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Adolescent School Bullying and Life Skills: A Systematic Review of the Recent Literature

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Abstract

The health consequences of being involved in bullying and cyberbullying are well described for adolescents, but many questions related to the role played by their life skills remain unanswered. Accordingly, this systematic review aims to provide a clear overview of research on the relationships between bullying involvement as a bully, victim, bully-victim or bystander, and adolescents' life skills. This article systematically reviewed 71 relevant empirical studies that met the inclusion criteria, extracted from the PubMed, PsycINFO, Scopus, Sage, Wiley and SpringerLink databases. Their main findings were categorized according to the three types of life skills described by the World Health Organization: decision-making/problem-solving skills, interpersonal and communication skills, and self-management skills. Results showed relatively consensual outcomes for communication and interpersonal skills (empathy, moral disengagement) and skills for managing stress (coping strategies). Other decision-making or interpersonal skills, such as executive function or theory of mind, were poorly explored, and require further research, if we are to understand how life skills may be involved in bullying. Taken together, our findings highlight methodological heterogeneity and measurement problems in bullying studies that make their results difficult to interpret. Recommendations for prevention/education health researchers and professionals are provided, emphasizing the importance of considering the sociocognitive development of adolescents in bullying prevention.

Keywords: life skills, bullying, adolescence, executive function, social cognition, moral disengagement, empathy, coping, systematic review

Adolescent School Bullying and Life Skills: A Systematic Review of the Recent Literature

1. School Bullying: A Triadic Process

School bullying is a concerning and pervasive problem experienced by adolescents that is recognized as a major, international public health problem (Bauman, Toomey, & Walker, 2013; Gini & Pozzoli, 2009; Takizawa, Maughan, & Arseneault, 2014; Wolke & Lereya, 2015). Although prevalence of victimization varies throughout the period of adolescence and across studies, the estimated percent of students bullied in the past two or three months ranged from 10 to 25% in many countries and regions (Chester et al., 2015; Craig et al., 2009; Due et al., 2005; Zych, Farrington, Llorent, & Ttofi, 2017). In 2014, a meta-analysis on 80 studies (Modecki, Minchin, Harbaugh, Guerra, & Runions, 2014) showed that 35% of adolescents reported that they had been involved in bullying as bullies, as victims or both, with a lower percentage for north-western Europe than for eastern European (Craig et al., 2009; Tsitsika et al., 2014). Moreover, a recent study shows that the prevalence of bullying involvement in the last six months among adolescents was estimated at 13-20% for victims-only, 5-7% for bully-victims and 3-12% for bullies only (Guy, Lee, & Wolke, 2019). Concerning cyberbullying, prevalence was around 23% for victimization and 15% for aggression (e.g., Hamm et al., 2015).

Although definitions of bullying vary across studies and according to authors (Hymel & Swearer, 2015), there is a general consensus that bullying characterizes a specific type of aggression between peers with three behavioral characteristics: (i) intention to deliberately harm or hurt, (ii) repetitive acts over time, and (iii) power imbalance between the bully and the bullied. Therefore, bullying is an abuse of power that occurs repeatedly over time, against a less powerful victim (Craig & Pepler, 2003; Juvonen & Graham, 2014; Olweus, 1994, 1995, 2006; Rigby, 2004). Olweus (Olweus, 1995; Olweus & Limber, 2010) adds that the victims feel vulnerably exposed to the perpetrators (i.e., they cannot effectively defend themselves;

see Lamb, Pepler, & Craig, 2009; Thomas, Connor, & Scott, 2015). Bullying includes various aggressive behaviors that are most often categorized as either direct, in the form of face-to-face verbal (e.g., name calling, threatening, teasing, harassment) and physical (e.g., pushing, kicking, hitting) acts, or indirect, in the form of relational/social forms of aggression, (e.g., social exclusion, ostracism or gossiping) (Bradshaw, Waasdorp, & Johnson, 2015; Crick & Grotpeter, 1996; Thomas et al., 2015). Within these indirect forms, the increasing use of information and communication technologies (ICTs) has led to a new method of peer bullying: cyberbullying (Dooley, Pyzalski, & Cross, 2009; Garrett, Lord, & Young, 2016; Kiriakidis & Kavoura, 2010; Kowalski, Giumetti, Schroeder, & Lattanner, 2014; Slonje & Smith, 2008).

It is also customary to differentiate between different types of involvement in bullying. Prior studies divided pupils involved in bullying into two groups: bullied (victims) or bullies (perpetrators or aggressors). Although numerous studies are still based on this dichotomy, current research indicates the existence of two other major groups: bully-victims (who are bullied but also bully; Haynie et al., 2001; Lereya, Copeland, Zammit, & Wolke, 2015; Veenstra et al., 2005) and bystanders (Twemlow & Sacco, 2013). Although they are not directly involved in the bullying, bystanders play an essential role in its social dynamic/process (Hong & Espelage, 2012; Salmivalli, Lagerspetz, Björkqvist, Osterman, & Kaukiainen, 1996), by reinforcing or decreasing aggressive behaviors. Regarding bystanders, more than 80% of pupils have witnessed a bullying episode, but only 20% on average intervene (Hawkins, Pepler, & Craig, 2001; Thornberg et al., 2012). Previous studies have identified three or four different roles of the bystander (e.g., Gini, Albiero, Benelli, & Altoè, 2008; Lucas-Molina, Williamson, Pulido, & Calderón, 2014; Salmivalli et al., 1996; Sutton & Smith, 1999): (i) followers (also called *pro-bullies*) support or reinforce the bully's actions through encouragement and/or mockery about the victim; (ii) outsiders (passive response)

attempt to keep away from any and all altercations (e.g., witness or withdrawal); And (iii) defenders support the victim by ending the bullying (e.g., confrontation of the bully or seeking help) or by caring for and bonding with the victim (e.g., emotional support, advice).

2. School Bullying in Adolescence and Mental Health

A well-established body of research has extensively described the negative impact of bullying in both its face-to-face and online forms (e.g., Hase, Golberg, Smith, Stuck, & Campaign, 2015; Hawker & Boulton, 2000; Nixon, 2014) on victims, perpetrators and bystanders. The negative outcomes of traditional and cyberbullying are reflected in academic performance (e.g., Kowalski & Limber, 2013; Schneider, O'Donnell, Stueve, & Coulter, 2012), anxious and depressive disorders (e.g., Schneider et al., 2012; Turner, Exum, Brame, & Holt, 2013), suicide (see van Geel, Vedder, & Tanilon, 2014), substance use (e.g., Lambe & Craig, 2017; Radliff, Wheaton, Robinson, & Morris, 2012), and self-esteem (Patchin & Hinduja, 2010; Seals & Young, 2003). Substantial research has also identified links between bullying perpetration and externalizing problems (Ttofi, Bowes, Farrington, & Lösel, 2014) such as emotional dysregulation (e.g., anger, Camodeca & Goossens, 2004) or conduct problems (Ragatz, Anderson, Fremouw, & Schwartz, 2011). There also seems to be a risk of mental health problems among bystanders (Rivers, Potteat, Noret, & Ashurst, 2009). Moreover, it should be noted that these negative psychological correlates tend to persist into adulthood (Lereya, Copeland, Costello, & Wolke, 2015; Sigurdson, Wallander, & Sund, 2014). These results demonstrate that both the perpetrators and the recipients of peer aggression experience psychological difficulties, whatever the form of bullying (Hawker & Boulton, 2000; Reijntjes, Kamphuis, Prinzie, & Telch, 2010; Sourander et al., 2010).

3. Life Skills of Adolescents Involved in School Bullying

Given the well documented negative consequences, over the past decade, researchers have begun to examine how personal skills or abilities may impact involvement in bullying.

The identification of intrinsic vulnerabilities or protective factors is central for developing prevention and counseling strategies. According to empowerment philosophy, adolescents are considered to be capable of effectively coping with the challenges of life using their available life skills.

The World Health Organization (WHO) defines life skills as “abilities for adaptive and positive behavior that enable individuals to deal effectively with the demands and challenges of everyday life” (WHO, 1997, 2003). In short, life skills are essentially abilities that promote mental wellbeing and positive social relationships. This definition indicates that life skills can refer to both psychosocial competencies (e.g., decision making, problem solving, evaluating future consequences, managing emotions and stress) and communication and interpersonal skills (e.g., engaging in verbal/nonverbal communication, giving feedback without blame and with empathy). There have been numerous attempts to categorize these key skills. The most widely recognized classification establishes three broad categories of skills that are mainly interrelated, complementing and reinforcing each other (WHO, 2003): (i) decision-making skills, (ii) interpersonal and communication skills, and (iii) self-management skills. The choice of (and emphasis on) different skills varies according to the context and needs to be adapted and defined according to the health topic. For example, decision making can be targeted when promoting sexual health (e.g., condom use), whereas communication skills may be more important for preventing violence. Therefore, improving adolescents’ life skills is key to reducing ineffective interpersonal relationships with peers.

3.1 Decision-making/problem-solving skills: Executive functions

Decision-making skills, including problem-solving, are described as being central to interpersonal relationships, social regulation and impulse control, and are widely supported by executive functioning. Often used as “an umbrella term”, *executive functions* (EFs) refer to the high-level, interrelated abilities required for purposeful goal-directed behavior (Davidson,

Amso, Anderson, & Diamond, 2006; Goldstein, Naglieri, Princiotta, & Otero, 2014; Miyake & Friedman, 2012). They include attention control (and action inhibition), working memory, cognitive flexibility (shifting), and goal setting (planning, initiation, and problem solving). EFs are especially challenged in unfamiliar settings such as social situations. Different aspects of EFs, controlled by the frontal regions of the brain (i.e., particularly the prefrontal cortex; Alvarez & Emory, 2006), have recently been identified as having an influence on other cognitive domains, mental health, and behavior self-regulation (Allan, McMinn, & Daly, 2016; Black, Semple, Pokhrel, & Grenard, 2011; McKown, Gumbiner, Russo, & Lipton, 2009). These multidimensional neurocognitive abilities have been linked to proactive aggression (Morgan & Lilienfeld, 2000; Ogilvie, Stewart, Chan, & Shum, 2011) and prosocial behavior (e.g., defender, not involved; Riggs, Jahromi, Razza, Dillworth-Bart, & Mueller, 2006), but still need to be studied in the specific context of bullying.

There is also considerable evidence that these high-level cognitive abilities are not mature in adolescence and continue to develop into young adulthood (Best & Miller, 2010; Blakemore & Choudhury, 2006). Other results underline the possibility that cold EFs (i.e., cognitive skills such as strategic planning, problem solving, working memory and cognitive flexibility) and hot EFs (i.e., empathy, emotional regulation, affective decision making) may develop somewhat independently during the transition to adolescence (Prencipe et al., 2011; Zelazo & Carlson, 2012). As a result, it is important to better understand the connections between bullying involvement and adolescents' EFs, especially as recent studies in early childhood have shown an association between peer problems and poor EFs (Coolidge, DenBoer, & Segal, 2004; Holmes, Kim-Spoon, & Deater-Deckard, 2016; Verlinden et al., 2014). Poor EFs are also predictive of poor Theory of Mind (Hughes & Ensor, 2007).

3.2 Interpersonal and communication skills: Theory of mind, empathy and moral disengagement

Interpersonal and communication skills for communicating and interacting effectively with peers (e.g., giving blame-free feedback, empathizing, and considering others' viewpoints and emotions) encompass social cognition constructs such as empathy, theory of mind (ToM) and moral disengagement (Frith & Frith, 2008). Both empathy (the ability to share in, and make inferences about, another person's emotional state) and ToM (a form of perspective-taking that entails understanding self and others' mental states) are involved in many interpersonal interactions (Kanske, Böckler, & Singer, 2015). In this sense, *ToM* refers to a social cognitive ability to attribute other people's beliefs, intentions, or feelings in order to explain and predict behaviors (Decety, 2005; Fodor, 1992). Impairment of this skill reduces social understanding and social functioning (Capage & Watson, 2001; Jenkins & Astington, 2000) and peer popularity (Slaughter, Imuta, Peterson, & Henry, 2015). ToM can be divided into cognitive ToM (relative to beliefs, intentions, and desires) and affective ToM (relative to emotional states and feelings), and we can also distinguish between first- ("I think that you think"), second- ("I think that you think that he/she thinks") and third ("I think that you think that he/she thinks that another person thinks") order ToM (in terms of complexity). Some studies investigating ToM and bullying among children and preadolescents have found good ToM abilities among defenders and lower abilities among bullies (in comparison with noninvolved individuals; see Smith, 2017). However, it not yet clear whether these findings are also observed in adolescents. It should be noted that other authors do not support this social skill deficit hypothesis. For example, Sutton and Smith (1999) argued that some child bullies actually use their social cognition skills to manipulate and damage others.

Nevertheless, considering the late acquisition of ToM in childhood, some of these results cannot be extended to the specific context of adolescence, especially since adolescence has been recognized as a critical period in the development of ToM (Dumontheil, Apperly, & Blakemore, 2010; Steinberg, 2005; Vetter, Altgassen, Phillips, Mahy, & Kliegel, 2013).

Another dimension of social cognition, *empathy*, plays a major role in interpersonal and communication skills. Empathy underpins everyday peer socialization, which is crucial for the development and maintenance of affective bonds between partners and larger social groups (Gleason, Jensen-Campbell, & Ickes, 2009). As a fundamental social skill, empathy refers to an individual's ability to share other people's emotional states (see Cuff, Brown, Taylor, & Howat, 2016). It has long been viewed as a multifaceted concept, with a distinction being made between cognitive empathy (i.e., abilities to adopt another person's perspective) and affective empathy (i.e., ability to share another person's emotional state; Jolliffe & Farrington, 2006; Shamay-Tsoory, Aharon-Peretz, & Perry, 2009). Empathy is considered to be a fundamental aspect of prosocial and interpersonal behaviors among both children (e.g., Williams, O'Driscoll, & Moore, 2014) and adolescents (e.g., Sahdra, Ciarrochi, Parker, Marshall, & Heaven, 2015). Many anti-bullying interventions have focused on empathy (e.g., Stanbury, Bruce, Jain, & Stellern, 2009), but have proved to be of limited effectiveness, and no distinction has been made between affective and cognitive empathy (Ttofi & Farrington, 2011). A previous systematic review (van Noorden, Haselager, Cillessen, & Bukowski, 2015) concerning young people (aged 3-20 years) concluded that victimization is associated with lower levels of cognitive empathy, and defending with higher levels of both types of empathy. However, this review did not differentiate between children, adolescents and young adults, and thus did not consider the specificities of sociocognitive and socio-affective development in adolescence (Crone & Dahl, 2012).

Other major characteristics of interpersonal and communication skills are the sense of responsibility (Such & Walker, 2004) and moral competence (Ma, 2012), namely, personal judgments of moral/conventional transgressions relative to both prosocial behaviors and systematic peer-to-peer abuse. *Moral disengagement* was described by Bandura (Bandura, Barbaranelli, Caprara, & Pastorelli, 1996) as the tendency to harm others without having a

bad conscience, self-recrimination or guilt (i.e., to disengage from our moral responsibilities including moral standards and moral reasoning). Bandura characterized four broad categories of moral disengagement: (i) cognitive restructuring (with moral justification, advantageous comparisons or euphemistic labeling); (ii) displacement of personal responsibility; (iii) distortion of the consequences of the behavior; and (iv) dehumanization (or blaming) of the victim. A recent meta-analysis among children and youth (Gini, Pozzoli, & Hymel, 2014) revealed that moral disengagement is significantly associated with aggressive behaviors, including bullying. Furthermore, cyberbullies exhibit higher moral disengagement than traditional bullies (Slonje, Smith, & Frisé, 2012). In a sample of child and adolescent bystanders, defenders seemed to have lower moral disengagement scores (Almeida, Correia, & Marinho, 2009). One crucial finding of Gini et al. (2014)'s meta-analysis was that the links between moral disengagement and aggression are stronger in adolescents than in children, thus underscoring the need for a specific and thorough review of studies focusing exclusively on adolescents.

3.3 Self-management skills: Coping with emotion and stress

Self-management skills are related to coping skills for managing one's emotions (e.g., recognizing emotions, and being able to respond to them) and stress (dealing with stressful and challenging situations). First, managing/coping with emotions emphasizes the role of emotional evaluation, expression and recognition for using adapted and effective social strategies in peer relationships. Adolescents' ability to identify and understand emotions (their own and those of others) is critical for social adjustment and interpersonal relationships (Ciarrochi, Heaven, & Supavadeeprasit, 2008; Rowsell, Ciarrochi, Heaven, & Deane, 2014). An association between poor emotional understanding (e.g., emotion perception accuracy and emotion perception bias) and aggressive behaviors has been well documented among children (e.g., Blair & Coles, 2000; Denham et al., 2002), especially for boys. Results on bullying

among primary-school children all point to a reduced ability to recognize emotions, especially those of anger and fear in victims (physical or relational; e.g., Woods, Wolke, Nowicki, & Hall, 2009). As adolescence is a crucial developmental period, characterized by an increase in cognitive-emotional abilities (Herba & Phillips, 2004), the links between these abilities and bullying need to be addressed.

Second, skills for managing/coping with stress emphasize the role of individual strategies/resources in adapting to stressful situations (e.g., being directly or indirectly involved in bullying). *Coping with stress* (Folkman, 2013; Folkman, Lazarus, Gruen, & DeLongis, 1986) refers to the cognitive and behavioral strategies employed, with varying degrees of success or effectiveness, to minimize, stop, or withstand the emotional or situational impact of a stressful event.

A coping strategy is labelled as *adaptive* when detrimental effects are reduced, such as by asking a friend for advice or seeking help from an adult (Kanetsuna, Smith, & Morita, 2006; Moritz et al., 2016). By contrast, a *maladaptive* coping strategy leads to emotional/behavioral difficulties, such as passive avoidance, rumination or diversion (Cronqvist, Klang, & Björvell, 1997; Suls & Fletcher, 1985). Coping with bullying is classically divided into *problem-focused strategies* (i.e., to solve or remove the problem, also referred to as *approach coping*) and *emotion-focused strategies* (i.e., to minimize or reduce distress, also referred to as *avoidance coping*; Baker & Berenbaum, 2007; Wrzesniewski & Chylinska, 2007). Most investigations targeting children who are victims of bullying have shown that both traditional victims and cybervictims tend to cope ineffectively with bullying situations, exhibiting emotionally oriented and avoidant coping styles (Andreou, 2001; Hunter & Boyle, 2004). Specific coping strategies used by adolescents involved in bullying should be specified with regard to stress perception and coping modification during adolescence (Seiffge-Krenke, Aunola, & Nurmi, 2009).

4. Aim of the Present Review

Few studies have focused on the associations between adolescents' life skills and involvement in peer harassment. Studies of bullying have largely focused on the elementary and early secondary school period—a preadolescent period during which bullying behaviors increase (Finkelhor, Turner, Shattuck, & Hamby, 2013, 2015). Evidence shows that school bullying persists across the secondary-school years (Finkelhor et al., 2015; Griffin Smith & Gross, 2006; Skrzypiec, Askill-Williams, Slee, & Lawson, 2018), with both the common form of face-to-face bullying (especially among 12- to 13-year-olds) and online forms (with 12- to 15-year-old adolescents being more involved in cyberbullying; Eslea & Rees, 2001; Ryoo, Wang, & Swearer, 2015).

Moreover, the majority of studies (empirical and meta-analyses) that included both preteens and adolescents failed to consider either the stages of neurocognitive development (Spear, 2013) or the influence of peer group and socialization processes during adolescence (Brown, 2013). Furthermore, peer relationships become more sophisticated in adolescence, and life skills are at the heart of peer interactions (Blakemore, 2012). Adolescence is a critical period for building skills and developing positive habits with peers.

Although more and more skills-based health education programs are being implemented to some effect (e.g., Botvin & Griffin, 2003), the precise nature of the skills that are addressed remains undefined, and little is known about the theoretical underpinnings of building and developing life skills (e.g., EFs, social cognition, coping). It is therefore essential to identify which life skills could be effective in preventing bullying and how (Nasheeda, Abdullah, Krauss, & Ahmed, 2019).

In the light of the above, the aims of the present systematic review were to (i) gain a comprehensive overview of the associations between three life skills previously described in adolescents, namely decision-making/problem-solving skills based on EFs, interpersonal and

communication skills related to social cognition (i.e., ToM, empathy, and moral disengagement), and self-management skills (with coping strategies to manage stress or emotions), and bullying behaviors in youth aged 12-18 years, (ii) explore the nature of these associations according to role behaviors (bully, victim, bully-victim and bystander), and (iii) identify possible gaps in the present literature and directions for future research and interventions.

Method of systematic review

1. Literature Search Strategy

In accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) statement (Moher, Liberati, Tetzlaff, Altman, & PRISMA Group, 2009), the literature search followed a three-step process to identify relevant studies. First, the identification of suitable electronic databases led us to query the PsychArticles, PsychInfo, Scopus, PubMed, Sage, Science Direct, Springerlink and Wiley databases. Searches were conducted using the following terms (and their variations; e.g., “bull*”): “school bullying”, “bullying”, “bullied”, “bully”, “peer harassment”, “peer intimidation”, “peer victimization”, “peer aggression”, “bystander” AND “adolescent”, for the period of January 2010 to September 2020. As this systematic review was intended to examine life skills associated with bullying involvement, these keywords were used in conjunction with the following terms: “empathy”, “social cognition”, “theory of mind”, “executive function”, “moral disengagement”, “coping”, “behavioral adjustment”, and “appraisal”. An additional search was conducted on the basis of the three categories of life skills established by the WHO, using the terms “decision-making”, “problem-solving”, “interpersonal skills” and “communication skills” or “self-management” and “bullying”, and “adolescent”. Search areas comprised the title, abstract, keywords, and topic. This first step yielded 177 articles, 48 duplicates, and 133 references. Searches were completed on September 28, 2020. Second, we examined the

resulting list of articles in order to select the relevant studies. Full-text article screening resulted in the identification of 105 potentially relevant articles. These were retrieved and reviewed for eligibility. A total of 71 publications met the inclusion criteria. Third, the bibliographies of all 71 selected articles were screened to identify potential additional studies. Articles that met all the inclusion criteria were retrieved and examined.

2. Inclusion and Exclusion Criteria

Studies were included in the review if they met the following criteria:

- Full-text papers published in peer-reviewed journals between January 2010 and September 2020;
- English-language publications or publications with an abstract in English;
- Studies with adolescent participants aged 12-18 years;
- Manuscripts with reported outcomes relevant to adolescents' life skills (i.e., no consequences of bullying exposure, no interventional studies);
- Studies based on empirical, quantitative data, and containing measures and descriptions of statistical methods;

Only quantitative studies (original articles and short papers) were included. Review articles, unpublished articles, case studies and other qualitative research, dissertations, conference proceedings papers, books and book chapters were excluded from the review. Nevertheless, qualitative studies and meta-analyses were reviewed and used to provide further background and context.

3. Data Extraction

Data extracted included publication details, the country where the study was conducted, methodological characteristics such as sample size, percentage of girls, type of population, age range and/or grade level targeted, study design, and type of bullying measured. Information about the measurement strategy (youth self-report, peer nomination,

tools) and the measures used to rate victimization, perpetration, or bystander experiences was also reported. Data pertaining to studies meeting the inclusion criteria were used for basic descriptive statistics. Furthermore, several studies provided odds ratios or effect sizes. The articles were grouped according to three specific types of life skills: (i) EFs, (ii) ToM, empathy and moral disengagement, and (iii) coping strategies (related to emotion and stress).

Results

1. Descriptive Results of Studies

The 71 published papers we reviewed, mostly concerned studies conducted in Europe (45.1%, $n = 32$), followed by the United States (16.9%, $n = 12$), and Australia (11.3%, $n = 8$). These studies mostly featured a cross-sectional design (84.3%, $n = 59$) and assessed variables using self-report questionnaires (88.7%, $n = 63$). Sample sizes ranged from 68 adolescents to 9512. Two studies (3.9%) focused on clinical samples. Table 1 details the key characteristics of these studies.

Please insert Table 1 about here

Nearly one third of the studies failed to use a validated tool to evaluate bullying (45.1%, $n = 32$). The most frequently used validated self-reports for measuring bullying were the Olweus Bully/Victim Questionnaire (28.1%, $n = 9$), Participant Role Questionnaire (19.3%, $n = 6$), and Bully Participant Behavior Questionnaire (16.1%, $n = 5$).

2. Decision-Making/Problem-Solving Skills: Executive Functions

We begin by addressing the key results for decision-making and problem-solving skills, which are primarily supported by EFs. Table 2 provides a summary of the five studies that focused on this topic, including demographic information and the major findings. Studies investigating the relationships between EFs and bullying ($n = 5$, with 1 longitudinal study) mainly used ecological measures, such as CEFI ($n = 1$) and BRIEF ($n = 3$). One study (Liu,

Cao, Li, Lou, & Lavebratt, 2016) that focused on dysexecutive syndrome found that adolescents in this group were more likely to be bullied. With respect to victimization, studies tended to be homogenous, with a link between lower EF abilities and victimization (Crowley, Harvey-Knowles, & Riggs, 2016; Holmes et al., 2016; Kloosterman, Kelley, Parker, & Craig, 2014). Only one study (Jenkins, Demaray, & Tennant, 2017) considered aggression. This highlighted a significant association between perpetration and low levels of inhibitory control and emotion regulation. The same study found no significant relationship between EFs and bystander roles.

3. Interpersonal and Communication Skills: Theory of Mind, Empathy and Moral Disengagement

The question of an association between ToM and bullying among adolescents was only addressed in two studies, one cross-sectional (Espelage, Hong, Kim, & Nan, 2018) the other longitudinal (Shakoor et al., 2012). Despite the difference in design, both studies reported nonsignificant relationships between ToM and bullying. The relative risk ratio of (slightly) below 1 meant that the authors could not conclude with certainty that high or low ToM abilities at 5 years increase the risk (or protect against) involvement in school bullying in adolescence (see Table 2 for more details).

Please insert Table 2 about here

Studies of empathy ($n = 23$) mostly used self-report measures, applying the Basic Empathy Scale. The main finding about victimization was a lack of empathy (overall score), with inconsistent findings when a distinction was made between the cognitive and affective components of empathy (Antoniadou, Kokkinos, & Fanti, 2019; Walters & Espelage, 2019). In one recent study among adolescents from the Peruvian Amazonia, bullying and cyberbullying victimization were found to be positively related to both affective and cognitive

empathy (Martínez, Rodríguez-Hidalgo, & Zych, 2020). Lower levels of empathy were also strongly related to aggression (overall score), regardless of bullying modality (traditional or cyber; e.g., Antoniadou et al., 2019; Chan & Wong, 2019). Studies distinguishing between cognitive and affective empathy consistently highlighted an emotional empathy deficit among perpetrators (e.g., Ryzin & Roseth, 2019; Zych, Ttofi, & Farrington, 2019), but most failed to find a significant association with cognitive empathy (except for Antoniadou, et al., 2019). Eight studies (Caravita, Gini, & Pozzoli, 2012; Haddock & Jimerson, 2017; Jenkins et al., 2017; Machackova & Pfetsch, 2016; Schultze-Krumbholz, Zagorscak, Hess, & Scheithauer, 2020; Yang & Kim, 2017; Walters & Espelage, 2019) investigated bystander roles, showing a strong relation between defending and affective empathy. Two studies failed to find a relation between defending and cognitive empathy (Caravita et al., 2012; Walters & Espelage, 2019). By contrast, followers and outsiders scored lower on empathy (overall score and affective empathy subscore), and one study found no association at all in a cyberbullying context (Machackova & Pfetsch, 2016). Table 3 gives an overview of the main results.

Please insert Table 3 about here

Twenty-seven studies, including 19 cross-sectional ones, focused on moral disengagement (see Table 4). The Mechanism of Moral Disengagement Scale (Bandura, et al., 1996) was used in most cases. Significant correlations were found between victimization and moral disengagement (overall score), but only for self-report measures of traditional bullying (Caravita et al., 2012; Georgiou, Charalambous, & Stavrinides, 2020; Obermann, 2011, 2013; Pornari & Wood, 2010; Robson & Witenberg, 2013; Runions et al., 2019; Tognetta, Martinez, & Da Fonseca, 2016; Zych & Llorent, 2019) and cyber-bullying (Gao et al., 2020). One recent study failed to find a significant correlation between victimization and moral disengagement (Gini, Thornberg, & Pozzoli, 2020). Major findings on aggression were

convergent, showing a strong association between moral disengagement and bullying, both traditional and cyber, in self-report and peer-nominated surveys (Barchia & Bussey, 2011; Brighi et al., 2019; Georgiou et al., 2019; Gini, et al., 2020; Mazzone & Camodeca, 2019; Obermann, 2011, 2013; Robson & Witenberg, 2013; Runions et al., 2019; Teng, Bear, Yang, Nie, & Guo, 2020; Thornberg et al., 2012; Tognetta et al., 2016; Wachs, 2012; Wang, Yang, et al., 2020; Wang, Zhao, et al., 2020). In terms of mechanisms, moral justification, euphemistic labeling, displacement of responsibility, diffusion of responsibility, and distorting the consequences were most frequently associated with the perpetration of traditional bullying. For mechanisms in cyberbullying, results were less clearcut (Pornari & Wood, 2010; Renati, Berrone, & Zanetti, 2012; Robson & Witenberg, 2013). Finally, bystander roles were also associated with moral disengagement scores, with lower scores for defenders and higher scores for outsiders and probullies (Bjärehed et al., 2020; Bussey, Luo et al., 2020; Caravita et al., 2012; Levasseur, Desbiens, & Bowen, 2017; Mazzone & Camodeca, 2019; Thornberg & Jungert, 2013; Tognetta et al., 2016; von Grundherr, Geisler, Stoiber, & Schäfer, 2017).

Please insert Table 4 about here

4. Self-Management Skills: Coping with Emotion and Stress

The characteristics of the 16 studies that measured self-management are summarized in Table 5. Two results emerged from our analysis of the five studies (one longitudinal) of coping with emotions (Ciucci, Baroncelli, & Nowicki, 2014; Gül et al., 2019; Herts, McLaughlin, & Hatzenbuehler, 2012; Lomas, Stough, Hansen, & Downey, 2012; Pozzoli, Gini, & Altoè, 2017). First, victimization was significantly associated with difficulty perceiving negative emotions such as fear, sadness and anger, especially among male cyberbullying victims. Cyberbully-victims also tended to have greater difficulty with impulse control than pure cyberbystanders, whereas the latter were more lacking in emotional awareness

(Gül et al., 2019). The perpetration of bullying was associated with difficulties in the recognition of fear, especially for boys. Second, coping with emotions among the victims of bullying was characterized by cognitive and control difficulties relative to negative emotions. Results concerning aggression were less convergent, with one study highlighting links with negative emotion regulation (e.g., fear, anger; Herts et al., 2012), and another study finding no such link (Lomas et al., 2012).

Regarding skills for managing stress, we found 11 articles that used a range of self-report coping scales. Table 5 sets out the descriptive characteristics of these studies. Convergent results showed links between victimization and both self- or emotional-focused (e.g., self-blame, internalizing, acceptance, rumination, avoidance) coping strategies, and social coping strategies (Chan & Wong, 2017; Deniz & Ersoy, 2016; Garnefski & Kraaj, 2014; Keith, 2018; Ma & Chan, 2020; Murray-Harvey, Skrzypiec, & Slee, 2012; Parris et al., 2019; Rémond, Kern, & Romo, 2015; Singh & Bussey, 2011; Skrzypiec, Slee, Murray-Harvey, & Pereira, 2011). Externalizing strategies were also used by victims (Ma & Chan, 2020; Parris et al., 2019). Only one study looked for an association between aggression and coping (Parris et al., 2019) with significant results for self-reliance, externalizing, distancing and self-blame strategies. None of the studies explored bystander roles and coping strategies among adolescents.

Please insert Table 5 about here

Discussion

This study was intended to provide an overview of recent empirical research exploring the life skills involved in adolescents' bullying behaviors. The major goal of this exercise was to review, consolidate and reinforce the relevant literature, in order to achieve a more precise

understanding of (i) the life skills linked to bullying behaviors in adolescence, and (ii) the limitations of current research and the options for addressing these limitations.

1. Main Findings

1.1 Decision-making/problem-solving skills

We focused here on the EFs that can set children on the developmental path to bullying. Surprisingly, while researchers have established both early and longlasting prefrontal development in adolescence (Romine & Reynolds, 2005), and its links to externalizing behaviors (e.g., Clark, Prior, & Kinsella, 2002), few empirical studies have looked at the possible links to bullying (Crowley et al., 2016; Holmes et al., 2016; Jenkins et al., 2017; Kloosterman et al., 2014; Liu et al., 2016). It should be added three of the five studies we reviewed focused solely on school bullying victimization (Holmes et al., 2016; Kloosterman et al., 2014; Liu et al., 2016). Adolescents who are bullied tend to exhibit poorer EFs. Furthermore, adolescents diagnosed with dysexecutive syndrome exhibit greater peer victimization than controls (Liu et al., 2016). These initial results are interesting, and further studies will be required to replicate these relationships, and to clarify which EFs are involved in bullying victimization. Furthermore, one question remains: do victims initially have poorer EFs or does victimization lead to EF deskilling? Longitudinal studies are needed to resolve this issue. Regarding bullying perpetration, one study highlighted a link between low EFs (specifically inhibitory control and emotional regulation; Jenkins et al., 2017) and the level of bullying. Unfortunately, three of the studies we reviewed (Crowley et al., 2016; Holmes et al., 2016; Kloosterman et al., 2014) only reported an overall EF score, and specific outcomes in terms of EF components (i.e., EFs as distinct abilities) were only provided by Jenkins et al. (2017). Even though we cannot reach firm conclusions on the basis of a single study, this tends to strengthen the hypothesis that aggression reflects a self-regulation failure or deficit (Denson, DeWall, & Finkel, 2012). In addition, this result should be considered in

conjunction with Raaijmakers et al.'s (2008) study in preschool, which demonstrated that preschoolers with aggressive behavior have impaired inhibition (as measured by the Go/No go task). However, this study did not consider emotion regulation, as it is not always regarded as an EF (Baggetta & Alexander, 2016). Finally, one study (Jenkins et al., 2017) considered witnesses of bullying and EF skills but failed to find any significant association between the two. The involvement of higher-order cognitive processes such as EFs in peer harassment should be examined further, considering both forms of bullying (traditional and cyber) and different ways of assessing EFs (ecological and performance measures). Another limitation concerns the use of self-report measures despite the fact that adolescents with dysexecutive syndrome tend to have difficulty self-evaluating (e.g., problems with self-perception and metacognition). Additional parent and/or teacher ratings of the behavioral and cognitive executive problems experienced by youth would be more efficient. Future studies will have to investigate the relationships between EFs and bystander roles in a school bullying context.

1.2 Interpersonal and communication skills

ToM and empathy are essential for social and peer interactions. In the developmental context of adolescence, only two studies have so far investigated ToM skills and their involvement in bullying (Espelage et al., 2018; Shakoor et al., 2012). Although methodologically very dissimilar, neither study found a tangible link between the two. These initial results challenge the notion that child bullies have poorer ToM (Smith, 2017). Future research will have to confirm these findings by conducting an accurate ToM assessment with high measuring sensitivity and going beyond first-order (i.e., understanding another person's thoughts) - versus second-order (i.e., understanding what someone else thinks another person thinks) or third-order ("I think that you think that he/she thinks that another person thinks") ToM comparisons (Bosco, Gabbatore, & Tirassa, 2014). Further research also appears to be

needed regarding the different types of mental states involved in ToM (thoughts, beliefs, desires, positive and negative emotions).

Regarding empathy, there are consensual results regarding overall empathy scores and the level of bullying perpetration (Bergmann & Baier, 2018; Espelage et al., 2018; Jenkins et al., 2017; Steffgen, König, Pfetsch, & Melzer, 2011; Yang & Kim, 2017; You, Lee, Lee, & Kim, 2015), lower scores are robustly correlated with both traditional and cyberbullying. More specifically, lower affective (or emotional) empathy is involved in bullying others. In line with a previous systematic review on children (van Noorden et al., 2015), adolescent perpetrators of bullying appear to have difficulty experiencing the feelings of others (although they are capable of understanding others' feelings). Few studies have so far investigated the relationship between empathy and victimization (Antoniadou et al., 2019; Espelage et al., 2018; Jenkins et al., 2017; Martínez et al., 2020; Nickerson & Mele-Taylor, 2014). Recent research has been quite conflicting. Some studies have concluded that victimization is related to lower empathy among adolescents (Jenkins et al., 2017; Martínez et al., 2020), while others have failed to find any significant correlations (Antoniadou et al., 2019; Espelage et al., 2018; Walters & Espelage, 2019). One study found that cybervictims exhibited greater affective and cognitive empathy than noninvolved adolescents (Pettalia, Levin, & Dickinson, 2013). These results based solely on adolescent samples appear more heterogeneous than those set out in van Noorden et al.'s (2015) systematic review, which did not distinguish between children and adolescents, and concluded that school victimization is negatively associated with cognitive empathy. Empathic skills facilitate good-quality interpersonal relationships and may thus reduce victimization and promote social adaptation (Kokkinos & Kipritsi, 2011). If victims have difficulty sharing and inferring other people's emotions, this can lead to rejection by their peers. This hypothesis tends to be validated in children but has yet to be verified in adolescents.

Regarding bystanders, defending is strongly related to higher levels of empathy, whereas followers and outsiders tend to have lower scores (e.g., Haddock & Jimerson, 2017; Yang & Kim, 2017). This is consistent with Ma, Meter, Chen, and Lee (2019)'s recent meta-analysis of samples of children and adolescents (aged 5-17 years). It should be noted, however, that no such association has been found for cyberbullying (Ang & Goh, 2010). Given their use of relatively homogeneous tools, these cross-sectional results highlight the importance of empathy in bullying involvement. Nevertheless, further investigation is needed to establish a possible causal link and to define the specific features of empathy in victimization and cyberbullying.

Interpersonal and communication skills include interacting without blaming, which encompasses moral action through affective self-regulatory mechanisms (e.g., social cognitive theory of the moral self; Bandura, 1991). The field of moral disengagement has attracted the highest number of articles. Higher moral disengagement has been found among both traditional and cyberbullies, but also among the bullied (especially with internalization of blame; e.g., Sim & Tan, 2013; Song & Oh, 2018; Thornberg et al., 2012; Wang, Ryoo, Swearer, Turner, & Goldberg, 2017). However, in the latter case, results seem to vary according to the type of bullying measure (peer-nominated or self-reported; Obermann, 2013). By the same token, defending bystanders have lower moral disengagement than either outsiders or probullies (e.g., Caravita et al., 2012; Song & Oh, 2018; Thornberg et al., 2012; von Grundherr et al., 2017). These results are consistent with previous findings on moral disengagement and aggression (Gini et al., 2014; Ma et al., 2019) or bullying roles in youth (Killer et al., 2019), but question the bidirectionality of the association between moral disengagement and bullying among adolescents.

1.3 Self-management skills

Coping skills in aggressive behavior include expressing and recognizing emotion (coping with emotion). We identified four studies of adolescents' emotional skills and bullying (Ciucci et al., 2014; Herts et al., 2012; Lomas et al., 2012; Pozzoli et al., 2017). Two of them found that emotion recognition was difficult for adolescents involved in bullying, whether they were the victims or the bullies (Ciucci et al., 2014; Pozzoli et al., 2017). This problem mainly seemed to affect negative emotions (e.g., fear, sadness, anger), despite the heterogeneity of the emotion measures used. The regulation-based approach adopted by the two other studies (Herts et al., 2012; Lomas et al., 2012) also revealed poorer regulation of negative emotion among the bullied, but divergent results for bullies. Based on current knowledge, it is not possible to draw a firm conclusion on the relationships between coping with emotions and peer harassment. Future studies should aim to implement consensual screening of emotional abilities and bullying involvement. In addition, as authors have yet to consider bystanders, the question of their emotional abilities remains unanswered.

Many studies have described the links between coping strategies and victimization, using a variety of measures (e.g., Garnefski & Kraaij, 2014; Keith, 2018). Being a victim is closely related to emotion(cognitive)-oriented coping strategies (Garnefski & Kraaij, 2014), avoidance (Murray-Harvey et al., 2012; Singh & Bussey, 2011), and social support-seeking (Skrzypiec et al., 2011). These results are in line with previous studies of bullied school-aged children (Andreou, 2001; Bijttebier & Vertommen, 1998). For bullies, the only study (Parris et al., 2019) to have investigated this link so far, found a significant correlation with externalizing and internalizing coping strategies, while externalizing coping tended to be used more by child bully-victims (see Hansen, Steenberg, Palic, & Elklit, 2012). No published study has yet investigated coping among adolescent bystanders, despite the promising prospects in terms of research and potential levers for bullying prevention.

2. Recommendations for Research and Clinical Implications

2.1 Improving research design and methodology

The results of the studies included in this review underscore the need to ensure that bullying measures are strictly circumscribed (and validated), so that bullying can be accurately and reliably evaluated. As bullying is a global problem, crosscultural psychometric validation studies are needed (Konishi et al., 2009). Hamburger and Basile (2011) produced a useful guide to the tools available for measuring each bullying experience (bullies, bullied, bystander, etc.). It is also important to address the theoretical question of whether bullying should be considered as categorical (i.e., groups of bullies, bullied etc.) or dimensional (i.e., continuum of involvement). While the original definition of Olweus is categorical, many studies favor a dimensional approach (e.g., Espelage, 2016; Espelage, Bosworth, & Simon, 2001; Rigby, 2002). Espelage et al. (2001) suggested that youth cannot always neatly be categorized as either bullies or nonbullies or victims. Categorizing adolescents in this way (based on extreme scores) excludes those who report low or moderate levels of bullying. From a dimensional perspective, bullying actions can be viewed as occurring along a continuum of severity in different shades of gray, rather than black-and-white thinking.

Thought should be given to identifying the most suitable approach in terms of research and interventions (e.g., general or focused on the adolescent involved in bullying). As such, a cluster analysis approach developed to explore bullying in the workplace (e.g., Leon-Perez, Notelaers, Arenas, Munduate, & Medina, 2014) could be a useful alternative method for measuring bullying at school. It might capture the complex and dynamic nature of bullying more effectively. Research on bullying continues to adopt a dichotomous perspective (bullies vs. bullied) despite a well-established relationship between victimization and offending (e.g., DeCamp & Newby, 2015). Further research is needed to explore (*i*) the victim-offender overlap (i.e., victims and offenders are often the same people; Jennings, Piquero, & Reingle,

2012), and (ii) revictimization among the victims of bullying (e.g., sexual aggression, traumatic childhood experiences or exposure to violence; Beckley et al., 2018).

There are also issues surrounding the assessment of life skills, especially ToM, emotional abilities, and coping. Validated measurement tools adapted to adolescents should be used to improve the relevance of empirical studies. Reliable results on the relationships between these life skills and bullying need to be produced, to guide early preventive actions and rehabilitation and support initiatives in the future. This calls for longitudinal research designs, to understand any possible effects of life skills such as EFs and empathy on bullying involvement.

2.2 Important topic areas to be investigated

The current systematic review revealed that although bullying mainly takes place during adolescence, research on this age group (and its psychological aspects) remains limited. As underlined by Botvin and Griffin (2003), adolescence is a crucial period where young people develop their cognitive and self-management skills (e.g., decision making, goal setting, personal mastery, social support). This skill enhancement must be understood in the context of social, cognitive, and behavioral development during adolescence. We therefore recommend that future studies investigate more precisely the relationships between adolescents' increased cognitive potential and different forms of peer harassment (i.e., direct, indirect, cyber) and involvement (i.e., bullied, bullies, defenders). Given all we know about the cognitive and affective specificities of adolescence, it is not always possible to generalize child-based results to adolescents. From this perspective, authors should distinguish between the three stages (i.e., early, middle and late) of adolescence, in order to take account of sociocognitive maturation. Finally, although prevention programs are increasingly focusing on bystanders (Polanin, Espelage, & Pigott, 2012), all too few studies explore the types of cognitive-behavioral skills involved.

2.3 Life skills training for adolescents

Our review highlighted the importance of training in life skills in order to overcome socio-emotional behavioral difficulties. Although some domains such as ToM and EFs need further investigation before training programs can be developed, some recommendations can already be made for empathy skills, moral disengagement, and coping.

Empathy plays an important role in prosocial behavior, and levels of affective empathy were negatively related to aggression. Many adolescents who bully are quite cognitively empathic. It might be wise to strengthen the affective empathy of bullies, in order to improve their conflict resolution skills. Adolescents who understand the emotions and perspectives of others tend to display prosocial and moral behaviors (Feshbach & Feshbach, 2009). Peace education programs and school-based social and emotional learning programs should be effective in increasing students' empathy levels (Durlak & Weissberg, 2011; Polat & Günçavdı, 2020; Sagkal, Turnuklu, & Totan, 2012). The goal of these programs is to help participants develop the empathic skills they need to adopt the perspectives of others and understand their emotions. Empathy plays an important role in cooperation and altruistic behavior, positive conflict resolution and the limiting of aggressive behaviors (Feshbach & Feshbach, 2009).

Moral disengagement is a well-known key element in bullying perpetration and non-defending behaviors. Brief persuasive communications from mass media or peers may produce short-term changes (McAlister, 2001). Furthermore, cognitive therapy techniques should be efficient in bringing about longer-term changes, if moral disengagement is treated as a self-serving cognitive distortion (Ribeaud & Eisner, 2010). The major goal should be to identify and change the cognitive processes underlying the initiation, maintenance and justification of peer harassment among bullies and probullying witnesses, via social responsibility training and remediation of cognitive bias. When bullying victims internalize

aspects of moral disengagement, it can lead to cognitive self-blame attribution, and consequently to poorer behavioral adjustment. This is often observed among victims of violence (e.g., Ullman, 1996) and should be targeted more by anti-bullying campaigns.

Deficient strategies for *coping* with stress among bullying victims is one of the most well supported conclusions of our systematic review. As stressed above, victims tend to internalize shame and fear, so interventions designed to promote adaptive strategies for coping with interpersonal problems of bullying seem a promising solution. As underlined by Harrell, Mercer and DeRosier (2009), the major aim is to help adolescents manage their emotions, build self-confidence, and enhance coping skills. This could be achieved using cognitive-behavioral techniques such as positive reinforcement, corrective feedback, and cognitive reframing.

Interventions that simultaneously integrate these three skills may produce powerful behavioral outcomes in school bullying prevention. However, more studies need to be carried out in order to evaluate this type of skills-based health education.

Limitations

The present review had several limitations that warrant acknowledgement. First, we investigated all empirical studies among populations of adolescents, but future research could benefit from distinguishing between the developmental stages (from early adolescence to emerging adulthood). Second, this review focused on cognitive and behavioral skills, and therefore excluded studies that examined self-related cognitions (e.g., self-esteem or assertiveness). This systematic literature review included studies from a range of countries, but the possible cultural influences (e.g., individualistic vs. collectivist) on bullying and life skills were not discussed. As we restricted our literature search to quantitative studies published in English, there may also have been publication biases, such as not taking into account of qualitative studies or ones published in another language. Finally, owing to the

heterogeneity of the study designs (e.g., methodological quality), outcomes and populations, together with the lack of information about the strength of the evidence (e.g., effect sizes), a meta-analysis was not feasible. The review's findings for particular skills (e.g., ToM, EFs) are therefore based on a small number of studies, attesting to the dearth of research on their links to bullying.

Conclusion

Studies of bullying in adolescence vary, depending on the type or form of bullying being investigated, tools used for measuring, sex and age, making it harder to generalize the results and draw conclusions. Life skills education is promoted by the WHO as a means of facilitating the practice and reinforcement of psychosocial and interpersonal skills in a developmentally appropriate way. The teaching of life skills should promote positive and prosocial attitudes and behaviors (Srikala & Kumar, 2010; Wong, Zimmerman, & Parker, 2010). More specifically, cognitive and behavioral abilities such as empathy, moral judgment and behavioral adjustment should be trained through explanation, observation and practice of each skill in bullying situations (e.g., modelling, feedback based on role-playing in typical scenarios). Further studies will need to confirm the contribution of cognitive and emotional management skills to bullying behaviors. This systematic review underlines the need to develop an integrated model of cognition, emotion and behavioral processes of peer harassment, encompassing interactions and feedback.

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