Risk and protective factors of school bullying – A scoping review

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Preface

This text is a scoping review on risk and protective factors linked to school bullying written on behalf of the Friends Foundation and the World Anti-bullying Forum. The text forms the basis for the guide on what the research says about risk and protective factors connected to bullying presented at the World Anti-bullying Forum website. The guide is intended to be used as a tool for teachers, practitioners, and researchers around the world in preventing, detecting and addressing bullying. You will also find the text and the guide at the World Anti-bullying Forum website:

https://worldantibullyingforum.com/guides/a-guide-how-to-stop-bullying/

Risk and protective factors of school bullying – A scoping review

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The research on risk and protective factors related to school bullying is extensive. However, the research on risk and protective factors related to school bullying have, firstly, focused on risk rather than protective factors. Secondly, the research has mainly been based on cross-sectional and not on longitudinal studies. Although cross-sectional studies may indicate a relationship between two variables, it is hard to differentiate between causes and effects. Initially, it is also important to emphasize that risk and protective factors should not be equated with causes. In this context risk factors refer to factors or characteristics that statistically increase the likelihood of being a perpetrator or being victimized, and protective factors refers to factors or characteristics associated with a lower likelihood of negative outcomes or that reduce the impact of a risk factor. The knowledge of these factors is not only important in order to understand the phenomenon, but also to systematize this knowledge in order to identify and design interventions to prevent and remedy school bullying.

This compilation is mainly based on results from systematic and meta-analytical reviews of longitudinal studies. But it also includes findings from systematic reviews and meta-analysis of cross-sectional studies in order to deepen the understanding of certain risk and protective factors. In order to systematize the findings a social ecological framework (Bronfenbrenner, 1977; Hong & Espelage, 2012) have been used where different risk and protection factors are presented in relation to different levels of the social ecological model, i.e., the micro-, meso-, exo-, macro-, and chronosystem levels. The text also reports results related to individual and sociodemographic characteristics.

Since bullying is a relational phenomenon where individuals or groups end up in different positions or roles, it is also important to distinguish between risk and protective factors related to becoming a perpetrator or a victim.

Risk and protective factors related to bullying perpetration and bullying victimization

As mentioned above, most studies have been based on cross-sectional studies which make it difficult to say with certainty whether specific factors contribute to an increased risk of bullying perpetration and bullying victimization or not. However, in the following text, the focus will be on results from longitudinal studies, but it will also be supported by results from cross-sectional studies in order to exemplify how the risk and protective factors manifest themselves or to develop the understanding.

Table 1 shows an overall compilation of the risk and protective factors identified in previous research reviews. The text that follows describes the risk and protective factors that have been identified at each level of the social ecological model, starting with the chrono-, macro- and exosystem levels,

followed by the meso- and microsystem levels, and ending with a description of relevant individual and socio-demographic factors. The social ecological model pay attention to the role of immediate, direct, external as well as indirect environmental influences together with relationships experienced throughout the life course or development of an individual. Important relationships and influences are that of family, peers, teachers, cultural, laws, and customs. The system-levels are not independent of each other and do not function in isolation, they influence each other in a bi-directional fashion. The chronosystem covers time and all experiences that a person has endured throughout their lifetime, such as major life transitions, historical events, and puberty. The macrosystem covers the cultural and societal elements that influence the individual, such as cultural ideas and customs, socioeconomic status, ethnicity, the school system, and geographical location. The exosystem relates to formal and informal social structures that indirectly may influence the individual, such as the neighborhood, parent´s workplace and parent´s friends or mass media. The mesosystem consists of the interactions between two or more microsystems such as the home and the school, i.e., the relationships that surrounds and affect the individual directly. Finally, the microsystem consists of the immediate and explicit relationships that bi-directional influences the individual, since it encompasses the settings in which individuals has all their day-to-day experiences.

Risk and protective factors on the chrono-, macro- and exosystem levels

The research on risk and protective factors related to *the chronosystem level* is limited. The risk factors identified relates to *major life transitions* or *changes in the life course*.

   Changes in the family structure (e.g., divorce or remarried parents) has been identified as a risk factor with mixed results for aggressive behavior and bullying perpetration as well as bullying victimization (Hong & Espelage, 2012; Álvarez-García, García & Núñez, 2015), since changes in the parent-child interactions may affect the child during early childhood and adolescent in a negative way and result in negative outcomes, such as conduct problem, externalizing and internalizing problems. Based on this, consistency over the life course, in terms of a persistent family structure, could be considered a protective factor.

   Other risk factors related to historical events is **prior bullying perpetration** and **prior bullying victimization** (Hemphill, Kotevski, Tollit, Smith, Herrenkohl, Toumbourou, & Catalano, 2012). In their systematic review, Álvarez-García *et al*. (2015) found that prior participation in bullying situations, as a perpetrator or as a victim increased the likelihood of being a bully later. The findings are consistent with the results from Kljakovic & Hunt´s (2016) meta-analysis of predictors of bullying and victimization in adolescence. In their analysis of studies that explored the stability of victimization Kljakovic & Hunt (2016) found large effect sizes (ranging from Cohen's d = 0.444 to 0.573) that victimization at one time point was predictive of victimization at the following time point.

Other risk and protective factors that relates to *the chronosystem-level* in terms of change is **age**, and especially the transitions between childhood and adolescence (**puberty**). The results concerning age as a risk factor for bullying perpetration are consistent with the existence of a curvilinear relationship. The probability of being a bully perpetrator increases from grade to grade until about age 14 years, when it decreases (Álvarez-García *et al.*, 2015). Hong and Espelage (2012), argue that early adolescence is a critical period in the exploration of new social roles and the pursuit of status within the peer group which can motivate (increase the risk of) bullying during the transition from elementary to middle school. The result is consistent with Kljakovic & Hunt (2016) found that age was weakly protective against being a bully and argue that this finding aligns with the notion that bullying is not a stable behavior over time because some bullies may stop bullying as they mature. Based on this age can be seen as both a risk and a protective factor for bullying perpetration. We will return to age in the discussion on individual /socio-demographic characteristics below.

The research on risk and protective factors related to the *macrosystem level* is limited and somewhat inconsistent. However, the risk and protective factors identified relates to *cultural ideas and customs, socioeconomic status, and ethnicity.*

Studies on cultural ideas and customs in terms of societal attitudes and values are limited and somewhat inconsistent. Regarding **attitudes and values** some studies shows that certain attitudes can be a risk factor for bullying perpetration, such as tolerant attitudes towards anti-social and aggressive behaviors, competitive attitudes characterized by a desire for social success, sexist attitudes, and negative attitudes towards homosexuals (Álvarez-García et al., 2015). At the same time, attitudes and values can be a protective factor for bullying perpetration, for example positive attitudes towards sexual minorities are negatively associated with students' prejudice towards gays and lesbians, which, in turn, is positively associated with being a bully. Similarly, religious values and affiliation can either be a risk or a protective factor for bullying behavior (Hong & Espelage, 2012).

Socioeconomic status in terms of **degree of family income** has in a cross-national study carried out in 37 countries identified the degree of inequality of family income as a risk factor for bullying perpetration as well as bullying victimization (Elgar, Pickett, Pickett, Craig, Molcho, Hurrelmann & Lenzi, 2013; Khoury-Kassabri, Benbenishty, Astor & Zeira, 2004). The degree of inequality of family income is positively related to bullying perpetration and as well as bullying victimization (Jansen, Verlinden, van Berkel, Mieloo, van der Ende, Veenstra, Verhulst, Jansen & Tiemeier, 2012). This means that the greater the inequality is, the more likely it is for students to be a bully or a victim. The effect (standardized beta coefficients) was highest for bully-victims (b = 0.40), followed by bullying victimization (b = 0.29), and bullying perpetration (b = 0.25) (Elgar *et al.*, 2013).

Ethnicity is another relevant risk and protective factor related to *the macrosystem-level*. The most widespread pattern of results is that certain ethnic, racial, or cultural minorities, as well as immigrants

are more likely to be bullies than the majority group (Hong & Espelage, 2012; Álvarez-García *et al*., 2015). Studies shows a higher probability of being bullies among African American or Hispanic students than in white students in the United States and Canada. At the same time, some ethnic minority groups tend to have a lower probability of being bullies than the majority group. The patterns are similar when it comes to bullying victimization, where the probability of being victimized were higher for white American, Hispanic/Latino and Asian students. For Hispanic/Latino and Asian students, immigrant status and language/cultural barriers are significant predictors for bullying victimization. This result can be interpreted as a consequence of the process of assimilation, and the inter- as well as within-group conflicts that differences in social, economic, and educational outcomes can result in (Hong & Espelage, 2012). On the other hand, meta-analysis shows that ethnic diversity has a protective role for victimization in America at the same time as ethnic diversity may constitute a risk factor in Europe, where the focus is on immigrant backgrounds. For bullying victimization, ethnic diversity represents a risk factor at younger ages and turns into a more protective factor in secondary schools (Basilici, Palladino & Menesini, 2022)

The identified risk and protective factors related to *the exosystem-level* is very limited. The research highlights **unsafe neighborhoods** as a risk factor for both bullying perpetration and bullying victimization. The research shows that students residing in unsafe neighborhoods are likely to experience bullying victimization (Khoury-Kassabri et al., 2004), as well as bullying perpetration (Azeredo, Rinaldi, de Moraes, Levy & Menezes, 2015; Tsitsika, Barlou, Andrie, Dimitropoulou, Tzavela, Janikian & Tsolia, 2014).

The complex relation between different risk and protective factors at the chrono-, macro- and exosystem levels shows how closely intertwined they are and how they can strengthen or counteract each other. A good example can be found in the study of Jansen, et al. (2012) on how socioeconomic status (SES) of school neighborhoods is associated to bullying behavior. The result shows that all indicators of low family SES and poor school neighborhood SES were associated with an increased risk of being a bully or bully-victim, at the same time as parental educational level was the only indicator of SES related with bullying victimization.

Table 1: Risk and protective factors of bullying perpetration and bullying victimization related to different levels of the social ecological model

	Bullying perpetration		Bullying victimization	
	Risk factors	Protective factors	Risk factors	Protective factors
Chrono	Changes over the life course - Family structure Prior bullying perpetration Prior bullying victimization Age - Puberty Ethnicity	Consistency over the life course Age - Puberty Ethnicity	Changes over the life course - Family structures Prior bullying victimization Ethnicity	Consistency over the life course Ethnicity
Macro	Degree of family income Attitudes and values - Tolerant attitudes towards anti-social and aggressive behavior - Competitive attitudes - Sexist attitudes - Negative attitudes towards homosexuals - Religious values and affiliation	Attitudes and beliefs Religious values and affiliation	Degree of family income Religious values and affiliation	Attitudes and beliefs Religious values and affiliation
Exo	Unsafe neighborhoods		Unsafe neighborhoods	
Meso	***School*** Negative of conflictual school climate Interpersonal relationships - Absent anti-bullying norms - Inferior teacher support - Poor class(room) management Perceptions or feelings toward school Organizational characteristics - School and class size - Security and rules	***School*** Positive school climate Interpersonal relationships - Anti-bullying norms - Good teacher support - Efficient class(room) management - Perception of safety - A positive climate of coexistence - Teachers promoting mutual respect Perceptions or feelings toward school - Satisfaction with school - Sense of belonging - School attachment - School connectedness Organizational characteristics - School and class size - Security and rules	***School*** Conflictual school climate Interpersonal relationships - Absent anti-bullying norms - Inferior teacher support - Poor class(room) management Organizational characteristics - School and class size - Security and rules	***School*** Positive school climate Interpersonal relationships - Anti-bullying norms - Good teacher support - Efficient class(room) management - Positive student–teacher relationships - Student participation Organizational characteristics - School and class size - Security and rules

Table 1: Risk and protective factors of bullying perpetration and bullying victimization related to different levels of the social ecological model (continued)

	Bullying perpetration		Bullying victimization	
	Risk factors	Protective factors	Risk factors	Protective factors
Micro	**Family** Negative parenting - Scarce parental control, lower strictness/ supervision scores - Scarce emotional support - Negative attitudes and values transmitted - Abusive, harsh, or unsupportive home environments - Overprotective parents Inter-parental/family violence Parents' mental health Use of drugs and alcohol among family members **School (staff)** Low level of adult monitoring Low expectations from teachers towards students' performance Teacher apathy Negative relationship characterized by disruptive and aggressive behavior **Peers** Emotional support from friends Not feeling left out Number of friends Frequency of bullying behavior among the peers Anti-social peer relations - Friends of bullies, delinquents, with people with antisocial behavior or belonging to gangs Sociometric popularity	**Family** Positive parenting - Authoritative parenting - Parental control, higher strictness/supervision scores - Parents' interest in children´s schoolwork - Parent´s interest in children´s friendships - Parent´s interest in children´s activities - Closeness, trust and communication with parents - Perceived parental emotional support - Positive attitudes and values transmitted **School (staff)** High expectations from teachers towards students' performance Teacher support Good personal treatment from teachers towards students Teachers promote mutual respect and a positive climate of coexistence Clear and fair rules that are applied justly Democratic disciplinary style **Peers** Pro-social peer relations - Friends with anti-bullying attitudes	**Family** Negative parenting - Less loving, involved, and responsible - Negative family interactions - Overprotective parents - Emotionally abusive, hostile, and distant family relations Inter-parental/family violence **School (staff)** Low level of adult monitoring Negative relationship characterized by disruptive and aggressive behavior **Peers** Social isolation - Low level of peer acceptance - Low level of social support - Absence of a best friend	**Family** Positive parenting - Authoritative parenting - Parental supervision and monitoring - Parental involvement - Closeness, trust and communication with parents - Perceived parental emotional support **School (staff)** Teacher support Good personal treatment from teachers towards students Teachers promote mutual respect and a positive climate of coexistence Clear and fair rules that are applied justly **Peers** Peer acceptance Mutual and best friendships

Table 1: Risk and protective factors of bullying perpetration and bullying victimization related to different levels of the social ecological model (continued)

	Bullying perpetration		Bullying victimization	
	Risk factors	Protective factors	Risk factors	Protective factors

Individual /socio-demographic characteristics	Sex/gender
	
	Physical characteristics
	- Body Mass Index (BMI)
	- Motor skills (skill, balance, flexibility) (+)
	
	Psychological factors
	- *Externalizing problems*
	  - Impulsivity and hyperactivity
	  - Lack of empathy
	  - Aggressiveness
	  - Antisocial behavior
	- *Internalizing problems*
	  - Helplessness (-)
	  - Insecurity (-)
	  - Feeling low (-)
	  - Moodiness (-)
	  - Nervousness (-)
	  - Insomnia (-)
	  - Depressive symptoms
	  - Suicidal ideations
	
	Degree of social skills (social competence) (+)
	
	Lack of problem-solving skills
	
	Sensation seeking
	
	Conduct problems
	- Disciplinary referrals
	- Expelled from school
	
	Poor academic performance
		Self- and other-related cognitions and competencies
		
		Good academic performance
		
		Good social skills
			Sexual orientation
			
			Physical characteristics
			- Body Mass Index (BMI)
			- Motor skills (skill, balance, flexibility) (-)
			
			Psychological factors
			- *Internalizing problems*
			  - Helplessness (+)
			  - Insecurity (+)
			  - Feeling low (+)
			  - Moodiness (+)
			  - Nervousness (+)
			  - Insomnia (+)
			  - Depressive symptoms
			  - Anxiety
			
			Learning/development disabilities
			
			Degree of social skills (social competence) (-)
			
			Conduct problems
				Self- and other-related cognitions and competencies
				
				Good academic performance
				
				Good social skills

Risk and protective factors on the meso-, and microsystem levels

The risk and protective factors identified on *the mesosystem level* mainly refers to the school system, **the school climate**, i.e., the relationships that surrounds and affect the individual directly. Even if school climate is defined differently in research studies it includes **interpersonal relationships** (e.g., teacher–student relationships, cohesion); **perceptions or feelings toward school** (e.g., attachment, belonging); and (3) **organizational characteristics** of the school (e.g., school and class size, security, rules).

In their meta-analytic review of the link between school climate and violence in school Steffgen, Recchia & Viechtbauer (2013) found that an increasing **positive school climate** was related to a decrease in school violence (and vice-versa). However, the strength of the correlation varied considerably (range: −.53 to−.02) and was clearly heterogeneous. This is supported by another meta-analysis on predictors of cyberbullying, where a **negative school climate** showed a small, but significant positive effect size (r = .13) for cyberbullying perpetration (Guo, 2016). School climate has also been identified as one of the most important contextual predictors (risk factor) for bullying victimization and being a bully/victim (Cook, Williams, Guerra, Kim & Sadek, 2010; Fink, Patalay, Sharpe, & Wolpert, 2018)

If we examine the different dimensions of the school climate more closely, we find a variation in the results. When it comes to **interpersonal relationships** in terms of teacher-student relationships and cohesion, Azeredo et al. (2015) found that students in schools **without anti-bullying norms**, with **inferior teacher support**, and with **poor class management** were at increased risk of bullying perpetration. Student's **perception of safety**, **a positive climate of coexistence** and that the **teachers promote mutual respect** reduces the risk of bully perpetration (Zych, Farrington, Ttofi, 2019; Àlvarez et al., 2015; Mandira & Stoltz, 2021). Regarding bullying victimization, **positive student–teacher relationships** and **student participation** in decision making are associated with less victimization (Khoury-Kassabri et al. 2004). According to Saarento, Kärnä, Hodges & Salmivalli (2013) a **high-quality teacher-student relationship** helps to create a positive and tolerant classroom atmosphere and regulate individual students' emotions, which may counteract negative behavior to improve their social status. Predictors representing classroom norms, in terms of **prevailing antibullying attitudes**, b=-.227, z=1.67, p=.048, and negative outcome expectations of defending, b=.418, z=4.15, p=.001, predicted peer-reported victimization. At the school level, teachers' bullying-related attitudes had a contextual effect on victimization, i.e., the risk of victimization was greater in schools where teachers were less judgmental of bullying (Saarento et al., 2013). These results are also supported by the multilevel meta-analysis of ten Bokkela, Roorda, Maesa, Verschuerena & Colpin (2022), who found that higher-quality teacher-student relationships were related to less bullying perpetration and less peer victimization over time. The results showed small to medium, negative overall correlations between teacher-student relationship quality and both bullying perpetration (r = -.17, 95% CI [-.21, -.14]) and peer victimization (r = -.14, 95% CI [-.17, -.11]). **Teacher-student relationship quality** was also related to less subsequent peer victimization (b = -0.05, 95% CI [-0.08, -0.02]). The analysis also shows that the associations between teacher-student relationships and peer victimization were stronger for negative teacher-student relationship indicators (e.g., conflict) compared with positive indicators (e.g., emotional support) (ten Bokkela et al., 2022). These findings indicate that teachers and other school practitioners could invest in promoting positive and minimizing negative teacher-student relationships and by extension a negative school climate in order to counteract bullying behavior. However, it is not clear whether negative teacher-student relationships, and negative school or class climate is antecedents or consequences of bullying perpetration or bullying victimization.

This leads to questions about perceptions or feelings toward school. Regarding **perceptions or feelings toward school**, the research shows high consistency regarding the importance of **satisfaction with the school, sense of belonging, school attachment** and **school connectedness** (Hong & Espelage, 2012; Álvarez-García et al., 2015). **Satisfaction with and belonging to the school** is protective factors against bullying perpetration (Lovegrove, Henry & Slater, 2012). At the same time, students in a school context characterized by a negative school climate, where bullying perpetration and victimization is a

prevalent problem, will continue to perceive the shared psychosocial and disciplinary climate as negative (Saarento et al., 2013), which may have a negative impact on the satisfaction and commitment to the school (Cunningham, 2007). In a meta-analysis on predictors of cyberbullying perpetration and victimization it is shown that **a negative school climate** and **low school commitment** could place individuals on a developmental trajectory toward being involved in cyberbullying as perpetrators and victims (Guo, 2016).

The findings regarding **organizational characteristics** were inconsistent and varied between contexts. In almost half of the studies Azeredo et al. (2015) reviewed, **school size** had a significant positive association with bullying, at the same time as the other reviewed studies showed a negative association or no significant results. The results were similar regarding **class size** or student– teacher ratio, which had significant negative associations with bullying and a significant positive association with victim-reported bullying. When it comes to **security** and **rules** studies shows that the presence of established clear, consistent, and fair rules and accepted regulations against bullying, anti-bullying and pro-victim attitudes, as well as the ability to intervene against violence reduced the incidence of bullying perpetration and bullying victimization (Kassabri et al. 2004; Steffgen, et al. 2013; Azeredo et al., 2015; Álvarez-García et al. 2015). At the same time, negative school environment factors, such as low levels of adult monitoring, increases the risk of bullying perpetration as well as bullying victimization (Hong & Espelage, 2012). Taken together, this underlines **the importance of consistent and clear rules** and its association with negative and positive relationships, which in turn, may predict bullying perpetration and bullying victimization.

The risk and protective factors identified on *the microsystem level* mainly refers to the immediate and explicit relationships that bi-directional influences the individual, in relation to *relationships within the family, the school* and *in relation to peers*.

The research in the area is relatively consistent regarding the risk and protective factors related to the relationships within the family, especially when it comes to **parenting behavior**. In their meta-analysis on parenting behavior and the risk of becoming a victim and a bully/victim Lereya, Samara & Wolke (2013) found that **negative parenting behavior**, including abuse and neglect and maladaptive parenting, is related to a moderate increase of risk for becoming a bully/victim (Hedge's g range: 0.13–0.68) and small to moderate effects on victimization (0.10–0.31). The protective effects of **positive parenting behavior**, including authoritative parents, good communication of parents with the child, warm and affectionate relationship, parental involvement and support, and parental supervision were generally small to moderate for both victims (Hedge's g: range: -0.12 to -0.22) and bully/victims (-0.17 to -0.42). In addition, victims were more likely to have **overprotective parents**. And finally, both victims and bully/victims were found to experience negative parenting more often. These results is in line with Shetgiri, Lin & Flores (2013) who found that parental anger with their child was associated with

increasing bullying odds and parents with a communicative relation to their children and meeting their child's friends was associated with decreasing odds.

If we examine this more closely, the picture is strengthened of how important the relationship with the parents and the parenting style is – both as risk and protective factors for bullying perpetration and bullying victimization.

In a study on parental characteristics associated with bullying perpetration, Shetgiri, Lin, Avila & Flores (2012) identified **parent-child communication**, **meeting children's friends**, and **encouraging children academically** as protective factors associated with lower bullying odds (bullying perpetration). Their study revealed the importance of parent-child communication and involvement with the child both in relation to children´s friends and in relation to children´s school- or homework. On the other hand, **negative parental perceptions of the child** (the child bothers them, frequently makes them angry, is hard to care for) and **suboptimal maternal mental health** were identified as risk factor for bullying perpetration.

According to Atik & Güneri (2013) parental style variables play an important role in predicting involvement in bullying as bullies, victims, or bully/victims. **Parenting styles** including lower acceptance/involvement, higher psychological autonomy, and lower strictness/supervision was found to be significant factors in predicting involvement in bullying. For victims or bully/victims was the perception of their parents to be **less loving, involved, and responsible** distinctive. **Lower strictness/supervision scores** increased the likelihood of being a bully. At the same time, a parenting style characterized by **higher strictness/supervision scores** (parents involved in monitoring and supervision) decreased the likelihood of being a bully or a bully/victim.

In addition to the aforementioned family-related risk and protective factors, the research also highlights family-related factors such as the **establishment of family rules** and the **parents' interest in their children's schoolwork, parental emotional support, friendships, and activities** as protective factors which decreases the probability of bullying perpetration, and **scarce parental emotional support, abusive, harsh or unsupportive home environments,** including **family conflicts** and **inter-parental/family violence** and **negative attitudes and values transmitted** as risk factors for bullying perpetration, as well as for bullying victimization (Álvarez-García et al., 2015; Cook et al., 2010; Hong & Espelage, 2012; Hemphill, et al., 2012; Barboza, Schiamberg, Oehmke, Korzeniewski, Post, & Heraux, 2009). In their study on protective factors as moderators of risk factors in adolescence bullying, Baldry & Farrington (2005) found that family related risk factor (**conflicting parents**) was positively associated with bullying and with victimization (together with **punitive parenting**). The authors also found that **supportive and authoritative parenting style** were negatively associated to bullying and victimization.

Furthermore, **alcohol and drug use among family members** as well as the **parents' mental health** are highlighted as risk factors for bullying perpetration (Shetgiri, et al., 2012; Shetgiri, et al., 2013).

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The risk and protective factors for bullying perpetration and bullying victimization related to *the relationships within the school* focuses mainly on *the relationships with the teachers and other adults,* and *peers* in the school.

The findings regarding risk and protective factors related to *the relationships with the teachers and other adults in school* are consistent. A particularly distinctive feature is that these findings primarily relate to risk and protective factors for bullying perpetration, and that they relate to properties that characterize classroom management in terms of caring (teacher help their students they have problems), teaching (teachers' competence in explaining subject matter), monitoring (whether teachers keep an eye on their students' activities and behavior during lessons and breaks), and intervention (how teachers react when their students' behavior is not acceptable), which are central aspects of teacher-student interactions (Roland & Galloway, 2002).

The results shows that **low level adult monitoring** is a risk factor for both bullying perpetration and bullying victimization. The research shows that there is a rather strong relationship between teachers' management of the class and bullying behavior (Roland & Galloway, 2002). According to De Luca, Nocentini & Menesini (2019) it is more likely that aggressive behavior will increase if teachers do not intervene, ignore, or trivialize bullying, as teachers' nonintervention may be interpreted as an implicit acceptance and justification of bullying behavior as something normal. This is also supported by Troop-Gordon & Ladd (2015), who found that teachers who held more normative views of peer victimization were less likely to report reprimanding aggressive students and were more likely to utilize passive response strategies, which tends to increase the risk of bullying. Donat, Knigge, & Dalbert (2018) found that the more positive the students' experiences of their teachers' classroom management were, the less likely they were to self-report bullying behavior. These results consistently indicate that lower levels of adult monitoring can increase the frequency of bullying which may reduce the likelihood of students feeling safe (e.g., Hong & Espelage, 2012).

Research show that the character of the teacher-student relationship both can constitute a risk and protective factor for bullying perpetration and bullying victimization. A **negative teacher-student relationship characterized by disruptive and aggressive behavior** constitute a risk factor for both bullying perpetration and victimization (Díaz-Aguado & Martínez, 2013; Álvarez-García et al., 2015). According to Díaz-Aguado & Martínez (2013) bullies and bully-victims commit and receive more problematic behaviors in their interaction with teachers than those not involved in bullying. These relations are often characterized by disruption (disturbance in class), coercion, and aggressiveness (insulting the teacher), at the same time as the bully or bully-victim perceive more hostility and lack of support from the teachers (Díaz-Aguado & Martínez, 2013).

On the other hand, **positive teacher-student relationships** characterized by **teacher support, good personal treatment, teachers promoting mutual respect and a positive climate of coexistence**

constitute protective factors for both bullying perpetration and victimization (Barboza et al., 2009; Díaz-Aguado & Martínez, 2013; De Luca, Nocentini & Menesini, 2019; Donat et al., 2018; Hong & Espelage, 2012). According to Barboza et al. (2009) **teachers who are supportive**, take an active interest in students, and treat them fairly, create an environment where bullying is less likely. According to the authors, support from teachers is associated with lower probabilities of bullying and that the frequency of bullying depends on the extent to which teachers are active in promoting student welfare, are interested in helping students in need, allow different forms of self-expression, promote cooperation, and create a fair and just school environment (Barboza et al., 2009). The authors also show that a decrease in the teacher apathy (indifference) decreases the odds of bullying by almost 24% (Z = 4.39, p = 0.000) (Barboza et al., 2009, p. 113).

The importance of **support, a good, fair, and just treatment** is also highlighted by other authors. Students' that receive support and good treatment by teachers, as well as the existence of clear and fair rules that are applied justly, is all protective factors against bullying (Díaz-Aguado & Martínez, 2013). Donat et al. (2018) shows that the more students felt **justly treated by their teachers**, the less likely they were to self-report bullying behavior. According to the authors the reason why teacher justice is important is that it is a prerequisite that affect the legitimacy and fairness of school rules (rule acceptance), which also strengthens students' experience of social inclusion (feelings of belonging).

This is also supported by findings from De Luca, Nocentini & Menesini (2019) who underlines that teachers' attitudes, perception of efficacy, beliefs and knowledge, the level of empathy, the quality of the teacher-student relationship and contextual and situational factors (i.e., class climate, school liking, bullying characteristics) are associated with the likelihood that bullying and victimization can occur.

At the same time as these aspects constitute protective factors, they collectively form important components of, or conditions for, **a democratic disciplinary style** (sensitive and normative) that encourage teachers to behave authoritatively, which might decrease the risk to bully others (Bayraktar, 2012).

Another risk factor for bullying perpetration related to the relationships with the teachers and other adults in school is **low expectations from teachers towards students' performance**. In contrast with their expectations Barboza et al. (2009) found that the probability of being a bully was higher for students whose teachers had low expectations about their performance and that **unreasonable (high) expectations** placed on students by teachers and parents and teachers was found to decrease bullying behaviors (i.e., being a protective factor). More specifically, the odds of bullying increased by almost 5% among students whose parents and teachers hold low expectations of their school performance (Z= 1.97, p = 0.048) (Barboza et al., 2009, p.114).

To sum up, the research show that it can be difficult to determine the direction of influence between the quality of the teacher-student relationships (for example in terms of classroom management,

monitoring, expectations) and bullying behavior. Negative aspects of this relationship may increase at the same time as positive aspects decrease the risk for bullying behavior.

The risk and protective factors for bullying perpetration and bullying victimization related to the *relationships with peers* in the school refer to **bystander behavior**, **social and emotional support, social status, the number of friends and character of the relations**. Research show that the relationships with classmates and these aspects have a multifaceted meaning in terms of risk and protective factors.

The relationship with fellow students, in terms of having the **social and emotional support from the classroom**, either due to classmates' pro-bullying attitude or their fear of being the next victim, can be a risk factor for bullying perpetration (Barboza et al., 2009; Álvarez-García et al., 2015). Scholte, Sentse & Granic (2010) shows that adolescents with **permissive attitudes toward bullying** are more likely to being bullying perpetrators. However, their results show that the association of classroom attitudes with individual bullying decreased substantially when classroom bullying behavior was considered. Scholte et al. (2010) also found that **social preference** was negatively related to bullying, indicating that socially preferred adolescents bullied less than adolescents who were disliked by their classmates. In addition, the **number of friends** and **social preference** were both weakly yet significantly related to bullying perpetration. The fact that adolescents who had more reciprocal friends were more likely to bully support the idea friends may somehow reinforce bullies in their behavior, for example, by **bystander behavior** attributing a higher **social status** to bullies (i.e., socio-metric popularity). However, the most important finding from Sholte et al. (2010) shows that the general level of behavior in the classroom seems to be more important, than classroom attitudes to drive individual bullying involvement. Students that get away with their bullying behavior without being punished or are even rewarded by an increase in social status or dominance, can support and reproduce **permissive attitudes toward bullying** and counteract **anti-bullying attitudes** among the classmates. According to Nosentini, Menesini & Salmivalli (2013) **permissive or encouraging attitudes** of their classmates towards bullying and **the frequency of bullying behavior** in their class are both risk factors for a student to become a bully. At the same time, **anti-bullying behaviors in the class** can be seen as a protective factor that becomes stronger across time as bullying behavior decreases (Nocentini, et al., 2013). A possible explanation is that the pro-bullying effects are more related to mimicry and imitation mechanisms whereas the anti-bullying effects are more indirect group mechanisms (Nocentini et al., 2013). **Anti-social peer relations** (being friends of bullies or of friends with bullying attitudes) constitute risk factors for bullying perpetration, as it increases the probability of being a bully. At the same time, having pro-social peer relations (friends with anti-bullying attitudes) constitute a protective factor for bullying perpetration. Thus, the influence of peers adjusts students' attitudes and acting to the standard within the group. This conclusion is supported by the results from Killer, Busy, Hawes, &

Hunt´s (2019) meta-analysis of the relationship between moral disengagement and bullying roles, where they found a positive relationship between moral disengagement and bullying, as well as between moral disengagement and victimization, and a negative relationship between moral disengagement and defending.

The importance of **social status** is also a prominent risk factor when it comes to bullying victimization. According to Cook et al. (2010) **peer status** (r = .35) and social competence (r = .30) had the largest effect sizes on bullying victimization (Cook et al., 2010, p 71).

In Barboza, et al. (2009) the authors found that the probability of bullying perpetration increased with **number of friends,** and **not feeling left out** (felt included) in school activities. Their study shows the importance of peers in facilitating bullying behaviors. The results show, among other things, that the number of friends Increases the odds of bullying: each additional friend increases the odds of being a bullying perpetrator by 12% (Z = 5.43, p = 0.000) and that that students who are less isolated from their friends are more likely being a bullying perpetrator (Z = -6.56, p = 0.000) (Barboza, et al., 2009, p. 113).

The quality of the social relations, in terms of **friendship quality**, **peer acceptance**, **social and emotional support** and **social status** (high peer status and positive influence), is also important with respect to bullying victimization.

In a study on risk and protective factors for patterns of bullying involvement, Monopoli, Evans, & Himawan (2022) found that higher **friendship quality** was positively associated with bullying-victimization status. The authors reveled that youth who were classified as bullying-victimized and endorsed having high quality friendships more likely than other youth used that friendship to plan retaliatory behavior. The opportunities to engage in such behavior increased if their high friendship quality was the result of high levels of social involvement. According to Marini, Dane, Bosacki, & Ylc-Cura (2006) unsatisfactory relationships with classmates, in terms of experiences of peer relational problems in terms of **social isolation**, and being harassed, were more common for victimized students compared with bullying perpetrators or uninvolved students. The research is consistent when it comes to questions related to the **popularity and acceptance** among the peer group (Ma, Meter, Chen, & Lee, 2019; Lambe, Cioppa, Hong, & Craig, 2019; Pouwels, Salmivalli, Saarento, van den Berg, Lansu, & Cillessen, 2018; Lambe & Craig, 2022; Álvarez-García et al., 2015). The results from Ma et al. (2019) suggests that defenders' popularity and acceptance among the peer group may enable them to defend others without fear of negative repercussions. Thus, youth with higher status and positive peer regard take less social risk in standing up for peer victims. However, whether status emboldens defenders or whether defending leads to maintenance of status is not clear (Ma et al., 2019)

The importance of **social isolation** as a risk factor for bullying victimization has been highlighted in the research. Social isolation relates to the **number of friends**, or rather the **absence of a best friend**, and the level of **acceptance** and **social support** it brings

A study by Boulton, Trueman, Chau, Whitehand, & Amatya (1999) shows that early adolescents that **did not have best friend** over a period showed the highest increase in victimization over the course of their study, whereas those that did have a best friend showed the highest falls in victimization. They also showed that youth **without a best friend** were at risk of being bullied by their peers in school. Their research shows that those early adolescents who had a reciprocated best friend in their home class received significantly fewer peer nominations for victimization than did classmates without a reciprocated best friend.

However, at the same time as **the absence of a best friend** can be a risk factor for bullying victimization, having **few friends** seems to protect against offending (Zych et al., 2019) and cybervictimization (Arató, Zsidó, Rivnyák, Péley, & Lábadi, 2022). The absence of a best friend is especially important when it comes to the social situation which chronic victims find themselves in. The absence of friends makes it difficult for them to break free of victimization by themselves; while, on the other hand, maintaining quality friendships can act as a protection factor against it (Romero, Jiménez, Bravo, Ortega-Ruiz, 2021). These findings suggest that having **mutual and best friendships** may be a protective factor against peer victimization. However, the absence of a best friend does not imply that it is impossible to escape bullying victimization. Findings from Jackson, Chou, & Browne (2017) highlight an important interaction between physical characteristics and peer relationships, suggesting that physical strength can be a protective factor when it comes to peer victimization in the absence of friends.

Individual and socio-demographic characteristics

Regarding *individual and socio-demographic characteristics* **sex/gender** is, by far, beside age, the most analyzed variable when it comes to risk and protective factors for bullying perpetration and bullying victimization. The results consistently indicate a greater likelihood of being a bully in boys than in girls. In their systematic review Álvarez-García et al. (2015) only found one study where there was a higher probability for girls to be a bully (perpetrator of "indirect bullying"). When it comes to bullying victimization, **sexual orientation** seems to be a risk factor for bullying victimization in relation to negative attitudes towards homosexuals (Álvarez-García et al., 2015). As indicated earlier, attitudes and values can be a protective factor for bullying perpetration, since positive attitudes towards sexual minorities are negatively associated with students' prejudice towards gays and lesbians, which, in turn, is positively associated with being a bully.

Regarding *physical characteristics*, **Body Mass Index (BMI)** has been found to be a risk factor for bullying perpetration as well as for bullying victimization. Findings from previous studies indicate that obesity is a salient predictor for bullying behavior in school (Hong & Epelage, 2012). According to Álvarez-García et al. (2015) there is a trend for obesity to increase the risk not only of becoming a victim, but also of being a bully, and highlight the importance of the stigma and rejection that one's physical appearance can generate. However, the results regarding obesity and weight is mixed in relation to gender. Farhat, Iannotti, & Simons-Morton (2010) found that being an **obese girl** was a significant predictor of being a bully. On the other hand, In a meta-analysis on the relation between weight status and bullying, Van Geel, Vedder, & Tanilon (2014) found that that **both overweight and obese** youths were more likely to be victims of bullying. The results were not moderated by gender, overweight and obese boys and girls were equally likely to be victimized. Furthermore, Koyanagi, Veronese, Vancampfort, Stickley, Jackson, Oh, Shin, Haro, Stubbs, & Smith (2020) found a significantly higher odds for any bullying victimization for overweight and obesity among girls but not among boys. However, overweight and obesity were both associated with significantly increased odds for bullying by being made fun of because of physical appearance among both sexes— obesity (vs normal weight): girls OR = 3.42 (95% CI, 2.49-4.71); boys OR = 2.38 (95% CI, 1.67-3.37).

Other physical characteristics that have been highlighted is motricity. In their study on early risk factors for being a bully, victim, or bully/victim, Jansen, Veenstra, Ormel, Verhulst, & Reijneveld (2011) found that **good motor skills** in the preschool years was a predictor for bullying perpetration in the early school years while **poor motor skills** in preschool was a predictor of bullying victimization in the early school years and later. A plausible explanation of these results is that:

> Poor motor skills have been shown to result in poor performance in both individual and team games and sports, which may reduce children's sense of competence. This in turn reduces success within peer groups and may increase the likelihood of victimization. Motorically able children may receive more positive social feedback and recognition from peers, which may improve their self-image and popularity among peers which may lead to bullying [36]. In addition, good motor skills may provide children with physical means to bully. The reverse may increase the likelihood of victimization (Jansen et al., 2011, p. 5).

Another area with a great body of research relates to *psychological factors* in terms of externalizing and internalizing problems. The research regarding **externalizing problems** in terms of **impulsivity and hyperactivity, lack of empathy, sensation seeking, aggressiveness and antisocial behavior** as risk factors for bullying perpetration is very consistent, (Cook et al. 2010; Lovegrove et al., 2012; Álvarez-García et al, 2015; Kljakovic & Hunt, 2016; Pouwels et al., 2018; Marini et al., 2006; Farrington & Baldry, 2010).

In their systematic review on predictors of school bullying perpetration Álvarez-García et al. (2015) found that **impulsivity and hyperactivity**, as well as **lack of empathy** increased the likelihood of bullying perpetration (c.f. Farrington & Baldry, 2010).

Externalizing problems can, among other things be expressed through the performance of risky, dangerous, or forbidden behaviors, i.e., **sensation seeking**. Sensation seeking has also been identified as a predictor of bullying perpetration (Lovegrove et al., 2012).

Aggressiveness is positively associated with being a bully (Nocentini et al., 2013; Bayraktar, 2012; Lovegrove et al., 2012). Nocentini et al. (2013) revealed that both power-related proactive aggression (aggressiveness to increase one's power in the group, intimidating others), and affiliation-related proactive aggressiveness (aggression to earn friendship, group acceptance) were predictors for bullying perpetration. The aggressiveness is also associated with peer rejection since bullies tend to perceive more conflicts and worse relations with peers (Bayraktar, 2012; Lovegrove et al., 2012).

Anti-social behavior, such as involved in physical fights, bearing arms, high consumption of tobacco alcohol or illegal drugs, and **conduct problems**, such as **disciplinary referrals** and **school expulsions** has also been identified as risk factors for bullying behavior (Shetgiri et al, 2012; Barboza et al. 2009; Ttofi, Farrington, & Lösel, 2012; Kljakovic & Hunt, 2016).

The meta-analysis by Cook et al. (2010) found that **externalizing behaviors** had an effect size of 0.34 on the likelihood of being a bully. Regarding individual characteristics, the authors also revealed that the typical *bully* is characterized by a significant **externalizing behavior**, alongside with **internalizing symptoms**, has both **social competence** and **academic challenges**, possesses **negative attitudes and beliefs about others**, has **negative self-related cognitions**, and has **trouble resolving problems with others**. The typical *victim*, on the other, is more likely to **demonstrate internalizing symptoms**, **engage in externalizing behavior**, **lack adequate social skills**, possess **negative self-related cognitions**, and **experience difficulties in solving social problems**. And finally, the typical *bully victim* is characterized by a **comorbidity of externalizing and internalizing problems**, holds **significantly negative attitudes and beliefs about himself or herself and others**, is **low in social competence**, does **not have adequate social problem-solving skills**, and **performs poorly academically**. The Cook et al. (2010) meta-analysis also found that social factors, such as **social problem-solving** and **social competence** was related to both bullying and victimization, although the social factors identified mainly were protective. The authors identified **social competence** as an important risk factor for bullying perpetration as well as for bullying victimization. Their results indicated that bullies were more socially competent than victims. However, bully victims had the most severe challenges in social competence of all the groups. According to Cook et al. (2010) this seem to indicate that a lower **degree of social skills** (competence) may result in challenges in establishing and maintaining satisfactory interpersonal relationships, which in turn can be interpreted as an expression that the victim is socially maladjusted. This is also consistent

with Postigo, González, Mateu, & Montoya´s (2012) results that indicate that the level of maladjustment and social skills predicts sociometric popularity, which is a significant predictor of bullying involvement.

When it comes to *internalizing problems,* the research regarding risk factors for bullying perpetration and bullying victimization is consistent.

Internalizing problems, in terms of **helplessness**, **insecurity**, **feeling low**, **moodiness**, **nervousness**, **insomnia**, and **depressive symptoms** correlate negatively with bullying perpetration, and positively with bullying victimization (Kljakovic & Hunt, 2016; Cook et al. 2010; Shetgiri et al., 2012; Álvarez-García et al., 2015; Guo, 2016; Reijntjes, Kamphuis, Prinzie, Telch, 2010; Saarento, Kärnä, Hodges, & Salmivalli, 2013; Jansen et al. 2011). Alongside these internalizing problems **lack of empathy**, and **suicidal ideations** are more likely among bullies, and **anxiety** is more likely among victims (Marini et al., 2006; Álvarez-García et al., 2015). However, it is important to emphasize that Internalizing problems both can function as antecedents and consequences of peer victimization (Reijntjes, Kamphuis, Prinzie, Telch, 2010).

Regarding other protective factors for bullying perpetration and bullying victimization research has identified some common factors. These factors include having a **good performance at school** and **good social skills** (Ttofi , Bowes, Farrington, & Lösel, 2014; Álvarez-García et al. 2015; Postigo et al. 2012; Bayraktar, 2012), **self- and other related cognitions and competencies** (Cook et al. 2010; Kljakovic & Hunt, 2016).

Concluding remarks

In order to summarize the findings, this review will end with a presentation of effect sizes regarding risk and protective factors for bullying behavior.

Kljakovic & Hunt (2019) is one of few meta-analyses that more explicitly investigated the effects of different predictor and protective factors of bullying victimization and bullying perpetration. In their study (table 2) they have studied the combined effect of different groups of risk factors. According to the authors the risk factors identified to significantly predict victimization were **conduct problems**, **social problems**, **prior victimization,** and **internalizing problems**. Prior victimization (V1, V2) was the most effective predictor (risk factor) for bullying victimization, with a large effect size, followed by social problems and conduct problems. Internalization problems was the third significant group of risk factors. None of these predictors was considered protective. The effects for social problems, conduct problems and internalization problems were small.

Table 2: Effect size and heterogeneity statistics for predictors of victimization (Kljakovic & Hunt, 2016, p. 140, Table 3).

Variable	Outcome	Effect					Heterogeneity		
		k	Cohen's d	p- value	T	95% CI	Q	p	I^2
Conduct problems1	V2	2	0.101	0.000	0.00	[0.068, 0.134]	1.18	0.227	15.31
Internalising problems1	V2	6	0.090	0.000	0.03	[0.055, 0.125]	8.28	0.142	39.59
Social problems1	V2	5	0.102	0.049	0.09	[0.001, 0.202]	16.57	0.002	75.85
V1	V2	12	0.506	0.000	0.20	[0.417, 0.585]	519.83	0.000	97.88
V2	V3	8	0.598	0.000	0.32	[0.434, 0.724]	758.20	0.000	99.08
V3	V4	2	0.444	0.000	0.09	[0.320, 0.554]	5.01	0.025	80.02

When it comes to predictors of bullying perpetration (table 3) **conduct problems**, **social problems** and **school problems** were identified as risks for bullying perpetration. **Older age** was identified to be a protective factor of bullying perpetration. Social problems were found to be the most effective predictive (risk) factor for bullying perpetration with a medium effect size. The effects of the other identified risk factor groups, conduct problems and school problems, and the protective factor older age with small.

Table 3: Effect size and heterogeneity statistics for predictors of bullying. (Kljakovic & Hunt, 2016, p. 140, Table 4).

Variable	Outcome	Effect					Heterogeneity		
		k	Cohen's d	p- value	T	95% CI	Q	p	I^2
Age1	B2	2	0.043	0.039	0.00	[0.082, 0.003]	0.54	0.464	0.00
Conduct problems1	B2	3	0.139	0.000	0.04	[0.085, 0.192]	5.06	0.080	60.45
Social problems1	B2	2	0.206	0.000	0.00	[0.101, 0.307]	0.64	0.423	0.00
School problems1	B2	2	0.127	0.000	0.00	[0.072, 0.182]	0.25	0.615	0.00

The Zych et al. (2019) is one of the most robust and extensive meta-analyses conducted regarding protective factors for bullying behavior (i.e., bullying perpetration, bullying victimization, and bully victims).

Table 4: Median effect sizes for community and school, family, peer and individual protective factors in victims, perpetrators and bully/victims including bullying and cyberbullying (Zych et al., 2019, p.12. Table 3.)

	Victimization			Perpetration			Bully/victims
	Face to face	Cyber	Overall	Face to face	Cyber	Overall	
Community and school	OR = 1.80	OR = 1.73	OR = 1.77	OR = 2.10	OR = 1.58	OR = 1.61	OR = 3.41
Family	OR = 1.41	OR = 1.29	OR = 1.38	OR = 1.50	OR = 1.42	OR = 1.42	OR = 1.82
Peer	OR = 1.65	OR = 1.80	OR = 1.65	OR = 1.47	OR = 1.67	OR = 1.57	OR = 4.98
Individual							OR = 2.10
Academic	OR = 1.16	OR = 1.24	OR = 1.20	OR = 2.18	OR = 1.39	OR = 1.78	
ICT use	–	OR = 2.02	–	–	OR = 2.10	–	
Self-oriented personal competencies	OR = 2.18	OR = 2.13	OR = 2.18	OR = 1.40	OR = 1.44	OR = 1.44	
Other-oriented social competencies	OR = 1.34	OR = 1.02	OR = 1.20	OR = 1.80	OR = 1.58	OR = 1.66	

Note: insufficient data to divide personal factors in bully/victims.

Their study on the median effect sizes (Table 4) of different groups of protective factors against bullying perpetration and bullying victimization (cyberbullying included) related to **community and school,**

family, **peer**, and **individual factors** shows that **self-oriented personal competencies** were the strongest group of protective factors against victimization (both face-to-face and cyber) and **low technology use** was protective against cybervictimization. When it comes to face-to-face bullying perpetration, **community and school factors**, **good academic performance** and **other-oriented social competencies** were the groups of protective factors with the biggest median effect sizes. The strongest median effect sizes concerning protective factors related to cyber perpetration, were found for **low technology use** and **peer factors**. Their study also shows that **community and school factors**, and **peer factors** had the biggest median effect sizes regarding bully victims.

References

Álvarez-García, D., García, T., & Núñez, J. C. (2015). Predictors of school bullying perpetration in adolescence: A systematic review. *Aggression and Violent Behavior* 23 (2015) 126–136. http://dx.doi.org/10.1016/j.avb.2015.05.007

Arató, N. Zsidó, A. N., Rivnyák, A., Péley, B., & Lábadi, B. (2022). Risk and Protective Factors in Cyberbullying: the Role of Family, Social Support and Emotion Regulation. *International Journal of Bullying Prevention*, (2022) 4:160–173. https://doi.org/10.1007/s42380-021-00097-4

Atik, G., & Güneri, O. Y. (2013). Bullying and victimization: Predictive role of individual, parental, and academic factors. *School Psychology International*, 34(6), 658–673. http://dx.doi.org/10.1177/0143034313479699.

Azeredo, C. A., Rinaldi, A. E. M, de Moraes, C. L., Levy, R. B., & Menezes, P. R. (2015). School bullying: A systematic review of contextual-level risk factors in observational studies. *Aggression and Violent Behavior,* 22 (2015) 65–76. http://dx.doi.org/10.1016/j.avb.2015.04.006

Baldry, A. C. & Farrington, D. P. (2005). Protective factors as moderators of risk factors in adolescence bullying. *Social Psychology of Education* (2005) 8:263–284. DOI: 10.1007/s11218-005-5866-5

Barboza, G. E., Schiamberg, L. B., Oehmke, J., Korzeniewski, S. J., Post, L. A., & Heraux, C. G. (2009). Individual characteristics and the multiple contexts of adolescent bullying: An ecological perspective. *Journal of Youth and Adolescence*, 38, 101–121. http://dx.doi.org/10.1007/s10964-008-9271-1.

Basilici, M. C., Palladino, B. E. & Menesini. E. (2022). Ethnic diversity and bullying in school: A systematic review. Aggression and Violent Behavior 65 (2022) 101762. https://doi.org/10.1016/j.avb.2022.101762

Bayraktar, F. (2012). Bullying among adolescents in North Cyprus and Turkey: Testing a multifactor model. *Journal of Interpersonal Violence*, 27(6), 1040–1065. http://dx.doi.org/10.1177/0886260511424502.

Boulton, M. J., Trueman, M., Chau, C., Whitehand, C., & Amatya, K. (1999). Concurrent and longitudinal links between friendship and peer victimization: Implications for befriending intervention. *Journal of Adolescence*, 22, 461–466.

Bronfenbrenner, U. (1977). Toward an experimental ecology of human development. *American Psychologist*, 32(7),513. https://doi.org/10.1037/0003-066x.32.7.513

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. http://dx.doi.org/10.1037/a0020149.

Cunningham, N. J. (2007). Level of bonding to school and perception of the school environment by bullies, victims, and bully victims. *The Journal of Early Adolescence*, 27(4), 457–478.http://dx.doi.org/10.1177/0272431607302940.

De Luca, L., Nocentini, A., & Menesini, E. (2019) The Teacher's Role in Preventing Bullying. *Front. Psychol*. 10:1830. doi: 10.3389/fpsyg.2019.01830

Díaz-Aguado, M. J., & Martínez, R. (2013). Peer bullying and disruption–coercion escalations in student–teacher relationship. *Psicothema*, 25(2), 206–213. http://dx.doi.org/10.7334/psicothema2012.312.

Donat, M., Knigge, M., & Dalbert, C. (2018). Being a good or a just teacher: Which experiences of teachers' behavior can be more predictive of school bullying? *Aggressive Behavior*. 2018; 44: 29–39. DOI: 10.1002/ab.21721

Elgar, F. J., Pickett, K. E., Pickett,W., Craig, W., Molcho, M., Hurrelmann, K., Lenzi, M. (2013). School bullying, homicide and income inequality: A cross-national pooled time series analysis. *International Journal of Public Health*, 58, 237–245. http://dx.doi.org/10.1007/s00038-012-0380-y.

Farhat, T., Iannotti, R. J., & Simons-Morton, B. G. (2010). Overweight, Obesity, Youth, and Health-Risk Behaviors. *American Journal of Preventive Medicine*, 38(3), 258–267. https://doi.org/10.1016/j.amepre.2009.10.038

Farrington, D. P., & Baldry, A. (2010). Individual risk factors for school bullying. *Journal of Aggression, Conflict and Peace Research*, 2, 4–16. http://dx.doi.org/10.5042/jacpr.2010.0001.

Fink, E., Patalay, P., Sharpe, H., & Wolpert, M. (2018). Child- and School-Level Predictors of Children's Bullying Behavior: A Multilevel Analysis in 648 Primary Schools. *Journal of Educational Psychology*, 2018, Vol. 110, No. 1, 17–26

Guo, S. (2016). A meta-analysis of the predictors of cyberbullying perpetration and victimization. *Psychology in the Schools*, Vol. 53(4), 2016, 432-453. DOI: 10.1002/pits.

Hemphill, S. A., Kotevski, A., Tollit, M., Smith, R., Herrenkohl, T. I., Toumbourou, J. W., & Catalano, R. F. (2012). Longitudinal predictors of cyber and traditional bullying perpetration in Australian secondary school students. *Journal of Adolescent Health*, 51(1), 59–65. http://dx.doi.org/10.1016/j.jadohealth.2011.11.019.

Hong, J. S., & Espelage, D. L. (2012). A review of research on bullying and peer victimization in school: An ecological model. *Aggression and Violent Behavior*, 17, 311–322. https://doi.org/10.1016/j.avb.2012.03.003.

Jansen, P: W., Verlinden, M., van Berkel, A., Mieloo, C., van der Ende, J., Veenstra, R., Verhulst, F., Jansen, W., & Tiemeier, H. (2012). Prevalence of bullying and victimization among children in early elementary school: Do family and school neighbourhood socioeconomic status matter? *BMC Public Health*, 12(1), 494–494. https://doi.org/10.1186/1471-2458-12-494

Jansen, D. E., Veenstra, R., Ormel, J., Verhulst, F. C., & Reijneveld, S. A. (2011). Early risk factors for being a bully, victim, or bully/victim in late elementary and early secondary education. The longitudinal TRAILS study. *Public Health*, 11, 440. http://dx.doi.org/10.1186/1471-2458-11-440.

Jackson, V., Chou, S., & Browne, K. (2017). Victimization in the School and Community: An Exploratory Systematic Review of Longitudinal Predictors and Interacting Variables. *Trauma, Violence, & Abuse*, 2017, Vol. 18(3) 303-321. DOI: 10.1177/1524838015611675

Khoury-Kassabri, M., Benbenishty, R., Astor, R. A., & Zeira, A. (2004). The contributions of community, family, and school variables to student victimization. *American Journal of Community Psychology*, 34, 187–204.

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

Koyanagi, A., Veronese, N., Vancampfort, D., Stickley, A., Jackson, S. E., Oh, H., Shin, J. I., Haro, J. M., Stubbs, B., & Smith, L. (2020). Association of bullying victimization with overweight and obesity among adolescents from 41 low- and middle-income countries. *Pediatric Obesity*. 2020; 15:e12571. https://doi.org/10.1111/ijpo.1257

Lambe, L. J., Cioppa, V. D., Hong, I. K., & Craig, W. M. (2019). Standing up to bullying: A social ecological review of peer defending in offline and online contexts. *Aggression and Violent Behavior*, 45, 51–74. http://dx.doi.org/10.1016/j.avb.2018.05.007

Lambe, L. J. & Craig, W. M. (2022). The co-evolution of friendship, defending behaviors, and peer victimization: A short-term longitudinal social network analysis. *Social Development*. 2022; 31: 984–1000. DOI: 10.1111/sode.12599

Lereya, S. T., Samara, M. & Wolke, D. (2013). Parenting behavior and the risk of becoming a victim and a bully/victim: A meta-analysis study. Child Abuse&Neglect37 (2013) 1091–1108. http://dx.doi.org/10.1016/j.chiabu.2013.03.001

Lovegrove, P. J., Henry, K. L., & Slater,M. D. (2012). Examination of the predictors of latent class typologies of bullying involvement among middle school students. Journal of School Violence, 11(1), 75–93. http://dx.doi.org/10.1080/15388220.2011.631447

Ma, T-L., Meter, D. J., Chen, W-T., & Lee, Y. (2019). Defending Behavior of Peer Victimization in School and Cyber Context During Childhood and Adolescence: A Meta-Analytic Review of Individual and Peer-Relational Characteristics. *Psychological Bulletin*, 2019, Vol. 145, No. 9, 891–928. http://dx.doi.org/10.1037/bul0000205

Mandira, M. R. & Stoltz, T. (2021). Bullying risk and protective factors among elementary school students over time: A systematic review. *International Journal of Educational Research,* 109 (2021) 101838. https://doi.org/10.1016/j.ijer.2021.101838

Marini, Z. A., Dane, A. V., Bosacki, S. L., & Ylc-Cura (2006). Direct and indirect bully–victims: Differential psychosocial risk factors associated with adolescents involved in bullying and victimization. *Aggressive Behavior*, 32, 551–569. http://dx.doi.1.org/10.1002/ab.20155.

Monopoli, W. J., Evans, S. W. & Himawan, L. K. (2022) Risk and Protective Factors for Patterns of Bullying Involvement in Middle School Students, *Journal of School Violence*, 21:2, 175-189, DOI: 10.1080/15388220.2022.2036171

Nocentini, A., Menesini, E., & Salmivalli, C. (2013). Level and change of bullying behavior during high school: A multilevel growth curve analysis. *Journal of Adolescence*, 36, 495–505. http://dx.doi.org/10.1016/j.adolescence.2013.02.004.

Postigo, S., González, R., Mateu, C., & Montoya, I. (2012) Predicting bullying: maladjustment, social skills and popularity, *Educational Psychology*, 32:5, 627-639, DOI: 10.1080/01443410.2012.680881

Pouwels, J. L., Salmivalli, C., Saarento, S., van den Berg, Y. H. M., Lansu, T. A. M., & Cillessen, A. H. N. (2018). Predicting adolescents' bullying participation from developmental trajectories of social status and behavior. *Child Development*, 89, 1157–1176. http://dx.doi.org/10.1111/cdev.12794

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 (2010) 244–252. doi:10.1016/j.chiabu.2009.07.009

Roland, E. & Galloway, D. (2002) Classroom influences on bullying, *Educational Research*, 44:3, 299-312, DOI: 10.1080/0013188022000031597

Romero, E. M., Jiménez, C., Bravo, A., Ortega-Ruiz, R. (2021). Social status and friendship in peer victimization trajectories. *International Journal of Clinical and Health Psychology* 21 (2021) 100191. https://doi.org/10.1016/j.ijchp.2020.07.003

Saarento, S., Kärnä, A., Hodges, E. V. E., & Salmivalli, C. (2013). Student-, classroom-, and school-level risk factors for victimization. *Journal of School Psychology* 51 (2013) 421–434. http://dx.doi.org/10.1016/j.jsp.2013.02.002

Shetgiri, R., Lin, H., Avila, R. M., & Flores, G. (2012). Parental characteristics associated with bullying perpetration in us children aged 10 to 17 years. *American Journal of Public Health*, 102(12), 2280–2286. http://dx.doi.org/10.2105/AJPH.2012.300725.

Shetgiri, R., Lin, H. & Flores, G. (2013). Trends in Risk and Protective Factors for Child Bullying Perpetration in the United States. *Child Psychiatry Hum Dev* (2013) 44:89–104. DOI 10.1007/s10578-012-0312-3

Scholte, R., Sentse, M., & Granic, I. (2010). Do actions speak louder than words? Classroom attitudes and behavior in relation to bullying in early adolescence. *Journal of Clinical Child & Adolescent Psychology*, 39(6), 789–799. http://dx.doi.org/10.1080/15374416.2010.517161.

Steffgen, G., Recchia, S., & Viechtbauer, W. (2013). The link between school climate and violence in school: A meta-analytic review. *Aggression and Violent Behavior*, 18(2), 300–309. https://doi.org/10.1016/j.avb.2012.12.001

ten Bokkela, I. M., Roordab, D. L., Maesa, M., Verschuerena, K. & Colpin, H. (2022). The Role of Affective Teacher–Student Relationships in Bullying and Peer Victimization: A Multilevel Meta-Analysis. School Psychology Review. https://doi.org/10.1080/2372966X.2022.2029218

Troop-Gordon, W. & Ladd, G. W. (2015). Teachers' Victimization-Related Beliefs and Strategies: Associations with Students' Aggressive Behavior and Peer Victimization. *J Abnorm Child Psychol* (2015) 43:45–60. DOI 10.1007/s10802-013-9840-y

Tsitsika, A. K., Barlou, E., Andrie. E., Dimitropoulou, C., Tzavela, E. C., Janikian, M. & Tsolia, M. (2014). Bullying behaviors in children and adolescents: "an ongoing story". *Frontiers in Public Health*. Feb 2014, Volume 2, Article 7, 1-4. doi:10.3389/fpubh.2014.00007.

Ttofi, M. M., Farrington, D. P., & Lösel, F. (2012). School bullying as a predictor of violence later in life: A systematic review and meta-analysis of prospective longitudinal studies. *Aggression and Violent Behavior* 17 (2012) 405–418. doi:10.1016/j.avb.2012.05.002

Ttofi , M. M., Bowes, L., Farrington, D. P., & Lösel, F. (2014) Protective Factors Interrupting the Continuity From School Bullying to Later Internalizing and Externalizing Problems: A Systematic Review of Prospective Longitudinal Studies, *Journal of School Violence*, 13:1, 5-38, DOI: 10.1080/15388220.2013.857345

Van Geel, M., Vedder, P., & Tanilon, J. (2014). Are overweight and obese youths more often bullied by their peers? A meta-analysis on the relation between weight status and bullying. *International Journal of Obesity*, 38(10), 1263–1267. https://doi.org/10.1038/ijo.2014.117

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 (2019) 4–19. https://doi.org/10.1016/j.avb.2018.06.008