Identifying adolescents' victimization experiences: a latent profile analysis approach

Igor Peras[1] · Tina Pivec[1] · Anja Kališnik[2] · Katja Košir[3]

Abstract

This study investigates the profiles of students involved in different forms of victimization using a person-centered approach. It examines the associated psychosocial characteristics, including bullying perpetration, peer support, self-perceived personality, loneliness, social self-concept, and negative affect. A sample of 2081 students (59% girls; $M_{age} = 15.49$, $SD = 1.51$) was analyzed. Latent profile analysis (LPA) identified three distinct profiles based on experiences of verbal, relational, and cyber victimization: nonvictims (89.8%), moderate victims (5.3%), and severe victims (4.9%). The analysis revealed significant differences among the profiles, with severe victims exhibiting the poorest psychosocial outcomes, characterized by high levels of loneliness, negative affect, and poor social self-concept. Moderate victims showed similarities to nonvictims in most characteristics, yet their role in bullying perpetration suggests they might be bully-victims. Nonvictims demonstrated the most favorable psychosocial profile. These findings indicate that victimization experiences are heterogeneous, with severe victims being the most negatively impacted. The study highlights the importance of differentiating between levels of victimization in research and practice to better address the needs of affected students. Future research should further explore the nuanced roles of moderate victims and the implications for intervention strategies.

Keywords Adolescents · Bullying · Latent profile analysis · Psychosocial characteristics · Victimization

Introduction

Bullying is a major issue in schools. Involvement in bullying has many serious consequences for all participants, especially the victims (Bettencourt et al., 2023; Kaltiala-Heino et al., 2010; Moore et al., 2017). A student can be victimized in different ways (e.g., physical, verbal, relational, and cyber) at the same time. Although the experiences of individual students differ, some similar patterns of victimization emerge based on person-centered approaches (Barboza, 2015; Brown et al., 2017; Nylund et al., 2007; Zhao et al., 2023; Zhou et al., 2024). In the present study, we applied Latent Profile Analysis (LPA) to self-reported students' rates of verbal victimization, relational victimization, and cyber victimization. Variables previously shown to be associated with victimization (bullying perpetration, peer support, self-perceived popularity, social self-concept, loneliness, and negative affect) were used to distinguish between profiles. The present study contributes to a more detailed understanding of bullying victimization experiences in three ways. First, we used established and psychometrically sound measures of bullying behavior, enabling us to distinguish between three victimization types (verbal, relational, and cyber). Second, by using LPA, we applied a robust person-centered statistical procedure to the data. Third, students were classified into victimization profiles based on similar victimization experiences depending on the data collected (i.e., latent profiles). Consequently, the measures we used

✉ Igor Peras
   igor.peras@pei.si

   Tina Pivec
   tina.pivec@pei.si

   Anja Kališnik
   anja.kalisnik@cviu-velenje.si

   Katja Košir
   katja.kosir@um.si

1 Educational Research Institute, Gerbičeva ulica 62, 1000 Ljubljana, Slovenia

2 Center for Upbringing, Education and Training, Kidričeva cesta 19, 3320 Velenje, Slovenia

3 Department of Psychology, Faculty of Arts, University of Maribor, Koroška cesta 160, 2000 Maribor, Slovenia

did not predetermine which profile students belong to, but were profiled together based on empirical data.

Defining victimization and its impact on students

The most common definition states that bullying occurs when a student is exposed, repeatedly, and over time, to the negative actions of one or more students (Olweus, 2013). This definition emphasizes intentional negative or aggressive acts that occur repeatedly and over time and a certain imbalance of power or strength between the bully and victim, which makes it more difficult for the victim to defend himself or herself. Bullying comprises two orthogonal dimensions, bullying perpetration and victimization, and students may be low or high in both (Menesini & Salmivalli, 2017). In the current study, victimization is examined while simultaneously considering students' level of bullying perpetration when assessing its associations with victimization profiles. Contemporary bullying research has focused on three distinct types of bullying and victimization (Hymel & Swearer, 2015; Menesini & Salmivalli, 2017): physical (e.g., hitting, pushing, or kicking), verbal (e.g., name calling and threats), and relational bullying (e.g., spreading rumors and social exclusion). In addition, cyberbullying has attracted increased research interest in the last 10 years (Kowalski et al., 2014; Santre, 2023; Zych et al., 2019). Positioning cyberbullying as a form of bullying or as a separate aggressive behavior related to bullying has been the subject of debate (Olweus & Limber, 2018). In the present study, cyber victimization is conceptualized as a form of victimization equal to physical, verbal, and relational victimization, as it corresponds to the measures used.

Victimization occurs in institutional settings at all educational stages; with some students being victimized throughout their schooling (Oncioiu et al., 2020). Victimization tends to decrease with age as students' progress through school (Craig et al., 2009; Nylund et al., 2007; Pouwels et al., 2016), that is, students are victimized less as they get older. However, some authors (Salmivalli et al., 2021; Yeager et al., 2015) have suggested that this holds for direct types of bullying (e.g., physical), whereas indirect types of bullying increase in adolescence. In addition, victimization can have a greater effect on adolescents than on pre-adolescents (Kljakovic & Hunt, 2016), especially considering the fact that in adolescence social status in the peer group is of upmost importance (Salmivalli et al., 2021). Nevertheless, repeated exposure to victimization affects students' current and future physical, psychological, relational, and general well-being (Menesini & Salmivalli, 2017). Meta-analyses of longitudinal studies have shown victimization to be associated with internalizing problems (Reijntjes et al., 2010), depression (Ttofi et al., 2011), and psychosomatic issues (Gini & Pozzoli, 2009).

Students experience different patterns and frequencies of victimization (Berkowitz et al., 2015; Oncioiu et al., 2020; Zhou et al., 2024). If a student experiences one type of victimization, then it is more likely that he or she will experience multiple types (Nylund et al., 2007; Zhao et al., 2023). Hence, multiple simultaneous victimization experiences should be considered. Person-centered approaches are thus necessary to assess students based on similar victimization experiences.

Person-centered approaches in previous victimization research

Person-centered approaches are needed in bullying research to classify students who share a common pattern of experiences into groups (Bradshaw et al., 2015; Huang & Chui, 2024). They can be viewed as a response to variable-centered approaches (e.g. such as MANOVA analyses), in which students are classified into roles (e.g. victims, bullies) based on a cut-off criteria (typically one *SD* above or below the average for a given variable) (Kim et al., 2023). According to Howard & Hoffman (2018) variable-centered approaches focus on relationships between variables, while person-centered approaches are designed to identify subgroups within a population. Examples of person-centered approaches include LCA (Latent Class Analysis – based on categorical data) and LPA (Latent Profile Analysis – based on continuous data). Muthen & Muthen (1998–2021) define Latent Profile Analysis as a multivariate statistical model used to investigate the underlying grouping variables beyond observed scores with the use of continuous indicators. In other words, it identifies unobserved data (i.e. latent profiles). Thus, LPA and LCA differ by the type of variables used as indicators in the respective models. This approach minimizes classification errors (Morin & Litalien, 2019) and addresses limitations of the variable-centered approaches. Both LPA and LCA have been used in victimization studies to define victim profiles or classes according to the severity or type of victimization (Nylund et al., 2007; Zhao et al., 2023). However, LPA seems to be the preferred method as it considers both frequency and severity (Ashrafi et al., 2020).

Previous studies employing person-centered approaches have identified varying numbers of victim groups, including three (Nylund et al., 2007; Wang et al., 2010), four (Barboza, 2015; Berkowitz et al., 2015; Bradshaw et al., 2015; Gini et al., 2019), and five (Brown et al., 2017; Zhou et al., 2024). A consistent finding across these studies is the identification of a non-victimized group of students (Barboza, 2015; Berkowitz et al., 2015; Gini et al., 2019; Nylund et al., 2007; Wang et al., 2010; Zhou et al., 2024). The classification of

other victimized groups varies due to differing conceptualizations of victimization. Therefore, it is crucial to consider study design elements, such as distinguishing between two types of victimization (traditional or cyber, as in Gini et al., 2019) or four types (relational, verbal, physical, and cyber, as in Bradshaw et al., 2015), as these distinctions affect classification outcomes. Examples of identified victimization groups using person-centered approaches include severe bully-victims, relational bully-victims, moderate bully-victims, and victim profiles (Zhou et al., 2024); bullying passive bystanders, victimized active defenders, uninvolved passive bystanders, and uninvolved active defenders (Kim et al., 2023); and profiles differentiated based on emotional and behavioral problems (Balan et al., 2023) or perceived social support (Huang & Chui, 2024). Studies have also shown that latent groups of students differ based on gender. For example, Zhang et al. (2020) identified high, moderate, and low victimization classes for girls, with an additional verbal victimization class for boys. These findings highlight the potential and practical implications of using person-centered approaches in bullying and victimization study designs.

Students' characteristics associated with peer victimization

Various factors have been associated with students' bullying experiences. In the present study, we focused on the characteristics of students that have been previously linked to victimization. These characteristics encompass both individual traits and the students' status within their peer groups.

Bullying

Rather than being mutually exclusive, bullying and victimization may be reinforcing − students can be involved in both bullying perpetration and victimization (Marsh et al., 2011; Menesini & Salmivalli, 2017; Zhou et al., 2024). The correlations between bullying and victimization are typically low (Marsh et al., 2011) to moderate (Košir et al., 2018). Higher correlations are reported when bullying perpetration and victimization are assessed via self-reports rather than peer reports (Bouman et al., 2012). Previous studies have indicated that students who are involved in bullying as both victims and bullies (so-called bully−victims) represent a distinct group with psychosocial characteristics that are different from those of pure victims (Menesini & Salmivalli, 2017; Zhou et al., 2024). Bully-victims were found to have the greatest difficulties among all groups of bullying participants, including patterns of internalizing and externalizing problems (Kelly et al., 2015; Veenstra et al., 2005), as well as reporting the lowest peer support and teacher support

compared to other groups of student (Pivec et al., 2023). Thus, it seemed reasonable to include students' level of self-reported bullying in the present study so that pure victims and bully−victims could potentially be distinguished.

Perceived social support

Bullying is a social phenomenon; students with marginalized social status within their peer group are more likely to be victims of bullying (Hodges & Perry, 1999). Less socially connected students, or as Juvonen & Schacter (2017) describe them, "the least fitting classmates," are easy targets because no one stands up for them. Consequently, students who receive support from their peers are less likely to be victims, as their network of friends can potentially defend them in bullying situations. Perceived social support, typically measured as students' self-reported peer support in the classroom, is therefore one of the major protective factors against bullying victimization (Košir et al., 2020; Sainio et al., 2011). Profiles of victimization have also been shown to vary based on perceived social support (Huang & Chui, 2024).

Popularity

Popularity typically refers to students' perceived power and social status within the peer group (Mayeux & Cillessen, 2008). Unpopular students are vulnerable targets for bullies because they lack defenders (Hodges & Perry, 1999). Studies have consistently linked low popularity to both traditional and cyber victimization (Cook et al., 2010; de Bruyn et al., 2010; Katzer et al., 2009). Cyber victims often report experiencing traditional bullying as well and tend to be less popular (Vandebosch & Van Cleemput, 2009). According to Wachs (2012), students who perceive themselves as unpopular are four times more likely to be victims of traditional bullying and three times more likely to be victims of cyberbullying compared to their popular peers. Thus, low popularity consistently emerges as a significant risk factor for victimization (Romera et al., 2019). Conversely, some evidence suggests a curvilinear relationship between victimization and perceived popularity, with both unpopular and popular students reporting instances of victimization (Andrews et al., 2016).

Loneliness

Loneliness is defined as a negative emotional state where an individual perceives their social needs, both in terms of quality and quantity, as unmet (Campbell, 2013). This emotional state is characterized by feelings of disconnection from desired individuals or groups (Rokach, 2012).

A significant consequence of bullying victimization is an exacerbation of loneliness (Graham et al., 2006; Madsen et al., 2024). Victims of bullying commonly report heightened feelings of loneliness (Fleming & Jacobsen, 2009). Findings from a global survey across 28 countries indicate that the likelihood of experiencing loneliness increases with higher levels of victimization (Due et al., 2005). Regarding different types of victimization, there is a robust association between loneliness and both traditional and cyberbullying (Eden et al., 2016; Madsen et al., 2024; Matthews et al., 2022; Olenik-Shemesh et al., 2012). Comparative studies reveal that victims of traditional or cyberbullying report greater feelings of loneliness compared to non-victims, with those experiencing both forms reporting the highest levels of loneliness (Brighi et al., 2012). Moreover, the relationship between victimization and loneliness is bidirectional. Evidence suggests that lonely students are perceived as more vulnerable and are therefore more likely to be targeted for victimization (Eden et al., 2016; Scholte et al., 2007).

Social self-concept

Social self-concept develops from students' social interactions, encompassing their satisfaction with peer relationships, social skills, and acceptance by peers (Hawker & Boulton, 2000). Numerous studies consistently demonstrate that victimized students, whether through traditional or cyberbullying, exhibit lower levels of general and social self-concept compared to their non-victimized peers (Brighi et al., 2012; Cénat et al., 2014; Cook et al., 2010; Hawker & Boulton, 2000; Kowalski & Limber, 2013). The relationship between self-concept and social experiences, such as victimization, is likely reciprocal. Students with low self-concept are more vulnerable to victimization, as they are seen as easy targets for peers seeking to elevate their social standing through bullying. This victimization, in turn, worsens their low social self-concept. Furthermore, research by Košir et al. (2018) indicated that the negative association between social self-concept and victimization was more pronounced for verbal and relational victimization compared to physical victimization in a large cohort of early adolescent students.

Negative affect

Negative affect is a general dimension of subjective distress and unpleasurable engagement. It is present in various aversive mood states (e.g., anger, contempt, disgust, guilt, fear, and nervousness (Watson et al., 1988). Dill et al. (2004), based on longitudinal data, found that an increase in victimization was associated with an increase in negative affect. An increase in both relational victimization and overt victimization has predicted an increase in negative affect

(Martin & Huebner, 2007). Meanwhile, Jiang et al. (2020) concluded that an increase in daily peer victimization was associated with an increase in negative affect. Therefore, victims of bullying consistently report feelings of negative affect.

The present study

Previous research has shown that students encounter different victimization experiences, but there are some similar patterns of victimizations highlighted by person centered approaches. Although groups of students might differ between studies, the results show that students experiencing the most victimization typically have the poorest psychosocial outcomes (Bradshaw et al., 2015; Nylund et al., 2007).

Even if victimization is a well-researched domain in bullying research, there are still some evident research gaps. Present research does typically measure various forms of victimization experiences of students, but these different forms are typically not in focus in the respective research designs (e.g. Balan et al., 2023; Huang & Chui, 2024; Kim et al., 2023). More can be done to understand how different types of victimizations relate to the experience of victimization as a whole. For example, a student can be victimized verbally at school and this is then continued in the form of cyber victimization after school hours. Furthermore, there seems to be a gap in the literature concerning LPA and the different types of victimization (i.e. verbal, relational, cyber). While studies have started to consistently apply person-centered approaches in victimization research most has been done by use of LCA (e.g. Berkowitz et al., 2015; Bradshaw et al., 2015; Nylund et al., 2007) while study designs using LPA have only started gaining traction (e.g. Huang & Chui, 2024; Kim et al., 2023). In our view, measuring victimization at the continuous level is necessary for thoroughly understanding the complexity of victimization. Thus, more has to be done in regards to the use of LPA and victimization research. Finally, the combination of variables such as bullying perpetration, peer support, self-perceived popularity, loneliness, social self-concept, and negative affect remains relatively unresearched using person-centered approaches.

The present study aims to address the mentioned gaps by using LPA to distinguish between victimization profiles based on experiences of verbal, relational and cyber victimization. We aim to apply LPA to account for the continuous data using victimization measures that have been previously shown to be robust measures of victimization and bullying (Košir et al., 2020, 2022; Pivec et al., 2023). This approach enables the research to be led by the data collected as the defined victimization profiles can be based on the type and/ or severity of experienced victimization (Ashrafi et al., 2020). Moreover, our study aims to add to the expanding

literature on victimization and person-centered approaches by considering student psychosocial characteristics that have not been previously studied by means of LPA in terms of various victimization types (verbal, social, cyber). By including this in the research design, the study provides a novel approach to understanding how different victimization experiences co-occur or differ and how are they associated with these specific psychosocial outcomes.

Taking the above rationalization and research gaps into account, the present study made use of an LPA approach and aimed to apply it to two types of traditional victimization while also considering online victimization. Since physical victimization was found to decline during adolescence (Volk et al., 2006), it was not used as a variable in establishing student profiles according to their victimization experiences. We posed two research questions in our study design:

- Research Question 1: Which profiles of victimized students can be established using LPA?
- Research Question 2: What are the differences between victimization profiles in respect of the following variables: bullying perpetration; peer support; self-perceived popularity; loneliness; social self-concept; and negative affect?

As the research plan for the present study was exploratory in its nature (due to the novelty of the specific psychosocial characteristics in person-centered victimization research), we did not propose hypotheses informed by prior studies. Instead, only research questions above are of interest. The present study contributes to the bullying and victimization literature because it uses previously established bullying/ victimization measures that specifically focus on various types of bullying perpetration and victimization (Griezel et al., 2012; Marsh et al., 2011); examines a large, diverse sample of upper elementary school and high school students; and defines groups of victimized students using a robust statistical method of LPA.

Method

Participants

The present study is part of a larger research project that aimed to identify predictors of traditional bullying and cyberbullying among students in public elementary and high schools in Slovenia. The sample consisted of 2081 participants (59% girls; $M_{age} = 15.49$, $SD = 1.51$), 779 (49.8% girls; $M_{age} = 13.93$ years, $SD = 0.70$) of whom were in the final two grades of public elementary schools and 1302 (64.4% girls; $M_{age} = 16.42$ years, $SD = 1.02$) of whom were

upper-secondary students.[1] On average, participants spent 195.72 min ($SD = 143.99$) on social networks during the day. The majority of participants (81.3%) stated that they mainly used social networks to communicate with friends. Participants were randomly sampled based on their schools' responses to a call for participants. Consequently, the sample is not fully representative; however, as it includes students from both rural and urban schools as well as students from various upper-secondary educational programs, it reflects the typical characteristics of adolescents in this age group in Slovenia.

Measures

Bullying perpetration and victimization

The Adolescent Peer Relations Instrument-Bully/Target (APRI-BT; Parada, 2000) was used to measure bullying perpetration and victimization. It captures bullying perpetration and victimization in verbal, physical, and relational subdomains. The questionnaire consists of 36 items divided into two sections, bullying perpetration and victimization. In the present study, the verbal and relational subscales (6 items per bullying/victimization subdomain) were used. The verbal bullying (e.g., "I teased them by saying things to them.") and relational bullying (e.g., "I got my friends to turn against a student") subscales asked students to assess the frequency of behaviors against other students on a 6-point Likert scale (from 1 = *never* to 6 = *every day*), while the verbal victimization (e.g., "I was teased by students saying things to me") and relational victimization (e.g., "A student wouldn't be friends with me because other people didn't like me") subscales asked students how often they were subject to such behaviors. In the present study, all subscales showed good internal consistency (verbal bullying: 0.86; relational bullying: 0.75; verbal victimization: 0.90; and relational victimization: 0.87).

Cyberbullying perpetration and cybervictimization The Revised Adolescent Peer Relations Instrument-Bully/Target (RAPRI-BT; Griezel et al., 2012), which upgrades and supplements the APRI-BT (Parada, 2000), was used to measure cyberbullying perpetration and cyber victimization. The questionnaire consists of 26 items and is divided into two sections: cyberbullying and cyber victimization. The cyberbullying subscale asks students to state how often they

---

[1] Compulsory basic education in Slovenia is organized into a single-structure (ISCED1 and ISCED2) 9-year basic schooling for students aged 6 to 15 years. The next stage after 9 years of compulsory basic education is two-to-five-year non-compulsory upper secondary education (general education, vocational, and technical education) beginning at the age of 15 (Taštanoska, 2021).

engaged in a series of behaviors (e.g., "In the past year at this school, I used a cell phone to send a video of a student that I knew would embarrass him/her") on a 6-point Likert scale (from 1 = *never* to 6 = *every day*) and the cyber victimization subscale asks how often students experienced bullying behaviors (e.g., "In the past year at this school, a rude picture message was sent to my cell phone"). In the present study, both scales had good reliability (i.e., cyberbullying: 0.84; cyber victimization: 0.88).

Peer support

The Classroom Life Instrument (CLI; Johnson et al., 1983) was used to measure peer support. In the present study, only the students' peer support dimension (comprising 5 items) was included. The peer support subscale measures the level of support that an individual perceives as receiving from his or her classmates on a 5-point Likert scale (from 1 = *never true* to 5 = *always true*). Respondents rate how often they agreed with a particular statement (e.g., "My classmates like me the way I am"). In the present study, reliability was 0.87.

Self-perceived popularity

Students' popularity was measured using a single self-report item ("How popular are you compared to other students in your class?") on a 5-point Likert scale (from 1 = *much less than most others* to 5 = *much more than most others*).

Loneliness

The UCLA Loneliness Scale (Russell et al., 1980) was used to measure one's subjective feelings of loneliness and social isolation. The scale consists of 20 items asking respondents how often they feel the way the item describes (e.g., "How often do you feel that you lack companionship?") rated on a 4-point Likert scale (from 1 = *never* to 4 = *often*). In the present study, reliability was excellent (α = 0.90).

Social self-concept

Social self-concept was measured by using The Self-Description Questionnaire (SDQ II; Marsh et al., 2004). It measures several dimensions of adolescents' self-concept, but only social self-concept (e.g., "I have a lot of friends") was used in the present study. Students expressed their agreement with 10 items on a 5-point Likert scale (from 1 = *false* to 5 = *true*). In the present study, reliability was excellent (α = 0.89).

Negative affect

The Brief Measure of Positive and Negative Affect (PANAS; Watson et al., 1988) was used to measure negative affect (e.g., "feeling irritable"). Students were asked how often they experienced the described feelings and emotions on a 5-point Likert scale (from 1 = *very slightly or not at all* to 5 = *extremely*). The reliability of the scale was good (α = 0.83).

Procedure

Our convenience sample included 12 public elementary schools and 8 high schools in Slovenia. In return for their cooperation, recommendations for bullying and cyberbullying prevention together with the specific feedback from the study findings were delivered to each school. Before the data were collected, we obtained informed parental consent from the participants' parents. The data were gathered during school hours in a paper-pencil format by a trained researcher who provided instructions and answered the participants' questions. Participation was voluntary and anonymous. The study was approved by a local ethics committee.

Data analysis

First, descriptive statistics and correlations were examined and confirmatory latent analysis and latent profile analysis (LPA) were performed using Mplus Version 8.6 (Muthén & Muthén, 1998–2021). This software is commonly used to identify latent subgroups of participants, and in our case, different types of victimization (verbal, relational, and cyber; Nylund-Gibson & Choi, 2018). It has been recommended by other researchers (e.g., Nylund et al., 2007) because it is model-based and allows the mathematical evaluation of the data. The modeling process commenced by estimating a 1-profile LPA model; afterwards, we increased the number of profiles while considering how adding another profile affected the model fit indices, which are guidelines when deciding upon the number of profiles (Nylund-Gibson & Choi, 2018). First, the following fit indices were considered: (a) information criteria, which included the Bayesian Information Criterion (BIC) and the Sample-size adjusted Bayesian Information Criterion (SABIC), where we preferred the profile solution with the lowest value of information criteria; and (b) likelihood-based test: the Vuong-Lo-Mendell-Rubin Adjusted Likelihood Ratio Test (VLMR-LRT). Second, entropy as an index of the classification of individuals into profiles (values > 0.80) and average posterior probabilities as an index of good separation of individuals into their most likely profile (AvePP; values > 0.70) were examined. These served as guidelines for the assessment of

profile differentiation (Masyn, 2013). While LPA allows a mathematical evaluation of the data represented by a model, it has been suggested that the interpretability and utility of the results should also be considered when deciding upon the number of profiles (Masyn, 2013). Third, differences in profiles' predictors were examined using Welch's analysis of variance (ANOVA) tests since data had unequal variances and were followed by post-hoc tests (i.e., Games-Howell correction as the data showed unequal variances). Finally, multinomial logistic regression and the Bolck-Croon-Hagenaars approach (BCH) were used to examine the different types of bullying perpetration, peer support, self-perceived popularity, loneliness, social self-concept, and negative affect across the latent victimization profiles (Asparouhov & Muthen, 2021). The BCH approach is recommended for continuous variables because it avoids profile changes and is susceptible to differences in the variance of auxiliary variables across latent profiles (Asparouhov & Muthen, 2021).

Results

Descriptive statistics

Descriptive statistics and correlations were examined (see Table 1). The correlations show that all included types of victimization and bullying perpetration were positively correlated. Furthermore, peer support and social self-concept were negatively correlated to all types of victimization. Self-reported popularity was negatively correlated with verbal and relational victimization and positively correlated with cyber victimization. Loneliness and negative affect were both positively correlated with all types of victimization.

Profile Identification

First, model fit indices for one-to-four-profile solutions were compared; these are presented in Table 2, together with the probability test. Model fit indices did not indicate a proper solution as BIC was constantly decreasing, possibly as a result of using a larger sample (Marsh et al., 2009). The probability test (i.e., VLMR-LRT) was significant for a three-profile solution but not for a four-profile solution, suggesting that the former was a better one. Additionally, entropy and average posterior probabilities (AvePP) were analyzed. Entropy was excellent (0.97), indicating that the classification of individuals into profiles was successful. Average posterior probabilities values were higher than 0.90, indicating that the great majority of participants were positioned into their most likely profile. It was also important to consider the theoretical explanation of the profiles. Even though small profiles were extracted—around 5% of

Table 1 Descriptive statistics and correlations of the sample

Variable	M	SD	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
1. Gender	/	/											
2. Verbal victimization	1.80	0.93	-0.06^{**}										
3. Relational victimization	1.45	0.72	0.10^{**}	0.70^{**}									
4. CV	1.29	0.43	-0.04^{*}	0.57^{**}	0.54^{*}								
5. Verbal bullying	1.94	0.91	-0.22^{**}	0.41^{**}	0.23^{**}	0.42^{**}							
6. Relational bullying	1.42	0.58	0.01	0.34^{**}	0.33^{**}	0.46^{**}	0.66^{**}						
7. CB	1.40	0.47	-0.10^{**}	0.33^{**}	0.22^{**}	0.55^{**}	0.67^{**}	0.64^{**}					
8. Peer support	3.40	0.80	-0.10^{**}	-0.29^{**}	-0.37^{**}	-0.14^{**}	0.00	-0.04	-0.02				
9. Loneliness	2.06	0.51	0.13^{**}	0.28^{**}	0.39^{**}	0.19^{**}	0.01	0.09^{**}	0.03	-0.48^{**}			
10. Self-reported popularity	3.00	0.85	-0.19^{**}	-0.07^{**}	-0.19^{**}	0.05^{*}	0.22^{**}	0.16^{**}	0.21^{**}	0.46^{**}	-0.34^{**}		
11. Social self-concept	3.69	0.79	-0.18^{**}	-0.23^{**}	-0.34^{**}	-0.12^{**}	0.05^{*}	-0.03	0.03	0.57^{**}	-0.73^{**}	0.51^{**}	
12. Negative affect	2.68	0.72	0.33^{**}	0.17^{**}	0.23^{**}	0.14^{**}	0.02	0.11^{**}	0.07^{**}	-0.24^{**}	0.47^{**}	-0.22^{**}	-0.43^{**}

CV cyber victimization; CB: cyberbullying; * $p<.05$, ** $p<.01$, *** $p<.001$

Table 2 Latent profile fit statistics for different forms of victimization with covariates (Fit Statistics Without Covariates in Brackets)

Profile	BIC	SABIC	VLMR-LRT (p value)	Entropy
1	11836.38 (9011.08)	11804.61 (8982.49)	/	/
2	7825.08 (7820.17)	7780.60 (7778.87)	<.001 (<0.001)	0.98 (0.98)
3	7337.73 (7345.77)	7277.36 (7291.76)	0.014 (0.020)	0.97 (0.97)
4	6873.82 (6886.27)	6797.57 (6819.55)	0.300 (0.160)	0.97 (0.97)

BIC Bayesian Information Criterion, *SABIC* Sample-Size Adjusted Bayesian Information Criterion, *VLMR-LRT* Vuong-Lo-Mendell-Rubin Adjusted Likelihood Ratio Test

Table 3 Means and standard errors of different forms of victimization across latent subgroups

Form of victimization	Severe victims	Moderate victims	Nonvictims	F
Verbal victimization[a]	2.16 (0.25)	1.64 (0.16)	−0.22 (0.01)	485.01[***]
Relational victimization[b]	2.12 (0.18)	0.32 (0.08)	−0.14 (0.01)	436.51[***]
Cyber victimization[c]	1.01 (0.15)	0.63 (0.12)	−0.10 (0.01)	111.54[***]

Welch's ANOVA was used as the data exhibited unequal variances.
[a]$F(2, 144.45)$, [b]$F(4, 144.83)$, [c]$F(4, 144.53)$

the participants were involved in each of the two profiles of victims—we believe that the analysis included real self-reported victims in both profiles. After both mathematical and theoretical evaluations were considered, we decided to include gender as a predictor of profiles. Adding the covariate to the model did not make extreme changes in the distribution of participants. Profile counts, entropy, and AvePP remained adequate.

The final profile classification is presented in Table 3 (i.e., means, standard errors, and profile comparison).
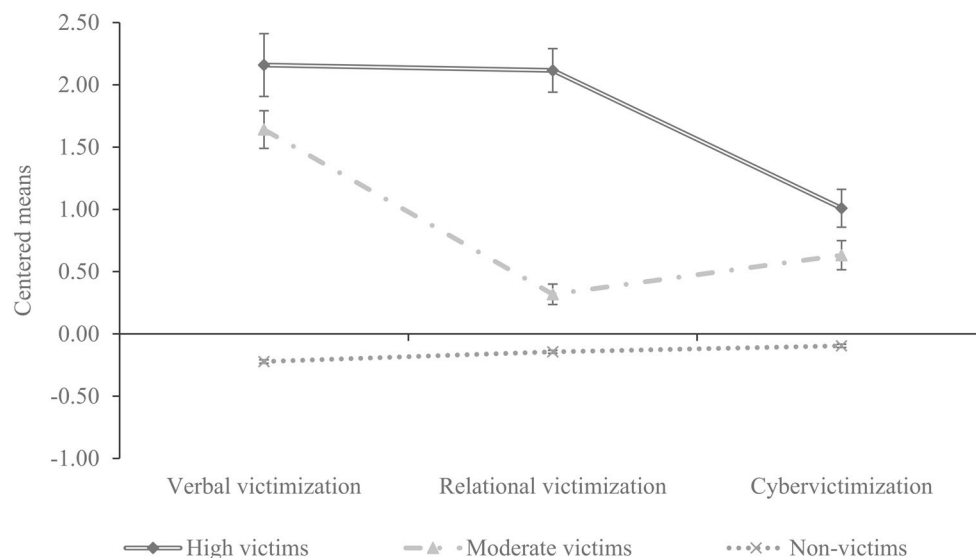
Quantitatively, Welch's ANOVA tests together with post hoc tests showed that all profiles differed in each of the predictors (verbal, relational, and cyber victimization) that were included in the LPA (all $ps < 0.05$). Figure 1 shows that profiles mostly differed according to the degree of victimization. The first profile, severe victims ($n = 102$; 4.9%), comprised participants who reported the highest degree of all types of victimization. The second profile, moderate victims ($n = 111$; 5.3%), comprised participants who reported moderate degrees of all types of victimization but in particular reported higher cyber victimization and verbal victimization. The third profile, nonvictims ($n = 1868$; 89.8%), comprised participants who reported the lowest degree of all types of victimization.

Differences between profiles according to types of bullying, peer support, self-perceived popularity, loneliness, social self-concept, and negative affect

After participants were classified into profiles according to the degree of victimization, established profiles were compared according to different types of bullying, peer support, social self-concept, self-perceived popularity, loneliness, and negative affect. To examine the differences, the BCH approach was applied. The Wald's chi-square tests—for Wald's chi-square statistics and p values, see Table 4—revealed that all characteristics differed significantly across profiles.

Profiles were first examined according to their degree of verbal, relational, and cyberbullying perpetration (Fig. 2). Moderate victims reported the highest degree of verbal bullying and were followed by severe victims. The lowest occurrence of verbal bullying was reported by nonvictims. Severe and moderate victims did not differ in relational bullying, while nonvictims had the lowest degree of relational

Fig. 1 Mean scores of verbal, relational, and cyber victimization in identified profiles

Table 4 Means and standard errors of auxiliary variables and tests of mean differences across subgroups

Means (Standard Errors)	Verbal bullying	Relational bullying	CB	Peer support	Social self-concept	Self-reported popularity	Loneliness	Negative affect
M (SE)								
Severe victims	0.69 (0.13)	0.54 (0.08)	0.20 (0.05)	−0.97 (0.07)	−0.94 (0.08)	2.37 (0.10)	0.19 (0.02)	0.46 (0.09)
Moderate victims	1.61 (0.14)	0.42 (0.07)	0.52 (0.06)	0.00 (0.07)	0.08 (0.10)	3.26 (0.12)	−0.01 (0.02)	−0.05 (0.10)
Nonvictims	−0.13 (0.02)	−0.06 (0.01)	−0.04 (0.01)	0.06 (0.01)	0.05 (0.02)	3.00 (0.02)	−0.01 (0.00)	−0.03 (0.02)
Overall test (Wald χ^2)†	179.69***	95.47***	106.31***	228.09***	145.30***	40.96***	86.13***	26.26***
Pairwise tests (Wald χ^2)‡								
Severe victims vs. moderate victims	141.01***	1.30	16.17***	106.42***	65.14***	32.03***	45.49***	14.11***
Severe victims vs. nonvictims	40.89***	57.58***	23.12***	228.06***	144.68***	35.27***	86.09***	26.06***
Moderate victims vs. nonvictims	22.13***	39.13***	84.75***	0.67	0.06	4.82*	0.01	0.06

*$p < .05$, **$p < .01$, ***$p < .001$. †All tests have 1 degree of freedom. ‡All tests have 3 degrees of freedom. *CB* cyberbullying

Fig. 2 Comparison of identified profiles in verbal, relational, and cyberbullying
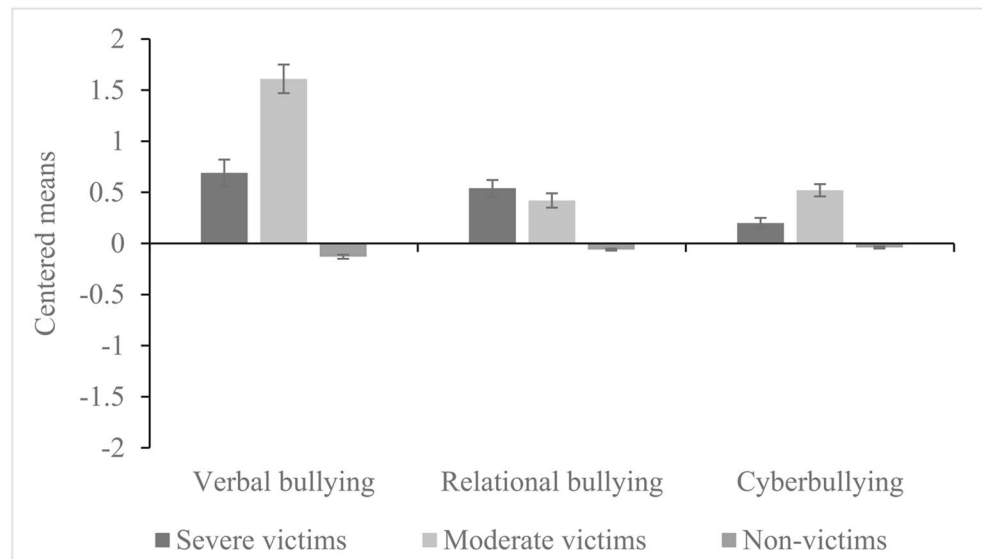
bullying. As for cyberbullying, moderate victims reported the highest degree, followed by severe victims. As with the other types of bullying, nonvictims reported the lowest degree of cyberbullying perpetration.

Several other psychosocial characteristics were then examined. First, differences in peer support and social self-concept were investigated (Fig. 3). There were no differences in peer support or social self-concept between moderate victims and nonvictims, while severe victims reported the lowest peer support and the lowest social self-concept.

Profiles were also observed according to their degree of self-reported popularity (Fig. 4). Moderate victims perceived themselves as the most popular, followed by nonvictims. Severe victims reported the lowest popularity among all profiles.

Finally, the profiles were examined for loneliness and negative affect (Fig. 5). There were no differences between nonvictims and moderate victims. Severe victims reported the highest degree of feelings of loneliness. Similar results applied to negative affect; nonvictims and moderate victims were alike and severe victims reported the highest negative affect.

Discussion

Prior research on bullying victimization has mostly depended on variable-centered approaches, with the shift in recent years beginning to transition toward person-centered approaches to thoroughly understand victimization experiences. In the present study, we applied Latent Profile Analysis (LPA) to categorize students (a convenience sample of both primary and upper-secondary students from urban and rural schools) into profiles based on their reported

Fig. 3 Comparison of identified profiles for peer support and social self-concept
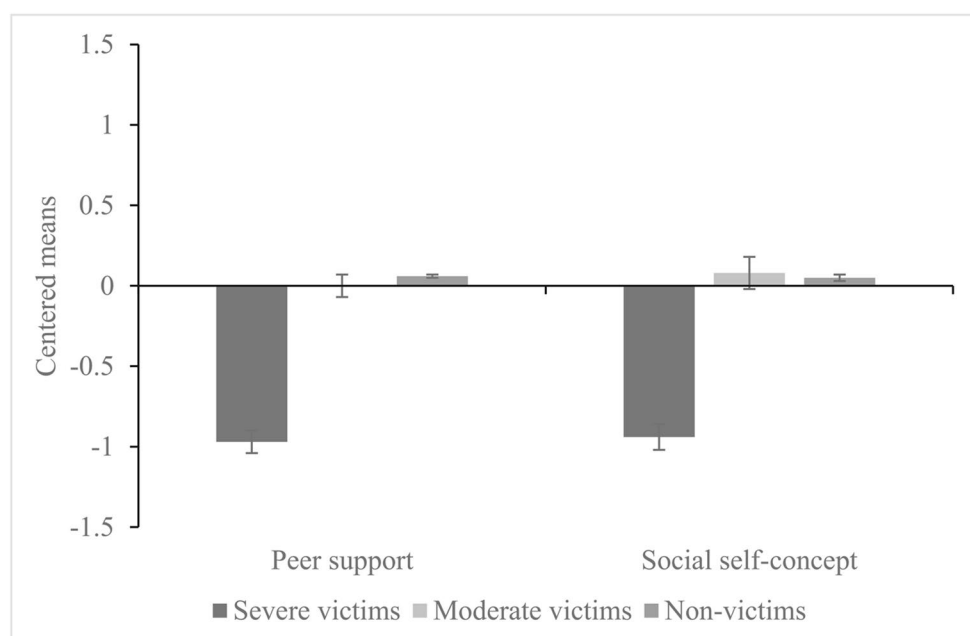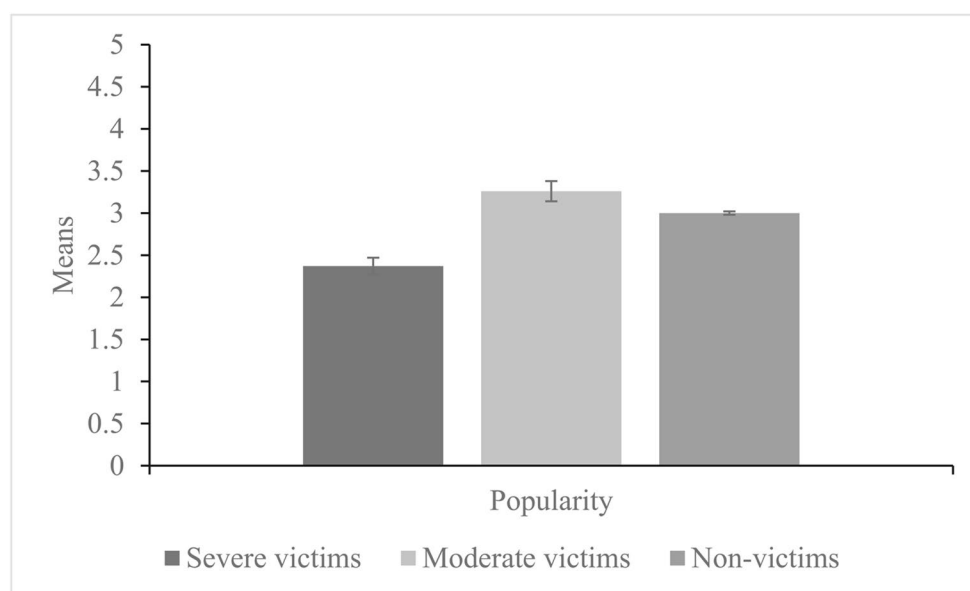

**Fig. 4** Comparison of identified profiles for self-reported popularity

experiences of verbal, relational, and cyber victimization. The methods used prevented us from overlooking the distinctive patterns of victimization experiences among students as has been the case previously (Zhou et al., 2024). Moreover, differences between the identified victimization profiles were also assessed based on students' characteristics (i.e., bullying perpetration, peer support, self-perceived popularity, loneliness, social self-concept, and negative affect). Findings from the profile classification generated three profiles: nonvictims, moderate victims, and severe victims. Significant differences between profiles in terms of each psychosocial characteristic were found with severe victims reporting the worst psychosocial outcomes.

In accordance with the findings of several previous studies (e.g. Ashrafi et al., 2020; Nylund et al., 2007), we classified students based on the degree (i.e., frequency) of victimization. LPA analysis was used to divide victims into ordered classes (Bradshaw et al., 2013), with each subsequent profile reporting an escalation of victimization experiences compared with the previous one. However, inside the profiles, there were some differences regarding the type of victimization as well.

Approximately nine out of 10 students were classified into the nonvictims profile. This is consistent with previous research findings in which nonvictimized students formed the most prevalent profile (e.g. Ashrafi et al., 2020; Barboza,

Fig. 5 Comparison of identified profiles for loneliness and negative affect
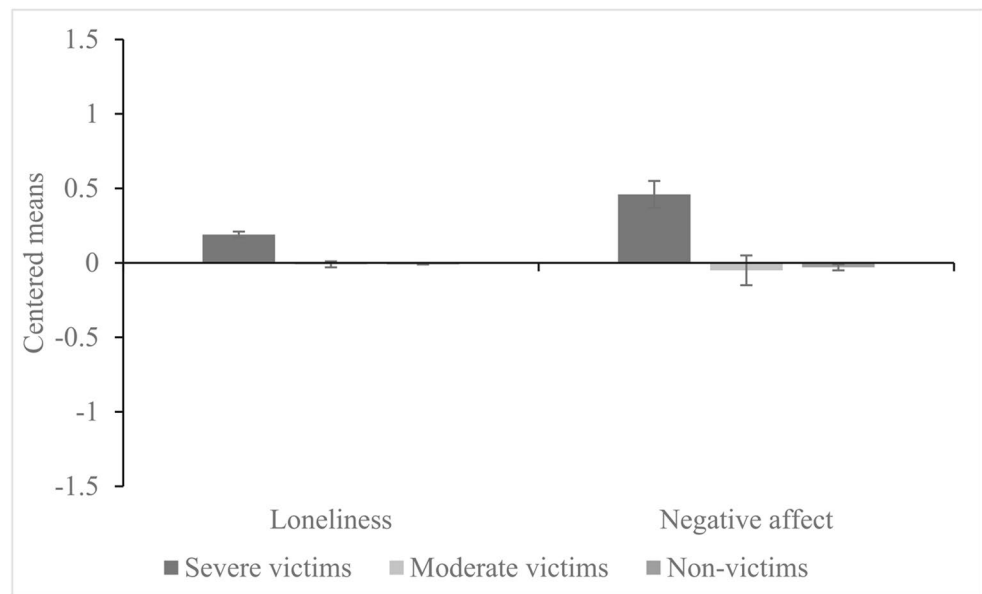
2015; Berkowitz et al., 2015; Zhou et al., 2024). The remaining students were divided equally into moderate and severe victim profiles. The classification of students as severe victims, moderate victims and non-victims corresponds to similar profiles identified by Zhang et al. (2020) with no gender differences reported in our study. In terms of proportions, unlike Ashrafi et al. (2020) and Nylund et al. (2007), who also derived profiles based on victimization frequency, our results classified a larger proportion of students in the nonvictim profile. A possible explanation for this contrast could be the age range of participants; the aforementioned studies were performed on samples of early adolescents, while our study included a broader age range from early to middle adolescence. Furthermore, the number of non-victimized students in our study is higher than reported in a similar-aged sample studied by Zhou et al. (2024). The proportion of students in the nonvictims and severe-victims profiles were more comparable with the proportions reported by Barboza (2015), who conducted research on students of similar age and, along with the nonvictimized and high victimized profiles, found two profiles that differed according to victimization type. Consequently, as some similarities with previous findings are reported, we can also observe inconsistencies in victimization studies using person-centered approaches as also elaborated by Zhou et al. (2024).

To answer Research Question 2, we investigated differences between victimization profiles in terms of psychosocial characteristics. Moderate victims reported the highest levels of verbal bullying and cyberbullying, while there was no difference between severe victims and moderate victims in relational bullying. Nonvictims, as was expected, were the lowest in bullying perpetration. Although bullying perpetration variables were used to differentiate the profiles,

moderate victims may have transitioned from bully and victim roles (i.e., bully−victims), as Kochel et al. (2015) and Antoniadou et al. (2019) also discovered in their studies using person-centered approaches. Moreover, in the case of relational bullying, it is possible (especially in severe cases) that victims actively tried to avoid certain students who bullied them and encouraged their peer group to do the same, which may have subsequently been reported on the relational bullying scale. This assumption might be addressed in future studies. Furthermore, the results may have been the result of using self-report measures of bullying and victimization which can have issues distinguishing between bullying and general aggression (Williford & DePaolis, 2019), even when students are provided with a definition of traditional bullying and cyberbullying.

In the present study, the sharpest distinction was between severe victims and nonvictims. The former reported the highest levels of loneliness and negative affect, as well as the lowest levels of peer support and social self-concept, while the latter reported the highest levels of peer support and lowest levels of loneliness and negative affect. Based on this, we can conclude that there is evidence of differences in psychosocial characteristics between students who report the most victimization compared to students who do not report victimization experiences. This is in line with previous research where the most severe victims had the poorest psychosocial profile, especially compared with nonvictims (Antoniadou et al., 2019; Ashrafi et al., 2020; Nylund et al., 2007).

Moderate victims are of particular interest, as they had the highest levels of self-reported popularity, while scores in loneliness, negative affect, social self-concept, and peer support did not differ from nonvictims. Our findings accord

with those of Malamut et al. (2021), who found a subgroup of victims who were also high in self-perceived popularity, which contrasts with the traditional notion that victims are low in popularity (de Bruyn et al., 2010; Wachs, 2012). However, a curvilinear relationship between popularity and victimization has been proposed before (Andrews et al., 2016). Moreover, it seems that moderate victims, who were characterized by high self-reported verbal victimization, were more similar to nonvictims than severe victims in their psychosocial characteristics. Thus, these students may have been not only victims but also bullies. As was mentioned above, moderate victims also reported the highest levels of verbal bullying perpetration, thus indicating how verbal bullying and verbal verbalization are intertwined. Social learning theory (Bandura, 1973) argues that people often imitate aggressive behavior when they witness or experience it. This may have applied in the case of moderate victims and verbal victimization. Thus, it is possible that victimization characterized by an imbalance of power only occurred in situations when verbal victimization was accompanied by relational victimization. There may be two explanations for this. First, moderate victims may not have been victims at all, as self-report measures inadequately capture the power imbalance in bullying (Nelson et al., 2019), though they were characterized as victims due to the high prevalence of reported verbal aggression. Second, moderate victims may have been bully−victims because they had the highest verbal bullying and cyberbullying scores.

Theoretical contributions

This study makes several theoretical contributions to the understanding of bullying. First, through the application of a person-centered approach, the study identified a distinct co-occurrence of multiple victimization types—verbal, relational, and cyber. The findings reveal that victimization rarely occurs in isolation; students frequently reported simultaneous experiences of different types of victimization. However, variations in the intensity of specific victimization types were observed within the severity-based profiles (non-victims, moderate victims, and severe victims). This suggests that students perceive themselves not as victims of a singular form of victimization but as experiencing overlapping forms (Nylund et al., 2007; Zhao et al., 2023). For instance, a student reporting moderate cyber victimization also reported moderate verbal and relational victimization.

Second, this study advances knowledge by integrating traditional forms of victimization (verbal and relational) with cyber victimization. Despite its inclusion as a distinct type of victimization, the results indicate that cyber victimization functions as an extension of traditional bullying rather than a standalone phenomenon. Consistent

with Barboza's findings (2015), cyber victimization was not observed independently in any of the identified profiles. This finding contributes to the ongoing debate about whether cyberbullying is equivalent to traditional bullying forms (e.g., physical, verbal, or relational) or represents a distinct phenomenon (Olweus & Limber, 2018). The present results align with Olweus's (2012) view, supporting the notion of cyberbullying as an extension rather than a separate form of aggression.

Third, the study underscores the necessity of a nuanced understanding of different victim groups. The findings suggest that moderate victims may, in fact, represent bully-victims—a transitional group of students occupying multiple roles within the bullying framework. This observation provides valuable insights into the reciprocal relationship between victimization and perpetration, emphasizing the fluidity of roles in bullying dynamics.

Practical implications

From a practical perspective, this study highlights the complexity of bullying, emphasizing that it resists simplistic or unreflective interpretations. As some students may not fit the traditional notion of "pure victims," practitioners should approach suspected cases of bullying with careful deliberation. The findings underscore the critical need for teacher training programs that cultivate reflective observation skills, encouraging educators to examine not only their students and classroom dynamics but also their own perceptions, attitudes, and beliefs. Such training equips teachers to adopt a multifaceted perspective, addressing the needs of victims, bullies, and bystanders alike. Additionally, practitioners must be vigilant about power imbalances inherent in aggressive interactions. Finally, practitioners might also benefit from programs enhancing their digital literacy to be able to better address the occurrences of cyberbullying.

For students, the identification of distinct victimization profiles gives evidence to the importance of targeted interventions tailored to the unique needs of different groups. Severe victims, characterized by the poorest psychosocial outcomes, could benefit from participation in support programs that focus on alleviating loneliness, reducing negative affect, and improving social self-concept. Moderate victims, by contrast, may require interventions emphasizing peer support and fostering positive social interactions, while concurrently addressing bullying perpetration.

At the policy level, the findings advocate for the adoption of a whole-school approach to bullying prevention. Such an approach should prioritize the cultivation of inclusive school climates and the promotion of robust peer support networks. Recognizing that bullying behaviors are often concealed from teachers, policies should actively involve all

stakeholders, including students, teachers, and other school personnel, to create a unified front against bullying.

Finally, while the study offers valuable insights, the generalizability of the findings beyond the current sample warrants cautious consideration. The Slovenian sample reflects the unique cultural and educational context of this population, suggesting the need for replication of the results in other international settings. Nevertheless, the relatively large sample size enhances the reliability and validity of the current findings.

Limitations, strengths and future directions

The present study has several limitations. First, it only included self-report measures. The participants evaluated their perceptions of being victimized, and this may have led to common method bias. We recommend that methodological triangulation be incorporated into future studies (e.g., combing self-reports with peer reports) so that bullying experiences can be captured more precisely. Second, because of the cross-sectional research design, we were unable to conclude that the victimization profiles and associated psychosocial characteristics of the participants were stable over time. Causal interpretations should also be avoided.

One important strength of our study compared with those that have used single-item measures to assess different types of victimization (e.g. Berkowitz et al., 2015; Bradshaw et al., 2013) is our use of psychometrically sound measures of victimization, which enhance the validity of the LPA. In addition, the measures were based on the same theoretical framework and used the same rating scale; this tended not to be the case in previous studies.

Future studies should address types of behaviors that can be indicators of verbal victimization and attempt to determine power imbalances. Also, given that the study did not produce a distinct cyber victim profile, future studies might continue to examine both traditional types of victimization and cyber victimization. Moreover, longitudinal research designs are needed to explore the stability of victimization profiles over time and their long-term implications for psychosocial outcomes. Additional studies could also incorporate data from multiple sources, such as peer and teacher reports, to triangulate findings and address potential biases in self-report measures.

Conclusions

Research on bullying victimization typically used variable-centered approaches that underestimate the presence of distinct victimization patterns. Using a person-centered approach, this study explored differences of student victimization experiences. The present study revealed that nine out of 10 participants did not consider themselves victims of bullying, and the remaining 10% revealed that victimization experiences were not uniform for all victims. Even though this points to the fact that most students do not report victimization experiences, it provides strong support that 2 students in a classroom of 20 are likely being victimized by their peers. The most severely victimized students had the poorest psychosocial profile and could be considered pure victims, while the students who reported moderate victimization could be regarded either as bully−victims due to their reported levels of bullying perpetration, or perhaps even as nonvictims who nevertheless experienced aggression. These findings offer strong empirical support for the idea that victimized students are a heterogenous group in terms of victimization they experience and underscore differences in several students' characteristics that can contribute to different outcomes in terms of mental health for these students. This opens possibilities for future studies that measure more reliably the power imbalance between students, especially those who report some but not severe victimization (as was the case with moderate victims). Empirical evidence based on the sample used shows that relational victimization is the prototypical form of victimization in adolescence; it distinguished severely and moderately victimized students and was associated with negative psychosocial outcomes.

Declarations

References

Andrews, N. C. Z., Hanish, L. D., Updegraff, K. A., Martin, C. L., & Santos, C. E. (2016). Targeted victimization: exploring linear and curvilinear associations between social network prestige and victimization. *Journal of Youth and Adolescence*, *45*(9), 1772–1785. https://doi.org/10.1007/s10964-016-0450-1

Antoniadou, N., Kokkinos, C. M., & Fanti, K. A. (2019). Traditional and cyber bullying/victimization among adolescents: Examining their psychosocial profile through Latent profile analysis. *International Journal of Bullying Prevention*, *1*(2), 85–98. https://doi.org/10.1007/s42380-019-00010-0

Ashrafi, A., Feng, C. X., Neudorf, C., & Alphonsus, K. B. (2020). Bullying victimization among preadolescents in a community-based sample in Canada: A latent class analysis. *BMC Research Notes*, *13*(1), 138. https://doi.org/10.1186/s13104-020-04989-4

Asparouhov, T., & Muthen, B. (2021). Auxiliary variables in mixture modeling: Using the BCH method in Mplus to estimate a distal outcome model and an arbitrary secondary model. *Mplus Web Notes*, *21*(2), 1–22.

Balan, R., Dobrean, A., Balazsi, R., & Cordier, R. (2023). A latent profile analysis of emotional, behavioral, and social problems among victims of bullying. *Psychology in the Schools*, *60*(11), 4563–4575. https://doi.org/10.1002/pits.22998

Bandura, A. (1973). *Aggression: A social learning analysis*. Prentice-Hall.

Barboza, G. E. (2015). The association between school exclusion, delinquency and subtypes of cyber- and F2F-victimizations: Identifying and predicting risk profiles and subtypes using latent class analysis. *Child Abuse & Neglect*, *39*, 109–122. https://doi.org/10.1016/j.chiabu.2014.08.007

Berkowitz, R., De Pedro, K. T., & Gilreath, T. D. (2015). A Latent class analysis of victimization among middle and high school students in California. *Journal of School Violence*, *14*(3), 316–333. https://doi.org/10.1080/15388220.2014.980424

Bettencourt, A. F., Clary, L. K., Ialongo, N., & Musci, R. J. (2023). Long-term consequences of bullying involvement in first grade. *Journal of School Psychology*, *97*, 63–76. https://doi.org/10.1016/j.jsp.2023.01.004

Bouman, T., Van Der Meulen, M., Goossens, F. A., Olthof, T., Vermande, M. M., & Aleva, E. A. (2012). Peer and self-reports of victimization and bullying: Their differential association with internalizing problems and social adjustment. *Journal of School Psychology*, *50*(6), 759–774. https://doi.org/10.1016/j.jsp.2012.08.004

Bradshaw, C. P., Waasdorp, T. E., & O'Brennan, L. M. (2013). A latent class approach to examining forms of peer victimization. *Journal of Educational Psychology*, *105*(3), 839–849. https://doi.org/10.1037/a0032091

Bradshaw, C. P., Waasdorp, T. E., & Johnson, S. L. (2015). Overlapping verbal, relational, physical, and electronic forms of bullying in adolescence: Influence of school context. *Journal of Clinical Child & Adolescent Psychology*, *44*(3), 494–508. https://doi.org/10.1080/15374416.2014.893516

Brighi, A., Guarini, A., Melotti, G., Galli, S., & Genta, M. L. (2012). Predictors of victimisation across direct bullying, indirect bullying and cyberbullying. *Emotional and Behavioural Difficulties*, *17*(3–4), 375–388. https://doi.org/10.1080/13632752.2012.704684

Brown, C. F., Demaray, M. K., Tennant, J. E., & Jenkins, L. N. (2017). Cyber victimization in high school: Measurement, overlap with Face-to-Face victimization, and associations with social–emotional outcomes. *School Psychology Review*, *46*(3), 288–303. https://doi.org/10.17105/SPR-2016-0004.V46-3

Campbell, M. A. (2013). Loneliness, social anxiety and bullying victimization in young people: A literature review. *Psychology and Education*, *50*(3/4), 1–9.

Cénat, J. M., Hébert, M., Blais, M., Lavoie, F., Guerrier, M., & Derivois, D. (2014). Cyberbullying, psychological distress and self-esteem among youth in Quebec schools. *Journal of Affective Disorders*, *169*, 7–9. https://doi.org/10.1016/j.jad.2014.07.019

Cook, C. R., Williams, K. R., Guerra, N. G., Kim, T. E., & Sadek, S. (2010). Predictors of bullying and victimization in childhood and adolescence: A meta-analytic investigation. *School Psychology Quarterly*, *25*(2), 65–83. https://doi.org/10.1037/a0020149

Craig, W., Harel-Fisch, Y., Fogel-Grinvald, H., Dostaler, S., Hetland, J., Simons-Morton, B., Molcho, M., de Mato, M. G., Overpeck, M., Due, P., & Pickett, W. (2009). A cross-national profile of bullying and victimization among adolescents in 40 countries. *International Journal of Public Health*, *54*(S2), 216–224. https://doi.org/10.1007/s00038-009-5413-9

de Bruyn, E. H., Cillessen, A. H. N., & Wissink, I. B. (2010). Associations of peer acceptance and perceived popularity with bullying and victimization in early adolescence. *The Journal of Early Adolescence*, *30*(4), 543–566. https://doi.org/10.1177/0272431609340517

Dill, E. J., Vernberg, E. M., Fonagy, P., Twemlow, S. W., & Gamm, B. K. (2004). Negative affect in victimized children: The roles of social withdrawal, peer rejection, and attitudes toward bullying. *Journal of Abnormal Child Psychology*, *32*(2), 159–173. https://doi.org/10.1023/B:JACP.0000019768.31348.81

Due, P., Holstein, B. E., Lynch, J., Diderichsen, F., Gabhain, S. N., Scheidt, P., & Currie, C. (2005). Bullying and symptoms among school-aged children: International comparative cross sectional study in 28 countries. *European Journal of Public Health*, *15*(2), 128–132. https://doi.org/10.1093/eurpub/cki105

Eden, S., Heiman, T., & Olenik-Shemesh, D. (2016). Bully versus victim on the internet: The correlation with emotional-social characteristics. *Education and Information Technologies*, *21*(3), 699–713. https://doi.org/10.1007/s10639-014-9348-2

Fleming, L. C., & Jacobsen, K. H. (2009). Bullying and symptoms of depression in Chilean middle school students. *Journal of School Health*, *79*(3), 130–137. https://doi.org/10.1111/j.1746-1561.2008.0397.x

Gini, G., & Pozzoli, T. (2009). Association between bullying and psychosomatic problems: A meta-analysis. *PEDIATRICS*, *123*(3), 1059–1065. https://doi.org/10.1542/peds.2008-1215

Gini, G., Marino, C., Xie, J. Y., Pfetsch, J., & Pozzoli, T. (2019). Associations of traditional and peer cyber-victimization with adolescents' internet use: A Latent profile analysis. *Cyberpsychology: Journal of Psychosocial Research on Cyberspace*, *13*(4). https://doi.org/10.5817/CP2019-4-1

Graham, S., Bellmore, A. D., & Mize, J. (2006). Peer Victimization, Aggression, and Their Co-Occurrence in Middle School: Pathways to Adjustment Problems. *Journal of Abnormal Child Psychology*, *34*(3), 349–364. https://doi.org/10.1007/s10802-006-9030-2

Griezel, L., Finger, L. R., Bodkin-Andrews, G. H., Craven, R. G., & Yeung, A. S. (2012). Uncovering the structure of and gender and developmental differences in cyber bullying. *The Journal of Educational Research*, *105*(6), 442–455. https://doi.org/10.1080/00220671.2011.629692

Hawker, D. S. J., & Boulton, M. J. (2000). Twenty years' research on peer victimization and psychosocial maladjustment: A meta-analytic review of cross-sectional studies. *Journal of Child Psychology and Psychiatry*, *41*(4), 441–455. https://doi.org/10.1111/1469-7610.00629

Hodges, E. V. E., & Perry, D. G. (1999). Personal and interpersonal antecedents and consequences of victimization by peers. *Journal of Personality and Social Psychology*, *76*(4), 677–685.

Howard, M. C., & Hoffman, M. E. (2018). Variable-centered, person-centered, and person-specific approaches: Where theory meets the method. *Organizational Research Methods*, *21*(4), 846–876. https://doi.org/10.1177/1094428117744021

Huang, Y., & Chui, H. (2024). Bullying victims' perceived social support and psychological health and prosocial behavior: A Latent profile analysis. *Journal of Youth and Adolescence*, *53*(7), 1683–1698. https://doi.org/10.1007/s10964-024-01954-3

Hymel, S., & Swearer, S. M. (2015). Four decades of research on school bullying: An introduction. *American Psychologist*, *70*(4), 293–299. https://doi.org/10.1037/a0038928

Jiang, Y., Li, X., Zilioli, S., Zhao, J., & Zhao, G. (2020). Effects of peer victimization and perceived social support on daily negative affect and sleep outcomes. *Journal of Child and Family Studies*, *29*(5), 1374–1384. https://doi.org/10.1007/s10826-019-01656-6

Johnson, D. W., Johnson, R., & Anderson, D. (1983). Social interdependence and classroom climate. *The Journal of Psychology*, *114*(1), 135–142. https://doi.org/10.1080/00223980.1983.9915406

Juvonen, J., & Schacter, H. L. (2017). Bullying in school and online contexts. In *The Wiley Handbook of Group Processes in Children and Adolescents* (pp. 315–332). https://doi.org/10.1002/9781118773123.ch15

Kaltiala-Heino, R., Fröjd, S., & Marttunen, M. (2010). Involvement in bullying and depression in a 2-year follow-up in middle adolescence. *European Child & Adolescent Psychiatry*, *19*(1), 45–55. https://doi.org/10.1007/s00787-009-0039-2

Katzer, C., Fetchenhauer, D., & Belschak, F. (2009). Cyberbullying: Who are the victims? *Journal of Media Psychology*, *21*(1), 25–36. https://doi.org/10.1027/1864-1105.21.1.25

Kelly, E. V., Newton, N. C., Stapinski, L. A., Slade, T., Barrett, E. L., Conrod, P. J., & Teesson, M. (2015). Suicidality, internalizing problems and externalizing problems among adolescent bullies, victims and bully-victims. *Preventive Medicine*, *73*, 100–105. https://doi.org/10.1016/j.ypmed.2015.01.020

Kim, I., Lee, H. Y., Hong, J. S., Carney, J. V., & Hazler, R. J. (2023). Profiles of participation in school bullying: Association with student well-being. *Journal of Counseling & Development*, *101*(2), 224–235. https://doi.org/10.1002/jcad.12458

Kljakovic, M., & Hunt, C. (2016). A meta-analysis of predictors of bullying and victimisation in adolescence. *Journal of Adolescence*, *49*, 134–145. https://doi.org/10.1016/j.adolescence.2016.03.002

Kochel, K. P., Ladd, G. W., Bagwell, C. L., & Yabko, B. A. (2015). Bully/victim profiles' differential risk for worsening peer acceptance: The role of friendship. *Journal of Applied Developmental Psychology*, *41*, 38–45. https://doi.org/10.1016/j.appdev.2015.05.002

Košir, K., Pivec, T., Klasinc, L., Špes, T., & Horvat, M. (2018). Psihosocialne značilnosti učencev kot napovedniki različnih oblik medvrstniške viktimizacije in nasilnega vedenja (Psychosocial characteristics of students as predictors of various types of victimization and bullying). Psihološka obzorja / Horizons of Psychology, 171–186. https://doi.org/10.20419/2018.27.494

Košir, K., Klasinc, L., Špes, T., Pivec, T., Cankar, G., & Horvat, M. (2020). Predictors of self-reported and peer-reported victimization and bullying behavior in early adolescents: The role of school, classroom, and individual factors. *European Journal of Psychology of Education*, *35*(2), 381–402. https://doi.org/10.1007/s10212-019-00430-y

Košir, K., Zorjan, S., Mikl, A., & Horvat, M. (2022). Social goals and bullying: Examining the moderating role of self-perceived popularity, social status insecurity and classroom variability in popularity. *Social Development*, *31*(2), 438–454. https://doi.org/10.1111/sode.12547

Kowalski, R. M., & Limber, S. P. (2013). Psychological, physical, and academic correlates of cyberbullying and traditional bullying. *Journal of Adolescent Health*, *53*(1), S13–S20. https://doi.org/10.1016/j.jadohealth.2012.09.018

Kowalski, R. M., Giumetti, G. W., Schroeder, A. N., & Lattanner, M. R. (2014). Bullying in the digital age: A critical review and meta-analysis of cyberbullying research among youth. *Psychological Bulletin*, *140*(4), 1073–1137. https://doi.org/10.1037/a0035618

Madsen, K. R., Damsgaard, M. T., Petersen, K., Qualter, P., & Holstein, B. E. (2024). Bullying at school, cyberbullying, and loneliness: national representative study of adolescents in Denmark. *International Journal of Environmental Research and Public Health*, *21*(4), 414. https://doi.org/10.3390/ijerph21040414

Malamut, S. T., Dawes, M., Van Den Berg, Y., Lansu, T. A. M., Schwartz, D., & Cillessen, A. H. N. (2021). Adolescent victim types across the popularity status hierarchy: Differences in internalizing symptoms. *Journal of Youth and Adolescence*, *50*(12), 2444–2455. https://doi.org/10.1007/s10964-021-01498-w

Marsh, H. W., Parada, R. H., & Ayotte, V. (2004). A multidimensional perspective of relations between self-concept (Self Description Questionnaire II) and adolescent mental health (Youth Self-Report). *Psychological Assessment*, *16*(1), 27–41. https://doi.org/10.1037/1040-3590.16.1.27

Marsh, H. W., Lüdtke, O., Trautwein, U., & Morin, A. J. S. (2009). Classical Latent profile analysis of academic self-concept dimensions: Synergy of person- and variable-centered approaches to theoretical models of self-concept. *Structural Equation Modeling: A Multidisciplinary Journal*, *16*(2), 191–225. https://doi.org/10.1080/10705510902751010

Marsh, H. W., Nagengast, B., Morin, A. J. S., Parada, R. H., Craven, R. G., & Hamilton, L. R. (2011). Construct validity of the multidimensional structure of bullying and victimization: An application of exploratory structural equation modeling. *Journal of Educational Psychology*, *103*, 701–732. https://doi.org/10.1037/a0024122

Martin, K. M., & Huebner, E. S. (2007). Peer victimization and prosocial experiences and emotional well-being of middle school students. *Psychology in the Schools*, *44*(2), 199–208. https://doi.org/10.1002/pits.20216

Masyn, K. E. (2013). Latent Class Analysis and Finite Mixture Modeling. In T. D. Little (Ed.), *The Oxford Handbook of Quantitative Methods in Psychology: Vol. 2: Statistical Analysis*. Oxford University Press. https://doi.org/10.1093/oxfordhb/9780199934898.013.0025

Matthews, T., Caspi, A., Danese, A., Fisher, H. L., Moffitt, T. E., & Arseneault, L. (2022). A longitudinal twin study of victimization and loneliness from childhood to young adulthood. *Development and Psychopathology, 34*(1), 367–377. https://doi.org/10.1017/S0954579420001005

Mayeux, L., & Cillessen, A. H. N. (2008). It's not just being popular, it's knowing it, too: The role of self-perceptions of status in the associations between peer status and aggression. *Social Development*, *17*(4), 871–888. https://doi.org/10.1111/j.1467-9507.2008.00474.x

Menesini, E., & Salmivalli, C. (2017). Bullying in schools: The state of knowledge and effective interventions. *Psychology Health & Medicine*, *22*(sup1), 240–253. https://doi.org/10.1080/13548506.2017.1279740

Moore, S. E., Norman, R. E., Suetani, S., Thomas, H. J., Sly, P. D., & Scott, J. G. (2017). Consequences of bullying victimization in childhood and adolescence: A systematic review and meta-analysis. *World Journal of Psychiatry*, *7*(1), 60. https://doi.org/10.5498/wjp.v7.i1.60

Morin, A. J. S., & Litalien, D. (2019). Mixture modeling for lifespan developmental research. In A. J. S. Morin, & D. Litalien (Eds.), *Oxford Research Encyclopedia of Psychology*. Oxford University Press. https://doi.org/10.1093/acrefore/9780190236557.013.364

Muthén, L. K., & Muthén, B. O. (1998–2021). *Mplus user's guide* (8th ed.). Muthuén & Muthén.

Nelson, H. J., Kendall, G. E., Burns, S. K., Schonert-Reichl, K. A., & Kane, R. T. (2019). Measuring 8 to 12 year old children's self-report of power imbalance in relation to bullying: Development of the Scale of Perceived Power Imbalance. *Bmc Public Health*, *19*(1), 1046. https://doi.org/10.1186/s12889-019-7375-z

Nylund, K., Bellmore, A., Nishina, A., & Graham, S. (2007). Subtypes, severity, and structural stability of peer victimization: What does Latent class analysis say? *Child Development*, *78*(6), 1706–1722. https://doi.org/10.1111/j.1467-8624.2007.01097.x

Nylund-Gibson, K., & Choi, A. Y. (2018). Ten frequently asked questions about latent class analysis. *Translational Issues in Psychological Science*, *4*(4), 440–461. https://doi.org/10.1037/tps0000176

Olenik-Shemesh, D., Heiman, T., & Eden, S. (2012). Cyberbullying victimisation in adolescence: Relationships with loneliness and depressive mood. *Emotional and Behavioural Difficulties,* *17*(3–4), 361–374. https://doi.org/10.1080/13632752.2012.704227

Olweus, D. (2012). Cyberbullying: An overrated phenomenon? *European Journal of Developmental Psychology*, *9*(5), 520–538. https://doi.org/10.1080/17405629.2012.682358

Olweus, D. (2013). School bullying: Development and some important challenges. *Annual Review of Clinical Psychology*, *9*(1), 751–780. https://doi.org/10.1146/annurev-clinpsy-050212-185516

Olweus, D., & Limber, S. P. (2018). Some problems with cyberbullying research. *Current Opinion in Psychology*, *19*, 139–143. https://doi.org/10.1016/j.copsyc.2017.04.012

Oncioiu, S. I., Orri, M., Boivin, M., Geoffroy, M. C., Arseneault, L., Brendgen, M., Vitaro, F., Navarro, M. C., Galéra, C., Tremblay, R. E., & Côté, S. M. (2020). Early childhood factors associated with peer victimization trajectories from 6 to 17 years of age. *Pediatrics*, *145*(5), e20192654. https://doi.org/10.1542/peds.2019-2654

Parada, R. H. (2000). *Adolescent Peer Relations Instrument: A theoretical and empirical basis for the measurement of participant roles in bullying and victimisation of adolescence: An interim test manual and a research monograph: A test manual.*

Pivec, T., Horvat, M., & Košir, K. (2023). Psychosocial characteristics of bullying participants: A person-oriented approach combining self- and peer-report measures. *Children and Youth Services Review,* *144*, 106720. https://doi.org/10.1016/j.childyouth.2022.106720

Pouwels, J. L., Souren, P. M., Lansu, T. A. M., & Cillessen, A. H. N (2016). Stability of peer victimization: A meta-analysis of longitudinal research. *Developmental Review*, *40*, 1–24. https://doi.org/10.1016/j.dr.2016.01.001

Reijntjes, A., Kamphuis, J. H., Prinzie, P., & Telch, M. J. (2010). Peer victimization and internalizing problems in children: A meta-analysis of longitudinal studies. *Child Abuse & Neglect*, *34*(4), 244–252. https://doi.org/10.1016/j.chiabu.2009.07.009

Rokach, A. (2012). Loneliness Updated: An Introduction. *The Journal of Psychology*, *146*(1–2), 1–6. https://doi.org/10.1080/00223980.2012.629501

Romera, E. M., Bravo, A., Ortega-Ruiz, R., & Veenstra, R. (2019). Differences in perceived popularity and social preference between bullying roles and class norms. *PLOS ONE*, *14*(10), e0223499. https://doi.org/10.1371/journal.pone.0223499

Russell, D., Peplau, L. A., & Cutrona, C. E. (1980). The revised UCLA loneliness scale: Concurrent and discriminant validity evidence. *Journal of Personality and Social Psychology*, *39*(2), 472–480. https://doi.org/10.1037/0022-3514.39.3.472

Sainio, M., Veenstra, R., Huitsing, G., & Salmivalli, C. (2011). Victims and their defenders: A dyadic approach. *International Journal of Behavioral Development*, *35*(2), 144–151. https://doi.org/10.1177/0165025410378068

Salmivalli, C., Laninga-Wijnen, L., Malamut, S. T., & Garandeau, C. F. (2021). Bullying prevention in adolescence: Solutions and new challenges from the past decade. *Journal of Research on Adolescence*, *31*(4), 1023–1046. https://doi.org/10.1111/jora.12688

Santre, S. (2023). Cyberbullying in adolescents: A literature review. *International Journal of Adolescent Medicine and Health*, *35*(1), 1–7. https://doi.org/10.1515/ijamh-2021-0133

Scholte, R. H. J., Engels, R. C. M. E., Overbeek, G., De Kemp, R. A. T., & Haselager, G. J. T. (2007). Stability in bullying and victimization and its association with social adjustment in childhood and adolescence. *Journal of Abnormal Child Psychology*, *35*(2), 217–228. https://doi.org/10.1007/s10802-006-9074-3

Taštanoska, T. (Ed.). (2021). *The education system in the Republic of Slovenia 2021/2022*. Ministry of Education, Science and Sport of the Republic of Slovenia.

Ttofi, M. M., Farrington, D. P., Lösel, F., & Loeber, R. (2011). Do the victims of school bullies tend to become depressed later in life? A systematic review and meta-analysis of longitudinal studies. *Journal of Aggression Conflict and Peace Research*, *3*(2), 63–73. https://doi.org/10.1108/17596591111132873

Vandebosch, H., & Van Cleemput, K. (2009). Cyberbullying among youngsters: Profiles of bullies and victims. *New Media & Society*, *11*(8), 1349–1371. https://doi.org/10.1177/1461444809341263

Veenstra, R., Lindenberg, S., Oldehinkel, A. J., De Winter, A. F., Verhulst, F. C., & Ormel, J. (2005). Bullying and victimization in elementary schools: A comparison of bullies, victims, bully/victims, and uninvolved preadolescents. *Developmental Psychology*, *41*(4), 672–682. https://doi.org/10.1037/0012-1649.41.4.672

Volk, A., Craig, W., Boyce, W., & King, M. (2006). Adolescent risk correlates of bullying and different types of victimization. *International Journal of Adolescent Medicine and Health*, *18*(4). https://doi.org/10.1515/IJAMH.2006.18.4.575

Wachs, S. (2012). Moral disengagement and emotional and social difficulties in bullying and cyberbullying: Differences by participant role. *Emotional and Behavioural Difficulties*, *17*(3–4), 347–360. https://doi.org/10.1080/13632752.2012.704318

Wang, J., Iannotti, R. J., Luk, J. W., & Nansel, T. R. (2010). Co-occurrence of victimization from five subtypes of bullying: Physical, verbal, social exclusion, spreading rumors, and cyber. *Journal of Pediatric Psychology*, *35*(10), 1103–1112. https://doi.org/10.1093/jpepsy/jsq048

Watson, D., Anna, L., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS Scales. *Journal of Personality and Social Psychology*, *54*(6). https://doi.org/10.1037/0022-3514.54.6.1063

Williford, A., & DePaolis, K. J. (2019). Validation of a cyber bullying and victimization measure among elementary school-aged children. *Child and Adolescent Social Work Journal*, *36*(5), 557–570. https://doi.org/10.1007/s10560-018-0583-z

Yeager, D. S., Fong, C. J., Lee, H. Y., & Espelage, D. L. (2015). Declines in efficacy of anti-bullying programs among older adolescents: Theory and a three-level meta-analysis. *Journal of Applied Developmental Psychology*, *37*, 36–51. https://doi.org/10.1016/j.appdev.2014.11.005

Zhang, S., Gong, M., Li, W., Wang, W., Wu, R., Guo, L., & Lu, C. (2020). Patterns of bullying victimization and associations with mental health problems in Chinese adolescents: A Latent Class Analysis. *International Journal of Environmental Research and Public Health*, *17*(3), 779. https://doi.org/10.3390/ijerph17030779

Zhao, B., Guo, J., He, Q., Jiang, L., & Hu, W. (2023). School bullying victimization types of primary school students and associations with school adaptation: A Latent profile analysis. *Child Indicators Research*, *16*(2), 755–775. https://doi.org/10.1007/s12187-022-09995-5

Zhou, Y., Li, J., Li, J., Wang, Y., & Li, X. (2024). Latent profiles of bullying perpetration and victimization: Gender differences and family variables. *Child Abuse & Neglect*, *149*, 106682. https://doi.org/10.1016/j.chiabu.2024.106682

Zych, I., Farrington, D. P., & Ttofi, M. M. (2019). Protective factors against bullying and cyberbullying: A systematic review of meta-analyses. *Aggression and Violent Behavior*, *45*, 4–19. https://doi.org/10.1016/j.avb.2018.06.008