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Peer victimization and suicidal ideation: a narrative

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Abstract

Suicide is one of the leading causes of adolescent mortality across the globe. Peer victimization has been connected to increased chances of suicide ideation and suicide attempts among youth in numerous articles. The existing knowledge about peer victimization and suicide ideation and suicide attempts is reviewed in this chapter. The general Strain model and the Social Defeat Model are described as possible theoretical explanations for the relation between peer victimization and suicide. Cybervictimization is considered as a relatively new form of peer victimization, and potential unique elements of cybervictimization are described. It is also considered whether cybervictimization predicts suicidality when traditional peer victimization is controlled for. The chapter ends with suggestions for practice and future research.

Key words: Suicide ideation; Suicide attempt; Suicide; Bullying; Peer victimization; Cyberbullying; Cyberaggression; Cybervictimization; Youth; Adolescence; Review

Abbreviations: -

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Introduction

Suicide remains one of the most prominent causes of death for adolescents worldwide (Soole et al 2017; Glenn et al 2020), and is a tragedy that strongly affects parents and other family members. Its traumatic consequences are experienced for a long time after the loss (Cerel et al 2014). Every suicide by definition starts with an attempt. A suicide attempt is defined as a self-injurious behavior with at least some intent to die (Nock et al 2008). Many suicide attempts are non-fatal; non-fatal attempts are estimated to be 10-20 times more frequent than actual suicides (Bilsen, 2018). However, suicide rates and suicide attempt rates vary widely from country to country (Kokkevi et al 2012; Liu et al 2018; Glenn et al, 2020), and between boys and girls, with a higher suicide rate among boys (Glenn et al 2020). Suicide ideation, defined as thoughts of engaging in behaviors to end one's life (Nock et al 2008), is very common among adolescents. For example, in the Youth Risk Behavior Survey it was found that 18.8 percent of youth, between grades 9 to 12, in the USA had seriously considered suicide in the past 12 months, while 15.7 percent had made an actual suicide plan (Ivey-Stephenson et al., 2020). Though suicide ideation has been confirmed to be a statistically significant predictor of suicide, the effect size has been argued to be too small to be of clinical use (Ribeiro et al 2016). Therefore, even though in research the relation between suicide ideation and suicide attempts is rather robust, it remains hard to predict whether an individual reporting high suicide ideation will attempt suicide. Nonetheless, suicidal ideation and suicide attempts are stepping stones for suicide and hence serious problems. They should be prevented as much as possible. In the remainder of this contribution we write about the role of bullying and victimization as a possible push towards or reason for suicide. Bully victimization is a potential cause of youth suicide that has been extensively studied, and that has garnered widespread media attention (Gunn & Goldstein, 2014). This chapter also addresses cyberbullying and ends with a section on the prevention of peer victimization and suicidal ideation and suggestions for future research.

Bullying and Peer Victimization

Bullying is a form of aggression characterized by repetition and a power imbalance. Bullying can be both physical -e.g., kicking, punching, shoving- or relational -e.g., exclusion, name-calling, threatening- (Salmivalli, 2010). The definition of bullying and its operationalization in research comes with some problems. For example, a power imbalance is not necessarily physical, but can also be social, or even a perceived power imbalance. It is also debatable what constitutes repetition. Furthermore, teachers and children can have different ideas about what constitutes bullying (Maunder et al, 2010). To accommodate some of these points of discussion we here define peer victimization as an aggressive transaction between peers, often with a core element of bullying. Different from bullying, peer victimization does not necessarily include elements of repetition or a power imbalance (Turner et al 2015; Van Geel et al 2016). In this review we will consider both research about bullying and peer victimization. A particularly troublesome aspect of bullying is that victimization can persist over long periods of time, sometimes so long that some authors suggest that victimization becomes like a personality-trait (McDougall & Vaillancourt 2015). Furthermore, there can be fear of retaliation, shame, the idea that problems have to be solved by yourself, or little trust in adults to understand or solve bullying, so that some victims do not report bullying, and their suffering goes unnoticed (DeLara, 2012).

Many adolescents encounter bullying at some point in their lives. In a study conducted in 79 high and low income countries among more than 300,000 adolescents approximately thirty percent of adolescents reported bullying victimization (Elgar et al 2015). The actual rate of bullying victimization varies between studies, and depends on among other things gender, country, the definition of bullying that researchers use, and the instrument that is used to measure bullying. For example, as regards country differences bullying victimization is more prevalent in African countries than in European or Middle Eastern countries, and is related to the income per capita (Elgar et al 2015). Nonetheless, it seems safe to say that bullying and peer victimization are widespread phenomena in countries across the world. Given that bullying is spread across the globe, and happens across cultures and throughout history, it has been argued that bullying may be an evolutionary adaptation. Bullies may experience benefits such as a reputation for toughness, and access to food and sexual partners (Volk et al 2012). In line with this explanation, bullies appear to date more often. Overall, bullying happens across the globe, is a difficult problem to tackle and by now, thousands of studies and meta-analyses demonstrate that peer victimization is related to a range of adverse outcomes including depression and anxiety (Reijntjes et al 2010), psychosomatic complaints (Gini & Pozzoli, 2009), weapon carrying (Van Geel et al 2014), and suicide.

Peer victimization and Suicide

Among the range of negative outcomes associated with peer victimization suicide is perhaps the most troubling. The relation between peer victimization and suicide is now well established, because many studies have shown relations between bullying and suicide ideation (eg., Van der Wal et al. 2003; Fleming & Jacobsen Kim et al 2009;) and suicide attempts (eg., Kaminski & Fang 2009; Schneider et al 2012) and several meta-analyses have confirmed cross-sectional relations between bullying or peer victimization, suicide ideation, and suicide attempts (Holt et al 2015; Van Geel et al 2014). These relations are quite robust, being demonstrated for both peer reports and self-reports of peer victimization, in larger and smaller studies, in convenience samples and other samples, and in countries across the world. Furthermore publication bias, a tendency of scientific journals to favor statistically significant results, does not explain away the relation between peer victimization and suicide ideation and attempts. Studies concerning longitudinal links are more rare, but several longitudinal studies show relations between peer victimization or bullying and suicide ideation or suicide attempts, and the longitudinal link between bullying and suicide ideation was confirmed in a recent meta-analysis (Van Geel et al 2022). The relation between peer victimization and completed suicides is rarely studied, but a birth cohort study by Klomek et al. (2009), where 5,302 Finnish children were followed from age 8 to age 24, used a combined outcome of suicides followed by hospitalization and completed suicides, and found that for girls victimization was related to suicidality, but for boys victimization was not related to suicidality after controlling for conduct and depression symptoms. Longitudinal studies can also shed light on questions of causality. It is commonly assumed that bullying leads to suicide ideation and attempts, but on the basis of cross-sectional studies it cannot be excluded that it is suicidal youth who attract more bullying. Indeed, peer victimization predicts future depressive symptoms and anxiety, but depression and anxiety also predict future peer victimization (Fekkes et al 2006). Few studies have looked at directionality for bullying and suicide, but the studies that exist suggest that there are bidirectional relations between bullying and suicide ideation (Klomek et al 2019; Zhu et al 2022). Suicidal youth may have poorer interpersonal skills, which may in turn make these youth more likely to become

victimized by their peers, as well as other problems associated with suicide ideation, such as depression and low self-esteem, may make victimization by peers more likely (Zhu et al 2022). This suggests that the pathway from peer victimization to suicide is not so much a one-way-street where victimization leads to increases in suicide risk, but much more a cyclical process where suicidal ideation may lead to increased chances of peer victimization, which may, in turn, lead to further increases in suicidal ideation.

Explanations for the Relation between Peer Victimization and Suicide

The mechanisms that explain the pathway between peer victimization and suicide are currently not well understood. Hay and Meldrum have used the General Strain Theory (GST) to explain the relation between bullying on the one hand and suicide ideation and self-harm on the other hand. Originally devised by Agnew (1992) the GST states that strains, including difficult relations with peers, lead people to deviant behavior. In their article, Hay and Meldrum (2010) report support for the idea that strains like bullying victimization and cyberbullying victimization, are related to self-harm and suicide ideation, and that this relation is partially mediated by negative emotions. The Social Defeat Model (SDM) is another framework that potentially explains the relation between peer victimization and suicide. The SDM model is based on the resident-intruder paradigm where a male rodent (intruder) is put in a cage with another male rodent (resident). This leads to a fight, with the loser of the fight being called the subordinate animal, and the winner being called the dominant animal. In a variation of this experiment the animals are made to fight over several trials, leading to a situation of chronic stress for the subordinate animal. Chronic stress may also be created by 'threat', exposing the subordinate animal constantly to visuals or smell of the dominant animal, for example by putting the dominant animal in an adjacent cage. The subordinate animal may show severe signs of stress, with some similarities to depression in humans, like an impaired corticosterone response, decrease in testosterone, decreased locomotion, heightened arousal, changes in sleeping patterns, increased anxiety behavior, and social anxiety in susceptible mice (Björkqvist, 2001; Henderson et al., 2017; Huang et al., 2016). Though the generalization of animal research to humans is always challenging, the SDM has been described as a promising model to explain the effects of peer victimization on humans, and bullying is certainly a situation where a victim is exposed to constant violence and threat, and has been shown related to depression and sleeping problems, comparable to the subordinate animals' experiences. In humans these problems, in turn are predictors of suicide ideation.

Cybervictimization and Suicide

Increasingly scholars have started devoting more attention to a modern type of victimization, namely cybervictimization. Meta-analyses have confirmed the relations between cybervictimization and suicide ideation and suicide attempts (Katsaras et al 2018; Van Geel et al 2014). Scholars have stated worries about some unique aspects of cyberbullying that may make it harmful over and above traditional peer victimization. Victims of cyberbullying may feel denigrated in front of a wider audience, namely, those with access to the world wide web, than victims of traditional bullying. Cybervictims may also relive denigrating episodes over and over, as materials are difficult to remove from the internet. Furthermore, whereas traditional victims are mostly harassed at school, cybervictims can also experience harassment at home, meaning that not even home is a safe environment anymore. Finally, traditional

aggressors see the effects of their actions on their victims. Seeing the distress on their victims may perhaps cause even hardened aggressors to stop or at least dampen their aggression. Cyberaggressors in many cases do not see their victims reactions, and without such a deterrent they may perhaps harass their victims longer and more severely (Smith et al 2008; Slonje et al 2013). Indeed, the claim that cyberaggression is uniquely harmful has received critical attention. Especially in the earlier work about cybervictimization the relations between negative outcomes and cybervictimization were often not controlled for traditional victimization. Because the vast majority of cybervictims are also traditional victims (Wolke et al 2017), a lack of control for traditional victimization in analyses raises the risk of misattributing significant relations to cybervictimization while, actually they should be attributed to traditional victimization (Olweus, 2012; Wolke et al 2017). A meta-analysis that focused on the relation between bullying and internalizing outcomes suggested that cybervictimization has a unique relation with internalizing problems, also when this relation is controlled for traditional victimization (Gini et al 2018). Is this also true for the relation between cybervictimization and suicide? A study among 20,406 teenagers in the USA showed that unique cybervictims have a higher risk of both suicide attempts and suicide attempts followed by hospitalization when compared with uninvolved children. The highest risks for suicide attempts and suicide attempts followed by hospitalization were reported by children who reported both traditional and cybervictimization (Schneider et al 2012). Overall, it seems prudent to treat cybervictimization as a health risk to young people, but more knowledge is needed to better understand the relations between cybervictimization and suicide. For example, it has been pointed out that cybervictimization has no wide upon agreed definition, and therefore it becomes difficult to compare studies of cybervictimization (Kowalski et al 2014; Slonje et al 2013). The problem with reaching consensus on a widely agreed definition has to do with the many different forms that cybervictimization can take. For example it can refer to sending somebody denigrating remarks or threats through email or messenger services, posting humiliating video's, posting private information online, hacking, and even sharing sexual images of the victim. At the moment it is not well enough understood whether different forms of cybervictimization are more dangerous than others, because most available studies used the omnibus construct of cybervictimization.

Future Research

Research carried out over decades and in countries across the globe has been the cornerstone in creating evidence based intervention and prevention programs to reduce peer victimization and youth suicide. However, to date, many youth across the globe still are victims of their peers, and suicide remains one of the leading causes of death amongst young people. This means that continued research remains necessary to inform future prevention and intervention efforts. One important area for future research is research in non-western countries. Even though there have been studies about bullying and suicide in non-western countries, there is still a striking imbalance between knowledge from Western countries compared to knowledge from non-western countries. For example, for the thousands of studies about bullying done in the Western world, a systematic review identified fewer than 50 studies about bullying among youth conducted in India (Thakkar et al 2021). Furthermore, the studies that were done often did not meet important standards in terms of design and validity, so that it was not possible to draw strong conclusions from the work. This is especially regretful because most youth do not live in Western countries; India, for example, is home to the world's largest youth population, and we cannot assume that knowledge from Western studies will generalize to non-western

countries (Thakkar et al 2021). Another issue for future research is cyberbullying. Though cyberbullying is no longer a new topic, research does highlight it's relation with suicide ideation and suicide attempts. Cyberbullying can take many forms, and future research should address how different types of cyberbullying (eg., exclusion, harassment, doxing) are related to suicide ideation and suicide attempts. Furthermore, research should focus on how each form of cyberbullying among youth can be prevented and diminished.

Applications of the Material

The links between peer victimization on the one hand and suicide ideation and suicide attempts on the other hand have repeatedly been found in research, and demonstrate how important it is to prevent and diminish peer victimization. For preventing bullying and peer victimization especially group based interventions appear successful. These interventions address the whole classroom and motivate bystanders to defend victims of bullying and support the victim. Such approaches have been found effective in reducing bullying (Salmivalli & Poskiparta 2012) and cyberbullying (Williford et al 2013). Even though many studies support the effectivity of group based interventions, the Healthy Context Paradox remains a concern. It has been found that when schools implement anti-bullying measures children that remain victims are worse off in terms of depression and self-esteem than children who are victimized in schools that did not implement interventions (Huitsing et al 2019). However, even though classroom based interventions are effective against peer victimization, no intervention to date has been found to put an end to bullying completely. Also, the Healthy Context Paradox remains a concern, and therefore it remains important to also focus on methods other than bullying interventions to reduce suicide risk amongst youth. Fortunately, research has identified methods to reduce suicide amongst youth. Promising methods to reduce youth suicide are mainly the limitation of access to lethal means, and school based awareness programs (Kalafat 2003; Zalsman et al 2016). Reducing suicide amongst youth requires intensive and combined effort, focusing both on causes, such as peer victimization, as well as on suicidal behavior.

Mini dictionary

Bullying: Bullying is a form of aggression characterized by repetition and a power imbalance

Peer victimization: Aggression between peers not necessarily including repetition and a power imbalance, but often with a core element of bullying.

Cyberbullying: Bullying through digital means such as computers or smartphones.

Suicide ideation: thoughts of engaging in behaviors to end one's life.

Suicide attempt: engagement in self-injurious behavior with at least some intent to die.

Key Facts

- Suicide is a leading cause of death amongst youth worldwide
- Peer victimization predicts suicide attempts and suicide ideation amongst youth
- Bullying victimization predicts suicide attempts and suicide ideation amongst youth
- Bullying victimization predicts completed suicides and suicides following hospitalization amongst girls, but not with boys after controlling for depression and conduct problems
- Cybervictimization predicts suicide ideation and attempts amongst youth

Summary Points

- Suicide is a leading cause of death amongst youth worldwide. For every completed suicides, there are many non-fatal attempts.
- Peer victimization and bullying have been found to predict suicide ideation and suicide attempts amongst youth in many studies, and these relations have been confirmed in meta-analyses.
- Victims of cyberbullying report higher suicide ideation and more suicide attempts than non-involved children.
- Future studies should focus on non-western countries and on cyberbullying.
- Prevention and intervention should be aimed both on reducing peer victimization, for example by using group based interventions, and on preventing suicide, for example by limiting access to lethal means and by using school based prevention efforts.

References

- Agnew R. (1992) Foundation for a general strain theory of crime and delinquency. *Criminology* 30: 47-88
- Bilsen J (2018) Suicide and youth: risk factors. *Front Psychiatry* 9: 540.
- Björkqvist K (2001) Social defeat as a stressor in humans. *Physiol & Behav* 73: 435-442.
- Bridge JA, Horowitz LM, Fontanella CA et al (2014). Prioritizing research to reduce youth suicide and suicidal behavior. *Am J Prev Med* 47: S229-S234.
- Cerel J, McIntosh JL., Neimeyer RA, Maple M et al (2014) The continuum of “survivorship”: Definitional issues in the aftermath of suicide. *Suicide Life- Behav* 44: 591-600.
- DeLara EW (2012) Why adolescents don't disclose incidents of bullying and harassment. *J Sch Viol* 11: 288-305
- Elgar FJ, Pickett KE, Pickett W et al (2013) School bullying, homicide and income inequality: a cross-national pooled time series analysis. *Int J Publ Health* 58: 237-245
- Ivey-Stephenson AZ, Demissie Z, Crosby AE et al (2020) Suicidal ideation and behaviors among high school students—youth risk behavior survey, United States, 2019. *Morbidity and Mortality Wkly Rep* 69: 47-55
- Fekkes M, Pijpers FI, Fredriks AM et al (2006) Do bullied children get ill, or do ill children get bullied? A prospective cohort study on the relationship between bullying and health-related symptoms. *Pediatrics* 117: 1568-1574.
- Fleming LC, Jacobsen KH. (2010) Bullying among middle-school students in low and middle income countries. *Health Promot Int* 25: 73-84
- Gini G, Card NA, Pozzoli T (2018) A meta-analysis of the differential relations of traditional and cyber-victimization with internalizing problems. *Aggr Behav* 44: 185-198.

- Gini G, Pozzoli T (2009) Association between bullying and psychosomatic problems: A meta-analysis. *Pediatrics* 123: 1059-1065
- Glenn CR, Kleiman EM, Kellerman J et al (2020) Annual Research Review: A meta-analytic review of worldwide suicide rates in adolescents. *J Child Psychol Psychiatry* 61: 294-308.
- Gunn JF Goldstein, SE (2017). Bullying and suicidal behavior during adolescence: A developmental perspective. *Adolesc Res Rev* 2: 77-97
- Hay C, Meldrum R (2010) Bullying victimization and adolescent self-harm: Testing hypotheses from general strain theory. *J Youth Adolesc* 39: 446-459
- Henderson F, Vialou V, El Mestikawy S et al (2017) Effects of social defeat stress on sleep in mice. *Front Behav Neurosci* 11: 227
- Huang GB., Zhao T, Gao XL et al (2016) Effect of chronic social defeat stress on behaviors and dopamine receptor in adult mice. *Prog Neuro-Psychoph*, 66, 73-79.
- Holt MK., Vivolo-Kantor AM, Polanin JR et al (2015) Bullying and suicidal ideation and behaviors: A meta-analysis. *Pediatrics* 135: e496-e509
- Huitsing G, Lodder G, Oldenburg B et al (2019) The healthy context paradox: Victims' adjustment during an anti-bullying intervention. *J Child Fam Stud* 28: 2499-2509
- Kalafat J (2003) School approaches to youth suicide prevention. *Am Behav Sci* 46:1211-1223
- Kaminski JW, Fang X (2009) Victimization by peers and adolescent suicide in three US samples. *J Pediatr* 155: 683-688

- Katsaras GN, Vouloumanou EK, Kourlaba G et al (2018) Bullying and suicidality in children and adolescents without predisposing factors: A systematic review and meta-analysis. *Adolesc Res Rev* 3: 193-217.
- Klomek, AB, Barzilay S, Apter A et al (2019) Bi-directional longitudinal associations between different types of bullying victimization, suicide ideation/attempts, and depression among a large sample of European adolescents. *J Child Psychol Psychiatry* 60: 209-215
- Klomek AB., Sourander A, Niemelä S et al (2009) Childhood bullying behaviors as a risk for suicide attempts and completed suicides: a population-based birth cohort study. *JAMA Psychiatry* 48: 254-261
- Kokkevi A, Rotsika V, Arapaki A et al (2012) Adolescents' self-reported suicide attempts, self-harm thoughts and their correlates across 17 European countries. *J Child Psychol Psychiatry* 53: 381-389
- Kowalski RM, Giumetti GW, Schroeder AN et al (2014) Bullying in the digital age: a critical review and meta-analysis of cyberbullying research among youth. *Psychol Bull* 140: 1073-1137.
- Liu X, Huang Y, Liu Y (2018) Prevalence, distribution, and associated factors of suicide attempts in young adolescents: School-based data from 40 low-income and middle-income countries. *PloS one*: e0207823.
- Maunder RE, Harrop A, Tattersall AJ (2010) Pupil and staff perceptions of bullying in secondary schools: Comparing behavioural definitions and their perceived seriousness. *Educ Res* 52: 263-282

- McDougall P, Vaillancourt T (2015) Long-term adult outcomes of peer victimization in childhood and adolescence: Pathways to adjustment and maladjustment. *Am Psychol* 70: 300-310
- Nock MK, Borges G, Bromet EJ et al (2008). Suicide and suicidal behavior. *Epidemiol Rev* 30: 133-154.
- Olweus D. (2012). Cyberbullying: An overrated phenomenon?. *Eur J Dev Psychol* 9: 520-538
- Ribeiro JD, Franklin JC, Fox KR et al (2016) Self-injurious thoughts and behaviors as risk factors for future suicide ideation, attempts, and death: a meta-analysis of longitudinal studies. *Psychol Med* 46: 225-236
- Reijntjes A, Kamphuis JH, Prinzie P et al (2010) Peer victimization and internalizing problems in children: A meta-analysis of longitudinal studies. *Child Abuse Negl* 34: 244-252
- Salmivalli C (2010) Bullying and the peer group: A review. *Aggress Viol Behav* 15: 112-120
- Salmivalli C, Poskiparta E (2012) KiVa antibullying program: Overview of evaluation studies based on a randomized controlled trial and national rollout in Finland. *Int J Confl Violence* 6: 293-301
- Schneider SK, O'donnell L, Stueve A et al (2012) Cyberbullying, school bullying, and psychological distress: A regional census of high school students. *Am J Publ Health* 102:171-177
- Smith PK, Mahdavi J, Carvalho M et al (2008) Cyberbullying: Its nature and impact in secondary school pupils. *J Child Psychol Psychiatry* 49: 376-385
- Slonje R, Smith PK, Frisén A (2013) The nature of cyberbullying, and strategies for prevention. *Comput Hum Behav* 29: 26-32

Soole R, Kőlves K, De Leo D (2015) Suicide in children: a systematic review. Arch Suicide Res 19: 285-304

Thakkar N, Van Geel M, Vedder P (2021) A systematic review of bullying and victimization among adolescents in India. Int J Bullying Prev 3: 253-269

Turner HA Finkelhor D, Shattuck A et al (2015) Beyond bullying: Aggravating elements of peer victimization episodes. School Psychol Quart 30: 366-384

Van der Wal MF, de Wit CA et al (2003) Psychosocial health among young victims and offenders of direct and indirect bullying. Pediatrics 111:1312-1317

Van Geel M, Goemans A, Vedder PH (2016) The relation between peer victimization and sleeping problems: A meta-analysis. Sleep Med Rev 27: 89-95

Van Geel M, Goemans A, Zwaanswijk W et al (in press). Does peer victimization predict future suicidal ideation? A meta-analysis on longitudinal studies. Aggress Violent Behav

Van Geel M, Goemans A, Zwaanswijk W et al (2018) Does peer victimization predict low self-esteem, or does low self-esteem predict peer victimization? Meta-analyses on longitudinal studies. Dev Rev 49: 31-40

Van Geel M, Vedder PH, Tanilon J (2014) Relationship between peer victimization, cyberbullying, and suicide in children and adolescents: a meta-analysis. JAMA Pediatr 168: 435-442

Van Geel M, Vedder PH, Tanilon J (2014) Bullying and weapon carrying: A meta-analysis. JAMA Pediatr 168 714-720

Volk AA, Camilleri JA, Dane AV et al (2012) Is adolescent bullying an evolutionary adaptation?. Aggress Behav 38: 222-238

- Volk AA, Dane AV, Marini ZA et al (2015). Adolescent bullying, dating, and mating: Testing an evolutionary hypothesis. *Evolutionary Psychology*, 13(4), 1474704915613909.
- Winsper C, Lereya T, Zanarini M et al (2012) Involvement in bullying and suicide-related behavior at 11 years: a prospective birth cohort study. *J Am Acad Child Adolesc Psychiatry*. 2012 51 :271–282
- Williford A, Elledge LC, Boulton AJ et al (2013). Effects of the KiVa antibullying program on cyberbullying and cybervictimization frequency among Finnish youth. *J Clin Child Adolesc Psychol* 42: 820-833
- Wolke D, Lee K, Guy A (2017) Cyberbullying: a storm in a teacup?. *Eur Child Adolesc Psychiatry* 26: 899-908.
- Zalsman G, Hawton K, Wasserman D et al (2016) Suicide prevention strategies revisited: 10-year systematic review. *Lancet* 3: 646-659
- Zhu X, Griffiths H, Eisner M et al (in press) Developmental associations between bullying victimization and suicidal ideation and direct self-injurious behavior in adolescence and emerging adulthood. *J Child Psychol Psychiatry*