Review



Suggesting self-compassion training in schools to stop cyberbullying: a narrative review

Muhammad Aledeh^{1,2} · Adewale Allen Sokan-Adeaga³ · Habib Adam⁴ · Sulaiman Aledeh⁵ · Yasuhiro Kotera⁶

Received: 9 August 2023 / Accepted: 19 December 2023 Published online: 03 January 2024 © The Author(s) 2023 OPEN

Abstract

Cyberbullying is a major public health problem among adolescents worldwide. Research shows that there is a link between cyberbullying and mental health problems. Adolescent victims of cyberbullying suffer from diverse negative effects such as stress, anxiety, depression, poor self-esteem, isolation, and suicidal ideation. Schools have attempted to address this by introducing measures, including raising awareness of cyberbullying among adolescents, launching Internet safety campaigns, and enacting regulations to stop cyberbullying. However, salient effects have not been reported to date. Research reports that self-compassion training is effective in reducing mental health problems and beneficial for adolescents. This narrative review aims to review the literature on cyberbullying in adolescence and propose effective measures to stop it. Self-compassion training is proposed as an effective intervention to stop cyberbullying among adolescents. This review further discusses how schools can implement self-compassion training to stop cyberbullying in adolescents. Findings will help policymakers and stakeholders of schools, colleges, and universities to incorporate self-compassion training into school curricula to help support victims of cyberbullying.

Keywords Cyberbullying · Internet · Social media · Adolescents · Mental health · Self-compassion training

1 Introduction

Cyberbullying is an increasingly major global public health concern, especially among adolescents and this has led to a renewed research interest across the world [1–5]. In many OECD nations, cyberbullying is a top-priority policy concern [6]. Cyberbullying occurs in various forms on several digital devices and communication technologies such as PCs and mobile phones, over the Internet via the web, messaging platforms, email, social media platforms, and gaming platforms [1, 4, 7, 8]. Cyberbullying is repeated behaviour aimed at angering, shaming, or scaring those who are targeted [7]. Over the past several decades, research into bullying in adolescence has received increased attention [9]. Research suggests that being a victim of cyberbullying has a serious negative effect on adolescents' mental health such as resulting in poor self-esteem, suicidal ideation, poor academic performance, and eating disorders [5, 10–12]. Furthermore, cyber dating abuse has also been prevalent among adolescents, especially during online dating [13–15]. Cyberdating abuse as described in the extant literature on partner abuse refers to aggressive behaviours of repeated surveillance of the partner [13–15].

Muhammad Aledeh, muhammad.aledeh@gmail.com | ¹Department of Psychiatry, Wiener Gesundheitsverbund, Klinik Donaustadt, Vienna, Austria. ²College of Health, Psychology and Social Care, University of Derby, Derby, UK. ³Department of Environmental Health Sciences, Faculty of Public Health, College of Medicine, Lead City University, Ibadan, Nigeria. ⁴Department of Computer Science, University of Applied Sciences, FH Technikum, Vienna, Austria. ⁵News Central TV, Victoria Island, Lagos, Nigeria. ⁶Faculty of Medicine and Health Sciences, University of Nottingham, Nottingham, UK.



YouTube, Instagram, Snapchat, Facebook, WhatsApp, TikTok, and Twitter [8, 16] are the most popular online platforms for teenagers. About 95% of teens claim to have access to a smartphone while 45% claim they are almost constantly online [16]. In the U.S., 36% of middle and high school students admitted having been victims of bullying at a point in their life and this has been exacerbated by social media [17, 18]. In the U.S. alone, many teens (59%) who believe that cyberbullying is a major problem for people their age have experienced online bullying or harassment [16]. These teens also think that the issue of cyberbullying has not been addressed by school authorities, social media companies, and government agencies [16]. Globally, schools and students were affected by the COVID-19 Pandemic lockdown. As a result, many schools had to adopt home-schooling, online learning/distance learning and many schools were forced to go home-schooling, online/distance learning [19, 20]. There is evidence that social isolation can negatively impact the well-being of students [21].

The result from a cross-sectional study conducted in Europe involving Germany, Greece, Iceland, Romania, Netherlands, Poland, and Spain shows that the highest rate of cyber victimisation was found in Romania (37.3%) while the lowest rate was found in Spain (13.3%) [22]. Another study conducted in six European countries with samples drawn from Spain, Romania, Italy, Poland, Portugal, and the United Kingdom included a total of 1146 secondary school students (698 females and 448 males) between the ages of 13 and 16 years [23]. Overall, 37.2% of female participants and 35.0% of male participants indicated that they had experienced bullying or cyberbullying [23]. Adolescents who had encountered physical and/or sexual abuse before the age of 15, witnessed domestic violence against their mothers, or experienced intimate partner violence were more prone to being victims of bullying and/or cyberbullying [23]. Students who experienced perceived social support from their teachers and classmates, along with possessing higher self-esteem, correlated with a decreased likelihood of falling victim to cyberbullying [23].

Cyberbullying among adolescents in Asian countries is also prevalent [24–26]. Studies indicate a significant prevalence of cyberbullying, reaching as high as 64.32% among Chinese college students [24]. Adolescents in Xi'an, China, provided self-report data through surveys. In total, 22.2% of the sample reported experiencing cyberbullying victimization at some point in their lives, while 6.3% reported such experiences within the past year [27].

A cross-sectional study investigated the cyberbullying experiences and coping mechanisms of 484 students across four secondary schools in urban Vietnam [26]. The study also explored how various forms of support mediate the associations between cyberbullying and mental health issues in adolescents [26]. Approximately 11.6% of students reported personal experiences of at least one cyberbullying act in the past three months, while 28.3% stated that they had observed such incidents during the same period [26]. Among those who were victimised, only 48.2% made an attempt to intervene and stop the perpetrators [26]. In contrast, a majority of the observers fell into the "Intervene" category, actively attempting to report instances of cyberbullying or assist the victims [26].

There is sufficient evidence that cyberbullying causes significant levels of loneliness, anxiety, and depression than traditional forms of bullying [28]. This results in most times in suicidal ideation and suicide [28]. The recurrence and persistence of cyberbullying, what started as just a brief chat or posting results in serious problems making victims more vulnerable in schools and the community that they reside in. The victims struggle to cope and sometimes become isolated which results in the deterioration of both their physical and psychological well-being [29]. Moreover these adolescent victims may suffer poor academic performance as they struggle to cope problems of concentration and lack of motivation [28, 30, 31]. The stress of having to suffer this alone may sometimes lead adolescent cyberbullying victims to seek coping strategies such as alcohol, drugs, and substance misuse [32, 33]. Their physical and psychological well-being becomes exacerbated and consequently, they become suicidal [34, 35].

In the early waves of the COVID-19 pandemic for example, in most Western European countries, cases of the virus were reported [36, 37], there was a spike in the amount of information and the number of people present online, especially on social media and this includes many adolescents [8, 31, 38]. Recent studies show that adolescents who are victims of cyberbullying report increased anxiety, loneliness, depressive affect, suicidal behaviour, and somatic symptoms [2, 4, 39, 40], and complete suicide [8].

2 Objective

We aim to conduct a narrative review of the literature on cyberbullying among adolescents, emphasising the link between cyberbullying and mental health problems. We highlight the common negative effects experienced by adolescent victims of cyberbullying, including stress, anxiety, depression, poor self-esteem, isolation, and suicidal ideation. Finally, we suggest self-compassion training to protect victims of cyberbullying among adolescents in schools.

3 Method

This is a narrative review of the literature.

3.1 Preventive measures to prevent cyberbullying

Strategies for the prevention of cyberbullying have not proven effective and research on effective preventive measures is lacking [3, 41]. Providing information for school personnel, parents, and youth has been a common preventive measure to prevent cyberbullying [42]. While there is evidence that preventive measures are necessary, consensus on how to address the problems of cyberbullying is lacking. [42]. An attempt made by a German-based curriculum for 11- to 12-year-olds (Surf-fair) that is delivered in a 90-min session only yielded substantial reductions in cyberbullying victimisation, however, it was less effective in reducing cyberbullying perpetration [42]. Medical professionals, for example, paediatricians can support victims and their families only if they are adequately trained to play key roles in caring for and supporting the social and developmental well-being of children [5, 11, 43].

Smith et al. reported pupils recommended blocking and avoiding messages from perpetrators and reporting the cases as the best coping strategies. However, many victims never told anyone about their cyberbullying experience [44]. A qualitative study, Pennell et al. conducted in Australia revealed that societal influences, rather than ineffective school practices, were to blame for the continued presence of cyberbullying [45]. Therefore, an intervention targeting a wider population extending beyond students such as the incorporation of self-compassion training into both teacher training programmes and school curriculum is required.

3.2 Supporting both victims and perpetrators of cyberbullying through self-compassion

Research shows that there is a relationship between cyberbullying victimisation and mental health conditions such as anxiety and depression [46]. Chu et al. suggest that hopelessness partially mediated the relationships between cyberbullying victimisation and anxiety and depression. Furthermore, Chu et al. suggest that there are direct effects of cyberbullying victimisation on anxiety and depression. They observed that self-compassion moderated the mediation effects of hopelessness [46]. It was also observed that these effects were specifically much stronger in adolescents with lower self-compassion [46]. According to recent research, gratitude is negatively correlated with cyberbullying perpetrators reduce or change their bullying behaviours [47].

Self-compassion training can benefit both the victims in that the victims learn healthy coping strategies to protect themselves when they are targeted. Research shows that victims of cyberbullying exhibit symptoms of mental distress such as stress, anxiety, depression, loneliness, lack of academic motivation, problems of concentration, insomnia, and suicidal ideation [28, 30, 31, 34, 35]. Similarly, perpetrators of cyberbullying will benefit from self-compassion training in that they learn to be kind to others the way they would want others to be kind to them in return. This has the potential to enable perpetrators of cyberbullying to develop a sense of empathy and consider the harm that they may be causing others and consequently, they would stop attacking others [48, 49].

Cyberdating abuse victimization (CDAV) is common among female adolescents [15]. In a cross-sectional study, Wang et al. studied a sample of 420 female adolescents who had been in intimate relationships during the past year. The participants were aged 13 to 17 years (mean age = 15.78 years) [15]. The results show that a total of 49% of participants reported experiencing CDAV in the past year, and CDAV exposure was directly related to experiential avoidance and indirectly to self-compassion [15]. Self-compassion and experiential avoidance were significantly associated with CDAV in participants with low interpersonal flexibility [15].

Recent research conducted by Fasihi and Abolghasemi and Múzquiz et al. highlights the significant impacts of engaging in bullying behaviours. They suggest that being a victim of cyberbullying has serious negative impacts on the health and well-being of both perpetrators and victims. Fasihi and Abolghasemi specifically demonstrate that students who engage in bullying have more problems with emotional processing. [50]. They suggest that perpetrators of bullying significantly score lower in their ability to suppress weak emotional experiences, mindfulness, self-kindness, and common humanity when compared to the victims [50]. This implies that in bullies and their victims, emotional processing and self-compassion are severely impaired [50]. Consequently, bullies and their victims both suffer severe damage to their emotional processing and self-compassion [50]. Furthermore, a recent study, by Múzquiz et al. suggests that relational and direct bullying were both associated with lower scores in positive affect and negative affect, whereas direct bullying was associated with only negative affect. [51]. The study further suggests that having high levels of self-compassion was strongly correlated with positive emotions, and self-compassion was a partial mediator between bullying (whether relational or direct) and negative emotions [51]. This study adds to existing evidence that self-compassion may be an important component in the prevention and intervention programmes for victims of bullying [51]. A study suggests the use of empathy, compassion, and self-compassion can enhance well-being by helping to reduce suffering because of cyberbullying [52].

3.3 Incorporating self-compassion training into the school curriculum

Self-compassion is commonly defined as kindness and understanding towards oneself in difficult times [53]. This salutogenic construct comprises three components: being kind to oneself rather than being critical, believing in common humanity by accepting one's suffering as part of life rather than isolating oneself, and avoiding over-identifying with one's distress by being mindful of it [54–57]. Self-compassion is the ability to support oneself when experiencing challenges in life such as pain or suffering—even though this is caused by external circumstances or inadequacies and personal mistakes [58, 59]. Mental health-related issues such as low self-esteem, depression, anxiety, increased stress, and acting out violently have been associated with cyberbullying, even long after the bullying has stopped [2, 60]. Self-compassion and self-compassion training has been proven to be effective for people suffering from several mental health-related problems such as stress, anxiety, and depression [61, 62], therefore, self-compassion and self-compassion training can be suggested to support both victims and perpetrators of cyberbullying. Cyberbully victims sometimes get ostracised and consequently leading them to become isolated [60] and even suicidal [2]. In a recent study Egan et al., there is evidence that self-compassion can be effective for several mental health problems such as stress, anxiety, and depression have lower levels of anxiety and depression [63]. Additionally, they noted the importance of self-compassion for anxiety and depression and suggested the need for tailored interventions which are inclusive to address diversity in the adolescent population [63].

A recent randomised controlled trial [64], suggests self-compassion training to be promising for improving psychological well-being. To determine whether self-compassion training can mitigate the symptoms of social anxiety disorder (SAD), a self-guided self-compassion training program was evaluated [64]. The study shows that learning how to be self-compassionate through self-compassion training may be effective for improving psychological well-being [64]. Finding suggests that, when compared to both the waitlist condition and applied relaxation training, self-compassion training produced greater clinically significant benefits in self-compassion and reduced fear of self-compassion [64].

4 Discussion

In this review, we introduce self-compassion training as a proposed effective intervention for reducing mental health problems related to cyberbullying among adolescents. We emphasise the existing evidence supporting the effectiveness of self-compassion training and its potential benefits for adolescents. This review suggests that incorporating self-compassion training into school curricula could be a practical and impactful strategy for preventing and addressing the negative consequences of cyberbullying. One of the obstacles that makes a supposedly happy, harmless, and positive school life difficult is cyberbullying which causes harm and suffering to many young and adolescent students [65]. This has led many adolescents in several countries across the world to commit suicide indicating the seriousness of this problem [65].

The challenges posed by cyberbullying transcend geographic boundaries and defy confinement to any country. Consequently, addressing this issue necessitates collaborative efforts on an international level. [3]. Moreover, the technology gap between children and their parents may prevent some parents from supporting their children, therefore, schools should support parents by supporting their students [66]. Attempts to stop cyberbullying in schools have posed serious challenges to date. For students to be confident enough to reveal their troubles, school authorities should also provide self-compassion routes [67].

The research on cyberbullying has experienced rapid growth in recent years, offering fresh perspectives on its prevalence and shedding light on the characteristics of adolescents who are prone to being cyberbullied and those inclined to engage in cyberbullying. Moreover, this research explores the relationship between these traits and mental well-being [6]. Cyberbullying is both a social and psychological problem [17, 18] which has been identified as a significant vulnerability factor in the development of some mental health challenges among adolescents [46]. Studies show that perpetrators of cyberbullying are more likely to report aggressive behaviours, increased substance use, and delinquent behaviours [3].

Self-compassion training [68] can be integrated into school curricula where students will learn self-compassion skills that they can incorporate into their daily routines. The course will be offered across 8 weeks. Self-compassion can be learned and practised by attending self-compassion training sessions. Adolescent students will be able to practice mind-fulness which is a core and inseparable component of self-compassion [69, 70]. Students will be able to learn healthy coping strategies to protect and support themselves against the negative impacts of cyberbullying. Mindfulness is the act of purposefully paying attention and being in the present moment while being aware of what is going on inside of us as we experience each moment after another and being non-judgemental [71, 72]. Mindfulness is offered mostly in 8-week block sessions as mindfulness-based stress reduction (MBSR), mindfulness-based cognitive therapy (MBCT), and mindfulness-based relapse prevention (MBRP) [73].

There is strong evidence that the COVID-19 pandemic may have influenced the increased use of social media platforms [31], and subsequently impact cyberbullying among adolescents via social media [8, 31]. Education systems have responded to this issue in a variety of ways, including by raising awareness of it, helping kids in schools, launching Internet safety campaigns, and enacting regulations and laws to stop cyberbullying [6]. There are several empirically tested interventions with the goal of assisting victims and decreasing perpetration, but more knowledge is required on how to create and scale up efficient interventions [6]. The existing body of literature further emphasises the necessity of developing a universally accepted definition of cyberbullying and the necessity of doing research to determine its causes and effects [6].

Evidence shows that there is a link between cyberbullying and mental health problems, and it is suggested that girls suffer more from cyberbullying than boys [74]. It is argued that exposure to cyberbullying is one of the areas where digital transformation yields worse outcomes for females than for males [74]. Data available in some OECD countries shows that approximately 12% of females under the age of 15 reports having experienced cyberbullying, compared to 8% of boys [74]. Griffiths and Kuss for example, suggest insights into why more girls than boys are affected by cyberbullying. Research shows that 40% of girls and only 6% of boys claimed Facebook to be the most important thing in their life [66, 75]. In all OECD countries except Denmark, Israel, and Spain, more girls than boys report being targeted by digital media (OECD, 2022). Along with Ireland and the UK, some Eastern European nations [74], UAE [76], and some countries in Africa including Nigeria [77] and Ghana [78] also have high rates of cyberbullying.

The COVID-19 pandemic that resulted in a global lockdown forced schools worldwide to close while some schools adopted online learning [20, 79]. As a result, millions of adolescents worldwide were exposed to the dangers of being potential victims of cyberbullying [20, 79]. Valkenburg, Peter, and Schouten, for example, suggest that adolescents who mostly received negative feedback on their social media posts may develop low self-esteem and consequently, poorer well-being [66, 80]. According to recent studies, cyberbullying causes adolescents to experience increased anxiety, loneliness, depressive symptoms, suicidal behaviour, and somatic symptoms, as well as complete suicide [2, 34, 81, 82].

Although perpetrators of cyberbullying are also possible perpetrators of traditional bullying, cyberbullying may be more dangerous since perpetrators can always act anonymously and connect easily with their victims [3, 83]. Self-compassion can be put in a simple way for adolescents in schools to understand. Self-compassion enables those who are undergoing suffering to turn compassion towards themselves [58]. This means that we are kind and understanding towards ourselves rather than being harshly self-critical when we make mistakes, fail, or feel inadequate [58, 68, 70]. When we face challenges and difficulties in our lives, we give support and encouragement to ourselves rather than being cold and judgmental towards ourselves [58].

The concept of self-compassion may be different for young adolescents as compared to adults due to their limited exposure [63]. Therefore, it is important to develop self-compassion training tailored to the anxiety and depression experienced by adolescents [63]. It is worthwhile to integrate self-compassion training not only into schools' curriculum but also in teacher training programmes. Consequently, this will enhance the development of a culture of compassion within the school community. Self-compassion can be nurtured in the classroom by providing a supportive environment [84]. Exercises that emphasize self-compassion, mindfulness and a sense of common humanity may be incorporated throughout the curriculum to promote self-kindness and mindfulness [84]. Additionally, to enhance a culture of compassionate leadership [85] in schools, leaders of schools may also benefit from self-compassion training to enable them to nurture compassion in themselves and in those they lead.

Self-compassion training is proven to be effective and beneficial for several mental health problems such as stress, anxiety, depression, and feelings of loneliness [86, 87]. Evidence suggests self-compassion training may enhance student

resilience and academic motivation in students suffering from poor academic motivation and poor mental health [88]. Among some of the consequences of cyberbullying is eating disorders and there is evidence that self-compassion can be helpful against eating disorders [12]. Additionally, a recent study suggests self-compassion training to be effective on work-related well-being across diverse cultures [89].

4.1 Suggestions for stakeholders and policymakers

Our review suggests that self-compassion training will be effective in supporting adolescent victims of cyberbullying. We hereby suggest recommendations for stakeholders and policymakers for the successful implementation of self-compassion training in schools to address the problem of cyberbullying.

Research shows that online mental health courses are effective in supporting students who may be struggling with mental health issues [90]. Accordingly, self-compassion training can be incorporated into online training (CITE) [91] to both prevent cyberbullying and protect would-be victims of cyberbullying.

We advocate for the following:

- 1. We advocate for the integration of self-compassion training modules within existing health and mental health curricula in schools. It is essential to ensure that these self-compassion training modules are age-appropriate and align with educational standards.
- 2. Teacher training programmes should be developed to equip educators with the knowledge and skills required to effectively deliver self-compassion training. These trainings can involve seminars, workshops, and online training sessions.
- 3. Organise awareness campaigns targeting parents, teachers, and school administrators to emphasise the importance of self-compassion training in preventing and addressing cyberbullying by highlighting the potential positive impact on mental health outcomes for adolescents.
- 4. Fostering collaboration between schools and mental health professionals to provide additional support for adolescent students undergoing self-compassion training as this collaboration can enhance the effectiveness of the training because it can ensure proper monitoring of the participants' well-being.
- 5. Ensuring that self-compassion training is incorporated into school policies to enable self-compassion training to be integrated into formal components of the schools' anti-bullying policies.
- 6. Engaging local communities by fostering community engagement programmes to garner support for the implementation of self-compassion training in schools. This will enable the collaboration of mental health advocates, communities, parents, and local communities to develop a comprehensive network of support.
- 7. Assessing the effectiveness of self-compassion training programmes by establishing robust evaluation and monitoring protocols. This can be done by regularly collecting data on mental health outcomes, cyberbullying incidents, and student feedback in order to make informed adjustments to the training.
- 8. Ensure national and international collaboration to facilitate collaboration between educational authorities to share experiences, best practices, resources, and research findings related to self-compassion training. This can be achieved by creating a network for cross-cultural adaptation and learning.
- 9. Ensure continuous research to assess the long-term impact of self-compassion training on curbing cyberbullying and improving mental health outcomes. The research findings can be used continuously to refine and enhance the training.

4.2 Limitations

This review is based on a narrative review of the literature and does not elaborate on the specific methodologies used in the literature review and as a result, there could be some potential biases in the review. While we suggest valuable insights and propose self-compassion training as a promising intervention for addressing cyberbullying among adolescents, we essentially acknowledge potential limitations in this review to enhance the transparency and applicability of the findings we report. Moreover the methodology of assessing self-compassion is still being refined [92]. This review has another limitation by not considering potential cultural or societal variations in the effectiveness of self-compassion training. Cultural differences in attitudes toward mental health and the acceptance of self-compassion interventions may impact successful implementation [93–95].

5 Conclusion

There is an urgent need to examine cyberbullying among adolescents considering its international (global) public health concern. Self-compassion training is effective and beneficial for several mental health problems such as stress, anxiety, depression, and feelings of loneliness that have been noted to be associated with cyberbullying. It is imperative to address cyberbullying among adolescents. Additionally, policymakers and stakeholders of schools, colleges, and universities may consider incorporating self-compassion training into school curricula to help support both adolescent victims and their peers who are perpetrators to cope with and stop cyberbullying. More research on cyberbullying and effective preventive measures is required.

Our review proposes to inform policymakers and stakeholders in educational institutions about the significance of the cyberbullying issue, the limitations of current measures, and the potential effectiveness of self-compassion training as an intervention. There are significant negative impacts of cyberbullying on the mental well-being of adolescents who have been victims of cyberbullying. The victims of cyberbullying exhibit symptoms of stress, anxiety, depression, insomnia, eating disorders, and suicidal ideation. There is sufficient evidence that self-compassion training as psychoeducational programmes can be integrated into school curricula to enable students to learn healthy coping strategies that can help them protect themselves from the psychological harm due to cyberbullying. We hereby suggest and encourage the consideration of incorporating self-compassion training into school programmes to better help prevent cyberbullying and support adolescents who have already become victims of cyberbullying.

Author contributions MA conceptualised and wrote the manuscript. YK partly wrote and supervised the work. YK, AASA, HA, and SA proofread the manuscript and supported in literature selection. MA, AASA, HA, SA, and YK discussed and revised the manuscript. All authors have read and agreed to the final version of the manuscript.

Funding The authors declare that they did not receive any financial support for this work.

Data availability We do not analyse or generate any datasets, because our work is based on literature reviews based. Therefore, no data was collected for this review.

Declarations

Ethics approval and consent to participate This is a literature review; therefore, ethics approval was not required.

Competing interests All co-authors have seen and agree with the contents of the manuscript, The authors have all declared that there are no conflicts of interest to declare.

Open Access This article is licensed under a Creative Commons Attribution 4.0 International License, which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons licence, and indicate if changes were made. The images or other third party material in this article are included in the article's Creative Commons licence, unless indicated otherwise in a credit line to the material. If material is not included in the article's Creative Commons licence and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder. To view a copy of this licence, visit http://creativecommons.org/licenses/by/4.0/.

References

- 1. Li Q. Cyberbullying in schools. Sch Psychol Int. 2006;27(2):157–70. https://doi.org/10.1177/0143034306064547.
- 2. Nixon CL. Current perspectives: the impact of cyberbullying on adolescent health. Adolesc Health Med Ther. 2014;5:143–58. https://doi. org/10.2147/AHMT.S36456.
- 3. Zhu C, Huang S, Evans R, Zhang W. Cyberbullying among adolescents and children: a comprehensive review of the global situation, risk factors, and preventive measures. Front Public Health. 2021;9: 634909. https://doi.org/10.3389/fpubh.2021.634909.
- 4. Peebles E. Cyberbullying: hiding behind the screen. Paediatr Child Health. 2014;19(10):527–8. https://doi.org/10.1093/pch/19.10.527.
- 5. Ferrara P, Ianniello F, Villani A, Corsello G. Cyberbullying a modern form of bullying: let's talk about this health and social problem. Ital J Pediatr. 2018;44(1):14. https://doi.org/10.1186/s13052-018-0446-4.
- OECD, "OECD Education Working Papers," 2022. [Online]. Available: https://www.oecd-ilibrary.org/education/oecd-education-workingpapers_19939019
- 7. UNICEF. Cyberbullying: what is it and how to stop it: what teens want to know about cyberbullying. https://www.unicef.org/end-viole nce/how-to-stop-cyberbullying. Accessed 3 Nov 2022.

- 8. Kee DMH, Al-Anesi MAL, Al-Anesi SAL. Cyberbullying on social media under the influence of COVID-19. Glob Bus Org Exc. 2022;41(6):11–22. https://doi.org/10.1002/joe.22175.
- 9. Quintana-Orts C, Rey L, Worthington EL. The relationship between forgiveness, bullying, and cyberbullying in adolescence: a systematic review. Trauma Violence Abuse. 2021;22(3):588–604. https://doi.org/10.1177/1524838019869098.
- 10. Extremera N, Quintana-Orts C, Mérida-López S, Rey L. Cyberbullying victimization, self-esteem and suicidal ideation in adolescence: does emotional intelligence play a buffering role? Front Psychol. 2018;9:367. https://doi.org/10.3389/fpsyg.2018.00367.
- 11. Kumar VL, Goldstein MA. Cyberbullying and Adolescents. Current pediatrics reports. 2020;8(3):86–92. https://doi.org/10.1007/ s40124-020-00217-6.
- 12. Wang W, Chen Z, Ding X. Cyberbullying victimization and disordered eating behaviors: the mediating roles of self-compassion and self-objectification. Appetite. 2022;178: 106267. https://doi.org/10.1016/j.appet.2022.106267.
- 13. Zweig JM, Dank M, Yahner J, Lachman P. The rate of cyber dating abuse among teens and how it relates to other forms of teen dating violence. J Youth Adolesc. 2013;42(7):1063–77. https://doi.org/10.1007/s10964-013-9922-8.
- 14. Borrajo E, Gámez-Guadix M, Pereda N, Calvete E. The development and validation of the cyber dating abuse questionnaire among young couples. Comput Hum Behav. 2015;48:358–65. https://doi.org/10.1016/j.chb.2015.01.063.
- Wang H, Wang J, Wei X, Lei L. Cyber dating abuse victimization and experiential avoidance among chinese female adolescents: the roles of self-compassion and interpersonal flexibility. J Interpers Violence. 2023;38(3–4):4416–42. https://doi.org/10.1177/088626052211163 16.
- 16. Anderson M, Jiang J. Teens, social media and technology 2018: Pew Research Center: Internet, Science & Tech. https://www.pewresearch. org/internet/2018/05/31/teens-social-media-technology-2018/ Accessed 13 Dec 2022.
- 17. Bouchrika I. Teenage cyberbullying statistics: prevalence and impact of social media. Teenage cyberbullying statistics: prevalence and impact of social media. Accessed 13 Dec 2022.
- 18. Patchin JW. Cyberbullying Data 2019: Cyberbullying Research Center. https://cyberbullying.org/2019-cyberbullying-data.
- 19. Zheng M, Bender D, Lyon C. Online learning during COVID-19 produced equivalent or better student course performance as compared with pre-pandemic: empirical evidence from a school-wide comparative study. BMC Med Educ. 2021;21(1):495. https://doi.org/10.1186/s12909-021-02909-z.
- 20. Repo J, Herkama S, Salmivalli C. Bullying interrupted: victimized students in remote schooling during the COVID-19 pandemic. Int J Bully Prev. 2022. https://doi.org/10.1007/s42380-022-00146-6.
- 21. Rhodes C, Kotera Y, Lim H. Identifying strengths in response to social isolation during the COVID-19 pandemic among pre-university students in Singapore: a thematic enquiry. Br J Guid Counsel. 2022. https://doi.org/10.1080/03069885.2022.2079611.
- 22. Athanasiou K, et al. Cross-national aspects of cyberbullying victimization among 14–17-year-old adolescents across seven European countries. BMC Public Health. 2018;18(1):800. https://doi.org/10.1186/s12889-018-5682-4.
- 23. Jaskulska S, et al. Bullying and cyberbullying victimization and associated factors among adolescents in six European countries. Sustainability. 2022;14(21):14063. https://doi.org/10.3390/su142114063.
- 24. Jin X, et al. Cyberbullying among college students in a Chinese population: prevalence and associated clinical correlates. Front Public Health. 2023;11:1100069. https://doi.org/10.3389/fpubh.2023.1100069.
- 25. Zhou S. Status and risk factors of Chinese teenagers' exposure to cyberbullying. SAGE Open. 2021;11(4):215824402110566. https://doi. org/10.1177/21582440211056626.
- Ngo AT, et al. Cyberbullying among school adolescents in an urban setting of a developing country: experience, coping strategies, and mediating effects of different support on psychological well-being. Front Psychol. 2021;12: 661919. https://doi.org/10.3389/fpsyg.2021. 661919.
- Zhu Y, Li W, O'Brien JE, Liu T. Parent-child attachment moderates the associations between cyberbullying victimization and adolescents' health/mental health problems: an exploration of cyberbullying victimization among Chinese adolescents. J Interpers Violence. 2021;36(17–18):NP9272–98. https://doi.org/10.1177/0886260519854559.
- 28. Gohal G, et al. Prevalence and related risks of cyberbullying and its effects on adolescent. BMC Psychiatry. 2023;23(1):39. https://doi.org/ 10.1186/s12888-023-04542-0.
- 29. Varela JJ, Hernández C, Miranda R, Barlett CP, Rodríguez-Rivas ME. Victims of cyberbullying: feeling loneliness and depression among youth and adult Chileans during the pandemic. Int J Environ Res Public Health. 2022. https://doi.org/10.3390/ijerph19105886.
- 30. Lee JM, Park J, Lee H, Lee J, Mallonee J. The impact of cyberbullying victimization on academic satisfaction among sexual minority college students: the indirect effect of flourishing. Int J Environ Res Public Health. 2023. https://doi.org/10.3390/ijerph20136248.
- 31. Lee Y, Jeon YJ, Kang S, Shin JI, Jung Y-C, Jung SJ. Social media use and mental health during the COVID-19 pandemic in young adults: a meta-analysis of 14 cross-sectional studies. BMC Public Health. 2022;22(1):995. https://doi.org/10.1186/s12889-022-13409-0.
- 32. Yoon Y, et al. Association of cyberbullying involvement with subsequent substance use among adolescents. J Adolesc Health. 2019;65(5):613–20. https://doi.org/10.1016/j.jadohealth.2019.05.006.
- 33. Pichel R, Feijóo S, Isorna M, Varela J, Rial A. Analysis of the relationship between school bullying, cyberbullying, and substance use. Child Youth Serv Rev. 2022;134: 106369. https://doi.org/10.1016/j.childyouth.2022.106369.
- 34. Maurya C, Muhammad T, Dhillon P, Maurya P. The effects of cyberbullying victimization on depression and suicidal ideation among adolescents and young adults: a three year cohort study from India. BMC Psychiatry. 2022;22(1):599. https://doi.org/10.1186/s12888-022-04238-x.
- 35. Mohd Fadhli SA, Liew Suet Yan J, Ab Halim AS, Ab Razak A, Ab Rahman A. Finding the link between cyberbullying and suicidal behaviour among adolescents in Peninsular Malaysia. Healthcare (Basel, Switzerland). 2022. https://doi.org/10.3390/healthcare10050856.
- Perktold R. Eintragungsfehler: "patient 0" in lschgl Nun doch schon im Februar: Tiroler Tageszeitung Online 23 June 2020," Tiroler Tageszeitung Online, 2020, 2020. https://www.tt.com/artikel/30738198/eintragungsfehler-patient-0-in-ischgl-nun-doch-schon-imfebruar. Accessed 14 Jan 2023.
- 37. Tragaki A, Richard J-L. First wave of SARS-COV2 in Europe: study and typology of the 15 worst affected European countries. Popul Space Place. 2022;28(1): e2534. https://doi.org/10.1002/psp.2534.
- 38. Elbarazi I, et al. The impact of the COVID-19 "Infodemic" on well-being: a cross-sectional study. J Multidiscip Healthc. 2022;15:289–307. https://doi.org/10.2147/JMDH.S346930.

- Quintana-Orts C, Rey L, Mérida-López S, Extremera N. Suicide risk assessment and depressive symptoms among Spanish adolescent bully-victims: evidence for the importance of emotional intelligence and sex. J Health Psychol. 2022. https://doi.org/10.1177/13591 053221116021.
- Quintana-Orts C, Mérida-López S, Chamizo-Nieto MT, Extremera N, Rey L. Unraveling the links among cybervictimization, core selfevaluations, and suicidal ideation: a multi-study investigation. Personality Individ Differ. 2022;186: 111337. https://doi.org/10.1016/j. paid.2021.111337.
- 41. Young R, Tully M, Ramirez M. School administrator perceptions of cyberbullying facilitators and barriers to preventive action: a qualitative study. Health Educ Behav. 2017;44(3):476–84. https://doi.org/10.1177/1090198116673814.
- 42. Espelage DL, Hong JS. Cyberbullying prevention and intervention efforts: current knowledge and future directions. Can J Psychiatry. 2017;62(6):374–80. https://doi.org/10.1177/0706743716684793.
- 43. Mehari KR, Moore W, Waasdorp TE, Varney O, Berg K, Leff SS. Cyberbullying prevention: insight and recommendations from youths, parents, and paediatricians. Child Care Health Dev. 2018;44(4):616–22. https://doi.org/10.1111/cch.12569.
- Smith PK, Mahdavi J, Carvalho M, Fisher S, Russell S, Tippett N. Cyberbullying: its nature and impact in secondary school pupils. J Child Psychol Psychiatry. 2008. https://doi.org/10.1111/J.1469-7610.2007.01846.X.
- 45. Pennell D, Campbell M, Tangen D. What influences Australian secondary schools in their efforts to prevent and intervene in cyberbullying. Educ Res. 2020. https://doi.org/10.1080/00131881.2020.1795701.
- 46. Chu X-W, Fan C-Y, Liu Q-Q, Zhou Z-K. Cyberbullying victimization and symptoms of depression and anxiety among Chinese adolescents: examining hopelessness as a mediator and self-compassion as a moderator. Comput Hum Behav. 2018;86:377–86. https://doi. org/10.1016/j.chb.2018.04.039.
- 47. Zeng P, Wang P, Nie J, Ouyang M, Lei L. Gratitude and cyberbullying perpetration: the mediating role of self-compassion and moral disengagement. Child Youth Serv Rev. 2020;119: 105608. https://doi.org/10.1016/j.childyouth.2020.105608.
- Balakrishnan V, Fernandez T. Self-esteem, empathy and their impacts on cyberbullying among young adults. Telemat Inform. 2018;35(7):2028–37. https://doi.org/10.1016/j.tele.2018.07.006.
- 49. Auriemma V, Iorio G, Roberti G, Morese R. Cyberbullying and empathy in the age of hyperconnection: an interdisciplinary approach. Front Sociol. 2020;5: 551881. https://doi.org/10.3389/fsoc.2020.551881.
- 50. Fasihi A, Abolghasemi A. The comparison of emotional processing and self-compassion in bully and victim students. Int J Adv Stud Hum Soc Sci. 2017. http://www.ijashss.com/article_83861.html.
- 51. Múzquiz J, Pérez-García AM, Bermúdez J. Relationship between direct and relational bullying and emotional well-being among adolescents: the role of self-compassion. Curr Psychol. 2022. https://doi.org/10.1007/s12144-022-02924-3.
- 52. Ramos Salazar L, Khandewal P. Compassion and empathy as transformative intervention approaches. In: Ordóñez de Pablos P, Ramos Salazar L, editors. Advances in human resources management and organizational development, handbook of research on cyberbullying and online harassment in the workplace. London: IGI Global; 2020. p. 493–512.
- 53. Kotera Y, Taylor E, Fido D, Williams D, Tsuda-McCaie F. Motivation of UK graduate students in education: self-compassion moderates pathway from extrinsic motivation to intrinsic motivation. Curr Psychol. 2021. https://doi.org/10.1007/s12144-021-02301-6.
- Hermanto N, Zuroff DC. The social mentality theory of self-compassion and self-reassurance: the interactive effect of care-seeking and caregiving. J Soc Psychol. 2016;156(5):523–35. https://doi.org/10.1080/00224545.2015.1135779.
- 55. Neff KD. The development and validation of a scale to measure self-compassion. Self Identity. 2003;2(3):223–50. https://doi.org/10. 1080/15298860309027.
- Raes F, Pommier E, Neff KD, van Gucht D. Construction and factorial validation of a short form of the self-compassion scale. Clin Psychol Psychother. 2011;18(3):250–5. https://doi.org/10.1002/cpp.702.
- 57. Kotera Y, Llewellyn-Beardsley J, Charles A, Slade M. Common humanity as an under-acknowledged mechanism for mental health peer support. Int J Ment Health Addict. 2022. https://doi.org/10.1007/s11469-022-00916-9.
- Neff KD. Self-compassion: theory, method, research, and intervention. Annu Rev Psychol. 2022. https://doi.org/10.1146/annur ev-psych-032420-031047.
- 59. Bluth K, Blanton PW. Mindfulness and self-compassion: exploring pathways to adolescent emotional well-being. J Child Fam Stud. 2014;23(7):1298–309. https://doi.org/10.1007/s10826-013-9830-2.
- 60. Kaspersky. What are the effects of cyberbullying?. https://usa.kaspersky.com/resource-center/preemptive-safety/cyberbullying-effects. Accessed 2 Jan 2023.
- 61. Marsh IC, Chan SWY, MacBeth A. Self-compassion and psychological distress in adolescents-a meta-analysis. Mindfulness. 2018;9(4):1011–27. https://doi.org/10.1007/s12671-017-0850-7.
- 62. Ferrari M, Hunt C, Harrysunker A, Abbott MJ, Beath AP, Einstein DA. Self-compassion interventions and psychosocial outcomes: a meta-analysis of RCTs. Mindfulness. 2019;10(8):1455–73. https://doi.org/10.1007/s12671-019-01134-6.
- 63. Egan SJ, et al. A review of self-compassion as an active ingredient in the prevention and treatment of anxiety and depression in young people. Adm Policy Ment Health. 2022;49(3):385–403. https://doi.org/10.1007/s10488-021-01170-2.
- 64. Sapach T, Michelle JN, Carleton RN. Self-compassion training for individuals with social anxiety disorder: a preliminary randomized controlled trial. Cogn Behav Therapy. 2022;52(1):18–37. https://doi.org/10.1080/16506073.2022.2130820.
- 65. Navarro R, Yubero S, Larrañaga E, editors. Cyberbullying across the globe: gender, family, and mental health. 1st ed. Cham: Springer; 2016.
- 66. Griffiths MD, Kuss DJ. Adolescent social networking: should parents and teachers be worried? https://www.academia.edu/429383/Griff iths_M_D_and_Kuss_D_2011_Adolescent_social_networking_Should_parents_and_teachers_be_worried_Education_and_Health_ 29_2_23_25?auto=download&email_work_card=download-paper&li=0. Accessed 14 Jan 2023.
- 67. Adediran AO. Cyberbullying in Nigeria: examining the adequacy of legal responses. Int J Semiot Law. 2021;34(4):965–84. https://doi.org/ 10.1007/s11196-020-09697-7.
- 68. Germer CK, Neff KD. Teaching the mindful self-compassion program: a guide for professionals. New York NY: Guilford Press; 2019.
- 69. Neff KD, Knox MC. Self-compassion. In: Zeigler-Hill V, Shackelford TK, editors. Encyclopedia of personality and individual differences. Cham: Springer International Publishing; 2017. p. 1–8.

- 70. Neff KD. Self-compassion: the proven power of being kind to yourself. New York, NY: William Morrow, an imprint of HarperCollinsPublishers; 2011.
- 71. van Gordon W, Shonin E. The way of the mindful warrior: embrace authentic mindfulness for wellbeing, wisdom, and awareness. Lanham: Rowman & Littlefield; 2020.
- 72. Kabat-Zinn J. Mindfulness-based interventions in context: past, present, and future. Clin Psychol Sci Pract. 2003;10(2):144–56. https://doi.org/10.1093/clipsy/bpg016.
- 73. Gerbarg PL, Muskin PR, Brown RP, editors. Complementary and integrative treatments in psychiatric practice. Arlington VA: American Psychiatric Association Publishing; 2017.
- 74. OECD. Girls are more exposed than boys to cyberbullying. https://www.oecd.org/gender/data/girls-are-more-exposed-than-boys-tocyberbullying.htm. Accessed 1 Jan 2023.
- 75. Coughlan S. Facebook is a major influence on girls, says survey. https://www.bbc.com/news/10121931. Accessed 14 Jan 2023.
- 76. Abaido GM. Cyberbullying on social media platforms among university students in the United Arab Emirates. Int J Adolesc Youth. 2020;25(1):407–20. https://doi.org/10.1080/02673843.2019.1669059.
- 77. Olumide AO, Adams P, Amodu OK. Prevalence and correlates of the perpetration of cyberbullying among in-school adolescents in Oyo State, Nigeria. Int J Adolesc Med Health. 2016;28(2):183–91. https://doi.org/10.1515/ijamh-2015-0009.
- 78. Sam DL, Bruce D, Agyemang CB, Amponsah B, Arkorful H. Cyberbullying victimization among high school and university students in Ghana. Deviant Behav. 2019;40(11):1305–21. https://doi.org/10.1080/01639625.2018.1493369.
- 79. UNICEF. Children at increased online risk during COVID-19 pandemic. https://www.unicef.org/bhutan/press-releases/children-increasedonline-risk-during-covid-19-pandemic. Accessed 20 Dec 2022.
- 80. Valkenburg PM, Peter J, Schouten AP. Friend networking sites and their relationship to adolescents' well-being and social self-esteem. Cycberpsychol Behav. 2006;9(5):584–90. https://doi.org/10.1089/cpb.2006.9.584.
- 81. Deol Y, Lashai M. Impact of cyberbullying on adolescent mental health in the midst of pandemic—hidden crisis. Eur Psychiatr. 2022;65(S1):S432–S432. https://doi.org/10.1192/j.eurpsy.2022.1096.
- 82. Skilbred-Fjeld S, Reme SE, Mossige S. Cyberbullying involvement and mental health problems among late adolescents. Cyberpsychology. 2020. https://doi.org/10.5817/CP2020-1-5.
- 83. Hutson E, Kelly S, Militello LK. Systematic review of cyberbullying interventions for youth and parents with implications for evidencebased practice. Worldviews Evidence-Based Nurs. 2018;15(1):72–9. https://doi.org/10.1111/wvn.12257.
- 84. Coaston SC, Lawrence C. Integrating self-compassion across the counselor education curriculum. J Creat Ment Health. 2019;14(3):292–305. https://doi.org/10.1080/15401383.2019.1610536.
- 85. West MA. Compassionate leadership: sustaining wisdom, humanity and presence in health and social care. United Kingdom: The Swirling Leaf Press; 2021.
- 86. MacBeth A, Gumley A. Exploring compassion: a meta-analysis of the association between self-compassion and psychopathology. Clin Psychol Rev. 2012;32(6):545–52. https://doi.org/10.1016/j.cpr.2012.06.003.
- 87. van Dam NT, Sheppard SC, Forsyth JP, Earleywine M. Self-compassion is a better predictor than mindfulness of symptom severity and quality of life in mixed anxiety and depression. J Anxiety Disord. 2011;25(1):123–30. https://doi.org/10.1016/j.janxdis.2010.08.011.
- 88. Kotera Y, Aledeh M, Barnes K, Rushforth A, Adam H, Riswani R. Academic motivation of Indonesian University Students: relationship with self-compassion and resilience. Healthcare. 2022. https://doi.org/10.3390/healthcare10102092.
- 89. Kotera Y, van Gordon W. Effects of self-compassion training on work-related well-being: a systematic review. Front Psychol. 2021;12: 630798. https://doi.org/10.3389/fpsyg.2021.630798.
- 90. Kotera Y, Edwards A-M, Garip G, Chircop J, Aledeh M. Effects of online mental health classes on mental health and stigma: a controlled before-after study with 1-month follow-up. SN Comprehensive Clin Med. 2022;4(1):172. https://doi.org/10.1007/s42399-022-01225-x.
- 91. Uneno Y, et al. Development of a novel COMPAssion focused online psyChoTherapy for bereaved informal caregivers: the COMPACT feasibility trial protocol. BMJ Open. 2022;12(12): e067187. https://doi.org/10.1136/bmjopen-2022-067187.
- 92. Kotera Y, Sheffield D. Revisiting the self-compassion scale-short form: stronger associations with self-inadequacy and resilience. SN Compr Clin Med. 2020;2(6):761–9. https://doi.org/10.1007/s42399-020-00309-w.
- 93. Kotera Y. De-stigmatising self-care: impact of self-care webinar during COVID-19. Int J Spa Wellness. 2021;4(2–3):213–7. https://doi.org/ 10.1080/24721735.2021.1892324.
- 94. Kotera Y, et al. The development of the Japanese version of the full and short form of Attitudes Towards Mental Health Problems Scale (J-(S) ATMHPS). Ment Health Religion Cult. 2023. https://doi.org/10.1080/13674676.2023.2230908.
- 95. Kotera Y, Taylor E, Brooks-Ucheaga M, Edwards A-M. Need for a tool to inform cultural adaptation in mental health interventions. Int Soc Study Behav Dev Bull. 2023.

Publisher's Note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.