulnerable to bullying victimization such as immigration background (Stevens et al., 2020), low socio-economic status and higher country-level income inequalities (Elgar et al., 2019), being overweight and obese (Janssen et al., 2004; van Geel et al., 2014), having a chronic health condition (Sentenac et al., 2012) and other factors related to marginalization, such as being a young carer, or belonging to a cultural or ethnic minority (Molcho et al., 2008). On the other hand, factors such as male gender, ethnicity, aggressiveness, anti-social behavior problems, low commitment to school or sociometric popularity are positively associated with bullying perpetration (Alvarez-Garcia, Garcia & Nunez, 2015). A recurrent risk factor for bullying involvement is sexual orientation (Thorsteinsson et al., 2017, DeSmet et al., 2018), however the current evidence stemming from European samples is limited.

Same- and both-gender attraction among young people has been associated with higher levels of bullying victimization than exclusively being attracted to opposite-gender partners (Berlan et al., 2010; McNamee et al., 2008). Previous Spanish research demonstrated that sexual minorities and intersecting other minority status (e.g., Roma and sexual minority) were at the highest risk of bullying and cyberbullying victimization compared to their heterosexual counterparts (Elipe et al., 2018; Llorent et al., 2016). Similar results have been reported in the United Kingdom (Henderson, 2015), Israel (Pizmony-Levy et al., 2019), Belgium (Flanders) (DeSmet et al., 2018) and Iceland (Thorsteinsson et al., 2017). A systematic review of 27 studies demonstrated that sexual minority young people are more likely to be cybervictimised than their heterosexual peers (Abreu & Kenny, 2018), but evidence on this within Europe is scarce, and according to a landscape and knowledge gap analysis on studies with Lesbian, Gay, Bisexual, Transgender, Intersex and other sexual and gender minority (LGBTI+) youth, cross-cultural comparisons in this area are practically non-existent (Költő et al., 2021).

There is much less evidence on sexual minority involvement in bullying perpetration, and findings are rather contradictory. One U.S. study showed that rates of bullying perpetration were significantly lower among sexual minority youth than among their heterosexual peers. Lesbian, Gay and Bisexual (LGB) adolescents in Iceland were more likely to bully others than non-LGB students (Thorsteinsson et al., 2017). In a Finnish study (Kurki-Kangas et al., 2019), same- and both-gender sexual minority youth were more likely to bully others than their exclusively opposite-gender attracted peers. Other findings report that bisexual girls are more likely to have been bullies—and victims—than heterosexual girls (Berlan, Corliss, Field, Goodman, & Austin, 2010). However, the difference leveled out after controlling for depression and delinquency. Despite evidence that bullying perpetration and victimization often overlap (Kennedy, 2021), existing studies have not considered how the confounding effects of these two could be disentangled. To address these knowledge gaps, we aimed to provide cross-national evidence around sexual minority involvement in bullying perpetration, controlled for victimization. Similarly, we controlled analyses of bullying victimization for the potential confounding effect of perpetration.

Some argue that romantic relationships in adolescence, irrespective of the gender of the romantic partner, may be a source of stress for young people (Seiffge-Krenke, 2011), and it has been suggested that being in a romantic relationship or revealing romantic attraction may be associated with bullying victimization (Connolly and McIsaac, 2009). Therefore, to understand the correlations between same- and both-gender romantic love and bullying, it is important to not only differentiate between opposite-, same- and both-gender romantic attraction, but also between being or not being romantically involved.

The intersection of gender and sexual identity appears to be important in understanding bullying among youth, but previous literature examining gender as a risk factor for bullying among sexual minority youth has yielded mixed results (Mennicke et al., 2020). Sexual minority adolescent boys reported the highest level of victimization, followed by heterosexual girls and sexual minority girls, then heterosexual boys (Ash-Houchen & Lo, 2018; Sterzing et al., 2014). However, other studies have reported that lesbian and/or bisexual girls were at highest risk of victimization. For example, in a nationally representative U.S. study, lesbian and bisexual girls were most at risk of face-to-face school victimization, with 37% reporting having been bullied, compared with 26% of gay and bisexual boys (Kann et al., 2016). Others have reported no significant interaction between sexual orientation and gender in bullying perpetration and victimization (DeSmet et al., 2018).

### ***Minority stress, structural stigma and camouflaging sexual orientation***

Minority stress theory could be used to understand the elevated risk that sexual minority young people have to be involved in bullying (Meyer, 2003). This model helps to understand how discrimination, violence, and victimization due to a pervasive homophobic and biphobic culture are the primary sources of stress, and most probable driving mechanisms, of mental health problems among sexual minorities (Yoo et al., 2018). Sexual minority populations experience higher levels of stigma than their heterosexual counterparts, which is deeply ingrained in society (and therefore labelled 'structural') and is directly linked to discrimination and bullying of sexual minority youth (Hatzenbuehler & Pachankis, 2016). Minority stress theory postulates that sexual minority young people may become hypervigilant to cues of aggressive behavior from others and may maintain a constant readiness to avoid overt aggression (Meyer, 2003). Conformity with the peer group (Jennings, 2015), for example taking part in bullying others, may be a way for them to camouflage their sexual minority status in order to avoid unwanted attention and becoming victims themselves. Similar 'stigma management' behaviors have been identified by Saewyc et al. (2008) who found that engaging in unprotected opposite-gender sex and getting pregnant in sexual minority girls could serve as way to disguise a lesbian or bisexual orientation.

### **Aims and hypotheses**

In summary, sexual minority adolescents have a higher risk of bullying victimization, but most of the evidence comes from North America, and it remains unclear whether such disparities are universal. Previous studies have focused primarily on traditional victimization, without investigating perpetration or cybervictimization. This study aims to describe and compare bullying involvement (as perpetrators, victims, and cyber-victims) across patterns of romantic love, using nationally representative samples of 15-year-old adolescents from seven European countries and one region. Based on the existing evidence, we hypothesized that adolescents who

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report same- and both-gender love will have higher odds of bullying perpetration, victimization, and cybervictimization than their peers reporting exclusively opposite-gender love or those who reported not having been in love.

### Materials and methods

#### *Sample*

Data were collected through Health Behaviour in School-aged Children (HBSC), a World Health Organization collaborative cross-cultural study, which collects nationally representative data on the well-being and health behaviors of adolescents (Roberts et al., 2009, Inchley et al., 2018). Cluster sampling was used in accordance with the structure of national education systems within countries/regions. The primary sampling unit was school class. Data were collected anonymously using a questionnaire completed in the classroom. A subset of seven countries (Bulgaria, Switzerland, England, France, Hungary, Iceland, North Macedonia) and one region (i.e., French-speaking Belgium) asked their 15-year-old participants about romantic love. The raw sample contained data from 14,545 respondents (mean age: 15.55 years,  $SD = 0.33$ , age range: 14.58–16.50, girls: 49.8%).

#### *Measures*

*Romantic love* was measured by a standardized item ‘Have you ever been in love with...’, with the response options ‘A girl or girls’, ‘A boy or boys’, ‘Both girls and boys’, and ‘I have never been in love’ (Költő et al., 2018). Girls who reported only being in love with boys, and boys who reported only being in love with girls were categorized into the opposite-gender love group. Girls who reported only being in love with girls and boys reporting only being in love with boys, were categorized into the same-gender love group. Respondents who reported being in love with both girls and boys were categorized into the both-gender love group. A fourth group comprised respondents who reported having never been in love, while those who did not answer the question were categorized into a fifth group.

*Bullying perpetration and victimization.* An adapted version of the Olweus (1997) bullying victimization questionnaire was used. Participants were presented with a definition of bullying which emphasized characteristics such as intentionality, power imbalance, and repetition (Cosma et al., 2020). They were then asked to indicate whether they had been bullied at school in the past couple of months and whether they had bullied another person at school in the past couple of months, both with the response options: ‘I have not bullied another person at school in the last couple of months’ (respectively for victimization ‘I have not been bullied at school in the last couple of months’; ‘It has happened once or twice’; ‘2 or 3 times a month’; ‘About once a week’; ‘Several times a week’; ‘It has happened once or twice’; ‘2 or 3 times a month’; ‘About once a week’; ‘Several times a week’). Based on previous research (Cosma et al., 2020), both items were dichotomised into two or three times a month or more frequently (1) versus less frequently (0).

*Cybervictimization.* Participants were asked to indicate how often in the past couple of months they had experienced the following: ‘Someone sent mean instant messages, wall postings, emails and text messages or created a website that made fun of me’ and ‘Someone took unflattering or inappropriate pictures of me without permission and posted them online’. Similar to the

traditional bullying questions, the response options ranged from ‘I haven’t been bullied’ to ‘Several times a week’. The cybervictimization items followed the traditional bullying items in all national surveys; for psychometric properties see Cappadocia et al. (2013). A composite cybervictimization variable was created by combining all participants who indicated being cyberbullied by either or both of the two methods at least one or two times in the last couple of months (1), compared to those who had been cyberbullied less frequently (0) (Cosma et al., 2020).

*Gender.* Participants were asked whether they were a boy or a girl.

*Socioeconomic status* was measured by the Family Affluence Scale (Torsheim et al., 2016), a six-item measure that asks about concrete possessions (i.e., number of family cars; computers), characteristics of the home (i.e., having a bedroom for one own; number of bathrooms; owning a dishwasher), and the number of family holidays in the last year. A sum score (0 = lowest affluence, 13 = highest affluence) was transformed into a ridit-based variable classifying children from families within the lowest 20%, the medium 60%, and the highest 20% into affluence categories (Torsheim et al., 2016).

*Translation.* Questionnaires were translated from English into respective national languages with back-translation checks for accuracy under international supervision following a standardized protocol (Inchley et al., 2018).

### ***Sample selection***

The process of sample selection is presented in Figure 1. Only participants who provided sufficient information on their family affluence ( $n = 13,690$ ) were retained in the sample. Those participants who did not give an answer to the love item were included in the analyses as a separate group. The final models included those participants who answered both the bullying perpetration and victimization items ( $n = 13,514$ ) or the cybervictimization item ( $n = 13,402$ ).

*-Figure 1 around here-*

### ***Statistical analysis***

Data analysis was carried out in SPSS version 25.0 (IBM Corp., Armonk, NY, USA). In order to test the relative risk of sexual minority youth to be engaged in different types of bullying in comparison to their non-minority counterparts, binary logistic regression models were built to test the associations between involvement in bullying behaviors and romantic love categories. Three univariate models testing the associations between different romantic categories and (1) traditional bullying victimization, (2) traditional bullying perpetration and (3) cybervictimization were built. First, we obtained crude (uncontrolled) odds ratios (cOR) for romantic love groups’ odds of bullying behaviors and experiences. Then multivariate models controlling for country, gender, and relative family affluence were built and adjusted odds ratios (aOR) were computed. Odds ratios are reported alongside their 95% confidence intervals (CI). In addition, to separate potential effects of being a bully-victim, the traditional bullying victimization model was controlled for perpetration, and the traditional bullying perpetration model was controlled for victimization. The reference group was opposite-gender love adolescents, to which the odds of adolescents reporting (1) being in love with same-gender partners, (2) being in love with both-

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gender partners, (3) not being in love, and (4) not responding to the item on love were compared. To test whether boys and girls have different odds for engagement in bullying, analyses for the multivariate models were stratified for gender. Wald statistics were used to test whether predictor variables made a significant contribution to the models. In some cases, the Chi-square tests indicated poor fit ( $p > 0.05$ ), which may be a result of the large (overall) sample size and the imbalance between the compared subgroup sizes. No collinearity was identified.

### ***Ethical considerations***

In line with the HBSC International HBSC research protocol (Inchley et al., 2018), all participating countries and regions obtained relevant research ethics approval. National teams varied as to the conditions attached to approval and whether active or passive consent was required from schools, parents, and pupils. The institutional ethical boards and type of consent by participating country are listed by Költő et al. (2020). Children were informed before administration of the questionnaires that they were free to decide whether they wanted to participate or not, and that they could skip any questions they did not want to answer and stop taking part at any point during the survey.

### **Results**

Associations of bullying involvement and socio-demographic factors are reported in the Supplementary Material (country/region: Table S1; gender: Table S2; family affluence: Table S3).

#### ***Romantic love and socio-demographic characteristics***

Overall, 81.3% of participants reported opposite-gender love, 1.6% same-gender love, 1.8% both-gender love, 12.9% not having been in love, and 2.4% did not respond to the item (Table 1). Among boys, both-gender love was least frequently reported (1.1%), whereas for girls the least frequently reported was same-gender love (1.8%). More girls reported same- or both-gender love than boys but the effect size was low:  $V = 0.079$ .

*-Table 1 around here-*

#### ***Romantic love and bullying involvement***

Overall, 7.8% of participants reported bullying other students in the last couple of months (Table 2). The highest prevalences were among those who reported both- (15.9%) and same-gender (14.6%) love. Bullying victimization was reported by 8.2% of participants with both- (21.2%) and same-gender (18.7%) love adolescents reporting the highest prevalence of victimization. The overall prevalence of cybervictimization was 3.4%, and it was most frequently reported by those reporting same- (14.8%) and both-gender love (14.5%).

*-Table 2 around here-*

#### ***Traditional bullying perpetration and victimization across love patterns***

In the unadjusted models, adolescents reporting both-gender love, same-gender love and those who did not answer the question had significantly higher odds of reporting bullying perpetration



compared to adolescents reporting opposite-gender love, while those who had never been in love had significantly lower odds. However, when controlled for gender, country/region, family affluence, and bullying victimization, only both-gender (aOR = 2.17, 95% CI: 1.42–3.32) and same-gender love (aOR = 1.63, 95% CI: 1.05–2.54) groups and non-responders (aOR = 1.63, 95% CI: 1.10–2.40) had higher odds of reporting bullying perpetration (Table 3).

In both the adjusted and unadjusted models, adolescents reporting both-gender love, same-gender love and those who did not answer the item reported higher odds for bullying victimization than their opposite-gender love peers. Adolescents who reported that they had never been in love had significantly lower odds for bullying victimization (Table 3).

Boys who reported same-or both-gender love had statistically similar odds of being perpetrators compared to their peers reporting opposite-gender love, while boys who did not respond to this question had significantly higher odds. Girls who reported both-gender love had higher odds of being perpetrators than girls reporting opposite-gender love, while the odds of girls reporting same-gender love or not answering the question on love were not statistically different from girls who reported opposite-gender love (Table 3).

Boys reporting same-gender love were three times more likely to report bullying victimization compared to boys reporting opposite-gender love, while no significant difference was observed among girls. However, both boys and girls reporting both-gender love had higher odds of experiencing victimization compared to peers that experienced opposite-gender love. Boys and girls who had not been in love reported significantly lower odds for both victimization and perpetration.

*- Table 3 around here -*

### ***Cybervictimization across romantic love patterns***

Adolescents who reported both- and same-gender love were five times more likely to report cybervictimization compared to those reporting opposite-gender love, while those who reported that they had never been in love had significantly lower odds for cybervictimization. Similar patterns were observed for boys and girls, with one exception. Girls who reported that they had never been in love had significantly lower odds of reporting cybervictimization, while this pattern was not found for boys. Those not responding to the question on love had similar odds of cybervictimization as their peers in love with the opposite gender (Table 3).

### **Discussion**

This study investigated the associations between romantic love and involvement in bullying behaviors (i.e., perpetration, victimization and cyber-victimization) among nationally representative samples of 15-year-olds across seven European countries and one region. Our results indicate higher odds (around two times) of victimization by traditional bullying among sexual minority 15-years-old adolescents compared to their non-minority peers. Sexual minority young people were around three times more likely than their non-minority peers to report traditional bullying perpetration, and four to five times more likely to report cybervictimization.

### *Bullying victimization in sexual minority youth: Is it universal?*

Our findings support existing evidence that sexual minority youth report higher rates of bullying victimization (DeSmet et al., 2018; Llorent et al., 2016). These effects were stronger for adolescent boys than girls, especially those reporting same-gender love. While most North American studies have reported similar gender differences, this finding is at odds with previous evidence from Belgium (DeSmet et al., 2018). Recent findings demonstrate that opposite- and both-gender love is associated with disproportionate risk of substance use (Költő et al., 2019) and elevated rates of psychosomatic health symptoms and poor self-rated health (Költő et al., 2020) among adolescents in Europe. Together, these findings suggest that elevated rates of bullying victimization among sexual minority adolescents, and its negative health correlates, may be widespread across different countries and cultures. Despite the scarcity of evidence outside North America and English-speaking countries, the existing European studies, including the findings reported here, indicate that a disproportionate burden of bullying (victimization, perpetration and cybervictimization) among sexual minority youth may be universal. More evidence is required on comparative rates of specific, bias-based bullying and intersectionality between sexual minority and non-minority youth, and on variation across sexual minority sub-groups (Gower et al., 2018).

### *Cyber-bullying victimization among sexual minority youth*

A particularly stark finding of this study is that same- and both-gender attracted adolescents were four to five times more likely to be cybervictimised than their non-minority peers. A systematic review of evidence on exposure to cyberbullying among sexual minority and gender diverse youth (Abreu & Kenny, 2018) revealed that sexual minority youth were unequivocally more likely to be cybervictimised than their non-minority peers, although the estimates differed widely. Among the 27 identified studies, only two were from Europe (one from the UK and one from Sweden). Our findings support those of Abreu and Kenny (2018) and extend them more broadly across Europe.

### *Bullying perpetration among sexual minority youth*

Our results indicate that sexual minority adolescents from different parts of Europe have higher odds of reporting bullying perpetration. Previous studies reported no difference in traditional bullying perpetration between sexual minority and non-minority youth (Llorent et al., 2016) or that the disparity disappeared when controlling for mental health indicators (Kurki-Kangas et al., 2019); there are also reports of elevated perpetration rates among sexual minority youth (Eisenberg et al., 2015; Thorsteinsson et al., 2017). Possible mechanisms behind these patterns are rarely discussed in the literature. A potential explanation is that their bullying perpetration may be a means of coping with bullying victimization (Berlan et al., 2010) and/or a self-protective behavior hiding the perpetrator's own vulnerability (Eisenberg et al., 2016). However, in our study sexual minority youths' odds for perpetration remained significant after controlling for victimization, and similarly, odds for victimization remained significant after controlling for perpetration, which contradicts the proposed explanation that perpetration and victimization are in a causal relationship.

### *Intersectionality of gender and sexual orientation*

Our results suggest that sexual minority youth do not constitute a homogenous group. Gender and sexual orientation appear to interact (Kahle, 2020). Girls in love with both girls and boys were more likely than opposite-gender attracted girls to be engaged in bullying perpetration, but this was not the case for boys, or for girls exclusively in love with girls. As sexual minority youth often do not conform to traditional gender roles (Heino et al., 2021), it could be that girls who report romantic interests in both boys and girls might be more likely to use retaliation as a strategy of coping with the pressure to conform with a typical female role, though this requires further investigation. Our findings also support previous results showing that youth who identified as lesbian and bisexual were more likely than their heterosexual counterparts to be involved in nonviolent delinquency (Beaver et al., 2016).

### *Romantic stress and bullying*

The findings presented here also suggest that those who have not been romantically involved may be protected against involvement in bullying. Those who reported they had never been in love reported lower levels of traditional and cyberbullying victimization than their peers reporting opposite-gender love. This finding is in line with conclusions stemming from the theory of romantic stress (Seiffge-Krenke et al., 2012) and implies that romantic attraction may, on its own, be a risk factor for bullying victimization.

Including those who did not respond to the romantic love questions in our analyses means we have been able to extend the empirical and theoretical evidence around this group of adolescents. Our findings might support the ‘stigma management’ behaviors hypothesis. Previous research from Saewyc et al. (2008) identified that engaging in unprotected opposite-gender sex and becoming pregnant in sexual minority girls could serve as way to hide a lesbian or bisexual orientation. While we do not know participants’ reasons for not responding to the question, it could be because they do not want to disclose this information or are unsure about their romantic feelings. This pattern echoes earlier findings that young people who are unsure of their sexual orientation (‘questioning’) are at a disproportionate risk for bullying victimization (Williams et al., 2017). Further research investigating links between sexual and gender minority status and bullying would benefit from offering participants items on their birth-registered sex, gender identity and sexual orientation, with response options including being ‘unsure’ about one’s identity.

### *Cultural differences*

In line with our earlier findings (Költő et al., 2018), we have seen variation in the rates of respondents stating never been in love, varying from 5.0% (in Iceland) to 39.8% (in England). The HBSC employs a centrally controlled rigorous translation methodology items are first developed in English and are translated into national or regional languages by the country teams. All items are subsequently independently back-translated to English by an different translator, and these are systematically compared to the original by native speakers during the international quality control process (Inchley et al., 2018), with an iterative method applied to resolve any issues arising. In most countries translated items are subjected to full piloting prior to adoption (e.g., Young et al. 2016). Nevertheless, further qualitative studies are needed to better understand what young people in different countries and regions think about being or not being in love, and when they consider they are ‘in love’ with someone.

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### *Strengths, limitations, and future directions*

This study is unique in that it is the first to examine the prevalence of involvement in bullying behaviors in a cross-national representative sample of sexual minority adolescents in Europe. We believe that the nationally representative samples of 15-year-old adolescents from seven European countries and one region and the established methodology of the HBSC study gives strength to the results. Nevertheless, we recognise that some children are home-schooled or are not in class for a variety of reasons. Such absences can be short-term (e.g., being sick, away from class due to other school activities) or longer-term (e.g., early school leavers). This is an inherent limitation of all school-based surveys. However, other limitations should be mentioned. First, the survey did not include a measure on cyberbullying perpetration. Second, we have not explored the motives behind bullying, therefore we could not assess whether the grounds for bullying perpetration and victimization were related to homophobic attitudes, or what motives sexual minority youth had for bullying their peers. Qualitative studies are needed to map sexual minority young people's explanations and narratives about bullying others. Third, the gender of both respondents and their romantic partners was identified using binary (boy–girl) questions. To date, no questions are included in the cross-national HBSC survey instrument to identify gender minorities such as transgender, genderqueer, non-binary, or intersex youth. Fourth, romantic love is only one dimension of sexual orientation alongside sexual identity and behavior (Geary et al., 2018). To identify sexual minority status, we focused specifically on romantic love but did not include other dimensions of sexual orientation. We have argued elsewhere that using romantic love to classify sexual minority status is a suitable method in cross-cultural studies (Költő et al., 2018). Finally, the relatively small number of sexual minority youth may have impacted the statistical power of the findings. Future studies in this area may consider using oversampling (or use non-probability sampling techniques) to have larger numbers of LGBTI+ youth included in their samples.

Future methodological developments are needed to address these issues, including qualitative studies on bullying involvement of sexual minority youth, extending the studies to gender minority youth, and mapping adolescents' attitudes on LGBTI+. The international HBSC network is committed to making the survey more inclusive to all sexual and gender minority students, and are currently developing a set of items which will measure birth-registered sex, gender identity, and different dimensions of sexual orientation. A promising new area of sexual and gender minority research is merging epidemiological data with macro-level indicators, such as levels of societal tolerance towards LGBTI+ individuals (e.g., van der Star et al., 2021).

Lastly, adolescents' involvement in different types and forms of violence may not be as clear as purely being victims or perpetrators, but these may rather constitute a continuum, and children may not think of bullying in the same terms as researchers. A latent class analysis of a nationally representative sample of Hungarian adolescents (Várnai et al., 2020) demonstrated that there are distinct latent classes behind different types and forms of peer violence (e.g., being frequently involved in all forms of violent behaviors, or being engaged only in online victimization but not in traditional bullying and fighting).

### *Conclusions and implications*

Our findings have several policy and practice implications. Across all countries and regions included in the analysis, adolescents who reported same- or both-gender love, and non-

respondents, were at higher risk of being involved in bullying incidents compared to those who reported opposite gender love, or never having been in love. The highest disparities were observed for cyberbullying which, given the nature of young people's online communications, is an especially important focal area for intervention. Evidence suggests that anti-bullying policies that explicitly mention bullying based on sexual orientation and gender identity can be effective in reducing the victimization of sexual and gender minority adolescents (Li et al., 2019). Supportive or positive school environments, such as having a Gender and Sexuality Alliance has been linked to Lesbian, Gay, Bisexual and Questioning (LGBQ) students feeling safer in school, and with reduced bullying (Ioverno et al., 2016). However, there are many other ways to improve inclusivity and safety in schools for sexual and gender minority students. These include including updating school- and state-level policies, adding LGBTI+ related material to curricula, and providing high quality, evidence-based training for teachers (Költő et al., 2021). These interventions should be tailored to the needs of the pupils and school staff and characteristics of the local settings, and their efficacy needs to be monitored.

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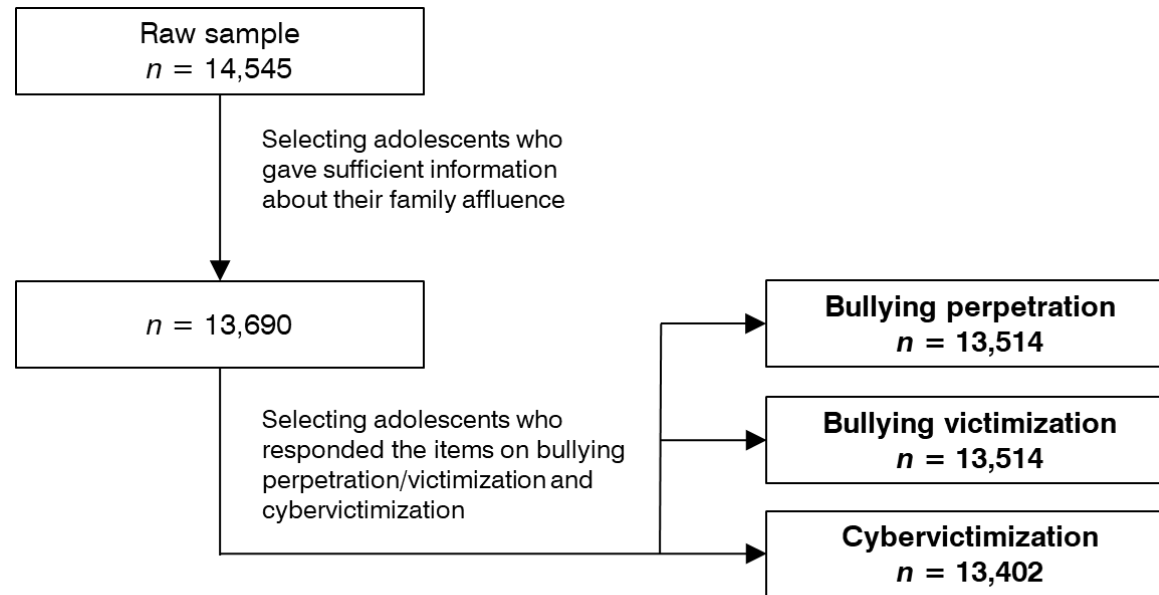
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## Figures

Figure 1. Sample selection



## Tables

Table 1. Characteristics of the sample, overall and by romantic attraction

Characteristics	OVERALL		Opposite-gender love		Same-gender love		Both-gender love		Not been in love		Non-responder		Assoc.
	<i>N</i>	Overall %	<i>n</i>	% (RA)	<i>n</i>	% (RA)	<i>n</i>	% (RA)	<i>n</i>	% (RA)	<i>n</i>	% (RA)	
<b>Love</b>	<b>13,514</b>												
Opposite-gender love	10,987	81.3											
Same-gender love	219	1.6											
Both-gender love	245	1.8											
Not been in love	1740	12.9											
Non-responder	323	2.4											
<b>Region</b>	<b>13,514</b>												
Belgium (French)	1792	13.3	1481	82.6	27	1.5	23	1.3	222	12.4	39	2.2	<i>p</i> < .001 <i>V</i> = .174
Bulgaria	1517	11.2	1286	84.8	62	4.1	39	2.6	111	7.3	19	1.3	
Switzerland	1690	12.5	1502	88.9	9	0.5	21	1.2	149	8.8	9	0.5	
England	1433	10.6	747	52.1	23	1.6	38	2.7	571	39.8	54	3.8	
France	1647	12.2	1353	82.1	34	2.1	33	2.0	209	12.7	18	1.1	
Hungary	1079	8.0	851	78.9	4	0.4	15	1.4	127	11.8	82	7.6	
Iceland	2957	21.9	2692	91.0	48	1.6	56	1.9	148	5.0	13	0.4	
North Macedonia	1399	10.4	1075	76.8	12	0.9	20	1.4	203	14.5	89	6.4	
<b>Relative family affluence</b>	<b>13,514</b>												
Lowest 20%	2811	20.8	2213	78.7	68	2.4	65	2.3	383	13.6	82	2.9	<i>p</i> < .001 <i>V</i> = .037
Medium 60%	8086	59.8	6585	81.4	112	1.4	143	1.8	1067	13.2	179	2.2	
Highest 20%	2617	19.4	2189	83.6	39	1.5	37	1.4	290	11.1	62	2.4	
<b>Gender</b>	<b>13,514</b>												
Boy	6689	49.5	5593	83.6	95	1.4	70	1.0	754	11.3	177	2.6	<i>p</i> < .001 <i>V</i> = .079
Girl	6825	50.5	5394	79.0	124	1.8	175	2.6	986	14.4	146	2.1	

*Note.* These descriptive statistics are given for the 13, 514 participants included in the models for bullying perpetration and victimization (see Table 3).

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Table 2. Prevalence of bullying involvement, overall and by romantic love

Outcome	OVERALL		Opposite-gender love		Same-gender love		Both-gender love		Never been in love		Non-responders		Assoc.
	<i>N</i>	Overall %	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	
<b>Bullying perpetration</b>	1050	7.8	847	7.7	32	14.6	39	15.9	95	5.5	37	11.5	$V = .064$
<b>Victimization</b>	1102	8.2	865	7.9	41	18.7	52	21.2	101	5.8	43	13.3	$V = .092$
<b>Cyber-victimization</b>	462	3.4	337	3.1	32	14.8	37	14.5	41	4.9	15	3.4	$V = .119$



Table 3. Crude and adjusted odds for the three types of bullying involvement, overall and by gender

Outcome	Univariate model			Multivariate model (overall)			Multivariate model stratified for gender					
							Boys			Girls		
	cOR	<i>p</i>	(95% CI)	aOR	<i>p</i>	(95% CI)	aOR	<i>p</i>	(95% CI)	aOR	<i>p</i>	(95% CI)
<b>Bullying perpetration</b>	<i>n</i> = 13,514			<i>n</i> = 13,514			<i>n</i> = 6,689			<i>n</i> = 6,825		
Opposite-gender love	1			1 <sup>a</sup>			1 <sup>a</sup>			1 <sup>a</sup>		
Same- gender love	<b>2.06</b>	< .001	<b>(1.40–3.02)</b>	<b>1.63</b>	.029	<b>(1.05–2.54)</b>	1.54	.184	(0.82–2.90)	1.82	.052	(0.99–3.33)
Both- gender love	<b>2.31</b>	< .001	<b>(1.62–3.27)</b>	<b>2.17</b>	< .001	<b>(1.42–3.32)</b>	1.91	.081	(0.92–3.94)	<b>2.25</b>	<b>.002</b>	<b>(1.36–3.72)</b>
Never been in love	<b>0.71</b>	<b>.002</b>	<b>(0.57–0.88)</b>	0.92	.510	(0.73–1.17)	0.97	.816	(0.71–1.30)	0.86	.445	(0.59–1.26)
Non-responders	<b>1.60</b>	<b>.010</b>	<b>(1.12–2.29)</b>	<b>1.63</b>	<b>.015</b>	<b>(1.10–2.40)</b>	<b>1.76</b>	<b>.024</b>	<b>(1.08–2.86)</b>	1.41	.309	(0.73–2.74)
<b>Bullying victimization</b>	<i>n</i> = 13,514			<i>n</i> = 13,514			<i>n</i> = 6,689			<i>n</i> = 6,825		
Opposite-gender love	1			1 <sup>b</sup>			1 <sup>b</sup>			1 <sup>b</sup>		
Same-gender love	<b>2.64</b>	< .001	<b>(1.86–3.75)</b>	<b>2.39</b>	< .001	<b>(1.61–3.53)</b>	<b>3.63</b>	< .001	<b>(2.06–6.39)</b>	1.59	.107	(0.91–2.78)
Both- gender love	<b>3.25</b>	< .001	<b>(2.37–4.45)</b>	<b>3.13</b>	< .001	<b>(2.19–4.47)</b>	<b>3.30</b>	< .001	<b>(1.66–6.60)</b>	<b>3.11</b>	< .001	<b>(2.06–4.70)</b>
Never been in love	<b>0.73</b>	<b>.004</b>	<b>(0.59–0.90)</b>	<b>0.62</b>	< .001	<b>(0.49–0.78)</b>	<b>0.71</b>	<b>.049</b>	<b>(0.51–0.99)</b>	<b>0.55</b>	< .001	<b>(0.39–0.76)</b>
Non-responders	<b>1.81</b>	< .001	<b>(1.30–2.51)</b>	<b>1.49</b>	<b>.027</b>	<b>(1.05–2.12)</b>	1.60	.051	(0.99–2.58)	1.37	.257	(0.79–2.38)
<b>Cybervictimization</b>	<i>n</i> = 13,402			<i>n</i> = 13,402			<i>n</i> = 6,628			<i>n</i> = 6,774		
Opposite- gender love	1			1 <sup>c</sup>			1 <sup>c</sup>			1 <sup>c</sup>		
Same- gender love	<b>5.27</b>	< .001	<b>(3.55–7.81)</b>	<b>4.53</b>	< .001	<b>(3.02–6.78)</b>	<b>5.20</b>	< .001	<b>(2.92–9.24)</b>	<b>3.77</b>	< .001	<b>(2.09–6.78)</b>
Both- gender love	<b>5.61</b>	< .001	<b>(3.89–8.09)</b>	<b>5.11</b>	< .001	<b>(3.53–7.40)</b>	<b>5.51</b>	< .001	<b>(2.85–10.68)</b>	<b>4.81</b>	< .001	<b>(3.05–7.58)</b>
Never been in love	0.75	.086	(0.54–1.04)	<b>0.60</b>	<b>.004</b>	<b>(0.42–0.84)</b>	0.85	.539	(0.51–1.42)	<b>0.42</b>	< .001	<b>(0.26–0.70)</b>
Non-responders	<b>1.59</b>	< .001	<b>(0.94–2.71)</b>	1.34	.289	(0.78–2.31)	1.53	.241	(0.75–3.13)	1.14	.760	(0.48–2.71)

cOR = crude odds ratio. aOR = adjusted odds ratio. For better readability, we have bolded statistically significant odds ratios (*p* < .05). <sup>a</sup> Controlled for gender, country, relative family affluence and bullying victimization. <sup>b</sup> Controlled for country, relative family affluence and bullying perpetration. <sup>c</sup> Controlled for gender, country, and relative family affluence.