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Published online: 23 Jun 2022.

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The association between gender, sexual harassment, and self-compassion on depressive symptoms in adolescents

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ABSTRACT

Aim: The study aims to identify the prevalence of bullying and sexual harassment as well as possible risk and protective factors for depression among adolescents. We focus on the association of different types of sexual harassment, gender, bullying, and self-compassion to depression criteria according to DSM 4.

Methods: This cross-sectional study included 318 adolescents aged 15–20 years, from Sweden. Participants answered the self-assessment scales Reynolds Adolescent Depression Scale, Second Edition, and Compassionate Engagement and Action Scales for Youth, as well as questions about sexual harassment and bullying. Regression analyses were conducted to examine the association between bullying, sexual harassment, self-compassion, and gender with depressive symptoms.

Results: Few students had been subjected to bullying, whereas sexual harassment was more common. About 32.7% of students had been subjected to verbal harassment and girls were more frequently exposed. Both bullying and sexual harassment were associated with depressive symptoms, and gender patterns were observed. For boys, verbal harassment and bullying correlated with negative self-evaluation and somatic complaints. For girls, bullying correlated with all depressive symptoms. Higher levels of self-compassion were associated with less depression, and the correlation was especially strong among boys.

Conclusion: Boys and girls express different types of depressive symptoms when subjected to bullying and sexual harassment. Not asking boys about negative self-evaluation or somatic complaints could lead to missing depression. However, for girls, all four symptoms are equally important to inquire about. Self-compassion is a possible protective factor against depression and future studies will show if teaching this to adolescents could lead to less depression.

Introduction

Mental health problems and depression are common problems among youth and the incidence increases significantly when children reach adolescence [1]. Depression afflicts 3–8% of adolescents [2] and is more than twice as prevalent among females after puberty than males at the same age [3]. In fact, young girls who have entered puberty are at the greatest risk of developing depression and other mental disorders [4]. Depressive disorders are even a leading contributor to the global disease burden in adolescents [5]. There are severe consequences of this, as depression in teenagers increases the risk of suicide and is associated with increased morbidity [1].

In Sweden, the number of suicides has decreased in all age groups since the 1970s, except in adolescents where an increase of 1% has occurred every year from 1994 to 2019 [6]. In the United States, suicides have increased by 30% from 2000 to 2016 [7], with the highest rates found in youth aged 15–24 years [8]. Increases in social media use, anxiety, and self-inflicted injuries are possible underlying factors [9],

however, the major contributor to suicide are severe forms of depressive disorders [10].

The definition of major depressive disorder (MDD) according to DSM 5 [11] is based on two main symptoms: a depressed mood and a loss of interest (anhedonia). Other symptoms that may be present are weight loss or weight gain, issues with sleep, fatigue, psychomotor agitation, or retardation, feeling worthless, concentration issues, and suicidal thoughts. How depressive symptoms are expressed differ between adolescents and adults. In adolescents, symptoms such as changes in appetite and weight, loss of energy, sleep disturbances, feelings of worthlessness, psychomotor deviations, and suicidal ideation, or attempts, are all more common, whereas anhedonia and concentration problems are more frequently present in adults [12,13].

MDD can develop in anyone, however, there are certain factors that increase the risk significantly. What has been shown is that individual factors such as female sex, low self-esteem, anxiety, mild depressive symptoms, and poor social skills have all been associated with MDD [14]. Contextual

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factors such as poverty, the loss of a family member, parental depression, and stress regarding school can also increase the risk of developing depression in adolescents [10,14]. Other putative risk factors are dieting, weight, and negative coping strategies [15]. As seen above, there are a lot of risk factors for developing depression and there is a need for further and deeper knowledge in order to help prevent additional increases in depression.

Depression and suicidality in adolescents can also be caused by bullying and sexual assault, both online and offline harassment play an important role [16,17]. Studies on adolescents in Sweden have shown that about 50% of girls and 30–45% of boys have been exposed to sexual harassment both online and offline [16,18]. What is not known is what type of sexual harassment (non-verbal, verbal, or physical) is the leading predictor of depression and whether bullying is a greater contributor to depression or leads to different kinds of depressive symptoms.

Protective factors have been shown to diminish the impact of both suicidal behavior and depression, however, there is a need for further research on the subject to fully establish this effect [2]. What has been shown is that social factors such as good relationships with friends and family, social skills, empathy, and optimism all reduce the risk of suicide, and that adolescents who were taught these skills were less likely to develop depression [19]. Self-compassion is another protective factor against depression in adolescents [20–22]. Self-compassion is most often defined by Neffs' definition [23], however here, we used Gilberts [24] broader concept that includes three perspectives on compassion: compassion from others, compassion to others, and self-compassion. This concept is defined as 'sensitivity to suffering in oneself and others with a commitment to try to alleviate and prevent it' according to Gilbert [24]. A meta-analysis focusing on self-compassion in adolescents showed that low levels of self-compassion was associated with higher levels of stress, anxiety, and depression [25]. Self-compassion has been associated to a greater ability to tolerate distress and was associated with greater life satisfaction, as well as more well-being [20]. It seems teenage boys in general report higher levels of self-compassion compared to girls at the same age [21].

The purpose of this study is to identify possible risk factors and protective factors for developing depression in an adolescent sample. The aims are to study the prevalence of sexual harassment and bullying in a normative sample of adolescents. We will analyze associations between sexual harassments, bullying, self-compassion, gender, socioeconomic status, age, and depressive symptoms according to DSM IV [26] with hierarchical regression analyses.

Material and methods

Participants

The participants were recruited from four schools from different socioeconomic backgrounds in Umeå, Sweden. In total, 617 students agreed to participate in the study and 335 of those went to upper secondary school and were in the age group of interest for our study. Seventeen participants were

excluded due to too much missing data. These students had not answered all questions about sexual harassment and/or bullying or had contradictory responses. These 17 participants were not significantly different from those included in the study regarding age ($M = 17.17$, SD $= 0.83$) and depressive symptoms ($M = 2.22$, SD $= 0.34$). After removal of these participants 318 adolescents were included in the final analyses of which 211 were girls and 107 were boys, from 15 to 20 years old. See Table 1 for descriptive statistics.

Procedure

Data were collected from the research project 'Adolescents' experience of mental illness: Psychometric properties of new Swedish versions of tests' (UPOP) study implemented in 2018 and 2019. The purpose of that study was to develop new instruments for screening for mental illness in children and adolescents. Ethical approval for the UPOP-project was given by the Regional Ethical Review Board in Umeå, Sweden (nr. 2018/59-31) and the project followed GDPR as a web survey was used to answer a questionnaire.

Two upper secondary schools with different socioeconomic backgrounds were included. Students received verbal and written information about the study and written consent was acquired from those who chose to participate. The participants received a keycode which they used to access the web survey, thus making the data anonymous to the author. Information was given to the participants that they could withdraw their participation at any time. Time to fill out the survey was given during school hours and a research assistant was present during the whole time to answer questions from the students. The students were also offered a snack during the completion of the forms.

Dependent variables

Reynolds Adolescent Depression Scale Second Edition (RADS-2)

The instrument contains 30 questions for measuring four dimensions of depression in adolescents: dysphoric mood, anhedonia, negative self-evaluation, and somatic complaints [27]. The scale is compatible to diagnostic criteria according to both DSM and ICD which makes it a good instrument to identify different dimensions of pathology and depression. It can also provide an indication of the clinical severity of the depressive symptoms an individual is showing. The Swedish translation [28] was used in the form the adolescents filled in. The questions on the scale have four answers ranging from 'no, never' (0) to 'most of the time' [3]. The instrument is one of the most well-used self-rated questionnaires for depression in the world [27,29]. It has been translated to Swedish and shown good reliability (Cronbach's alpha between 0.77 and 0.87) and validity in Sweden [28].

Independent variables

Gender

The participants were asked to declare their legal gender.

Table 1. Descriptive statistics for study sample.

	Total sample, $N=318$			Girls, $N=211$	Boys, $N=107$
Items	Mean (SD)	Frequency or range	%	Mean (SD)	Mean (SD)
Gender					
Girls		211	66.4		
Boys		107	33.6		
Age	17.1 (1.01)	15-20		16.9 (1.51)	17.3 (0.93)
Parents' socioeconomic status					
Manual workers and administrators		56	17.6		
Nurses		95	29.9		
Higher civil servants and executives		106	33.3		
Self-employed		24	7.5		
Unknown		37	11.6		
Bullying (0 = no, never, 4 = almost always)	0.33 (0.83)	0–4		0.36 (0.86)	0.27 (0.75)
No, never		267	84.0		
Yes, once		15	4.7		
Yes, a couple of times		22	6.9		
Yes, several times		11	3.5		
Yes, almost all the time		3	0.9		
Sexual harassment (0 = no, 1 = yes)					
Verbal		0–1			
No	0.33 (0.47)	214	67.3	0.36 (0.48)	0.25 (0.44)
Yes	0.19 (0.39)	104	32.7	0.24 (0.43)	0.08 (0.28)
Non-verbal		0–1	81.1	0.41 (0.49)	0.12 (0.33)
No	0.31 (0.46)	258	18.9		
Yes		60	68.9		
Physical		0–1	31.1		
No		219			
Yes		99			
Self-compassion	56.9 (16.9)	9–90		54.9 (16.9)	60.8 (16.2)
Never used alcohol		144	45.4		
Failing a school subject		34	10.7		
Difficulty keeping friends (1 = very difficult, 5 = not difficult)	3.90 (1.00)	1–5		3.95 (0.98)	3.79 (1.05)
RADS-2 tot.	2.05 (0.50)	1-3.40		2.13 (0.48)	1.86 (0.48)

Sexual harassment

The questionnaire contained three questions about three different types of sexual harassment: verbal, non-verbal, and physical. The questions were inspired by a previously used questionnaire [30] and have been used in a previous study on the same dataset [16]. The participants were to think back on the previous 6 months and report any experience of sexual harassment. Examples were given for each sub-category; examples of verbal harassment were being called a whore or someone commenting on your body or your private life in a sexual manner. Examples of physical harassment included someone trying to touch you in a sexual manner or trying to pull off your clothes against your will. Examples of non-verbal harassment included if someone was spreading rumors of a sexual character or sending messages, pictures, or films of you against your will. The different alternatives for answers were 'no, never (0); yes, at school; yes, online; yes, somewhere else'. All yes-answers were merged into yes [1], making it a dichotomous scale.

Bullying

The questionnaire contained one question about bullying, 'It happens that one or several students together tease, fight with, or exclude someone. Has this happened to you during the last six months?' The five options on the form ranged from 'no, never' (0) to 'yes, all the time' [4].

Self-compassion

The Compassionate Engagement and Action Scales for Youths (CEASY) [24] was used for measuring compassion. The scale measures commitment and actions to get closer to compassion with 30 questions with the answers for each question ranging from never (0) to always (10). The form consists of three subscales to measure the three different dimensions of compassion: self-compassion, compassion from others, and compassion for others. It has shown good psychometrics (Cronbach's alpha between 0.74 and 0.92) as well as good convergent and divergent validity when translated to Swedish [31]. The subscales that focused on compassion for others and compassion from others were not included as the focus for our study was the impact of self-compassion on depression. The self-compassion subscale included 10 questions.

Statistical analyses

Statistical analyses were conducted using SPSS version 27.0 (SPSS Inc., Chicago, IL, USA). Descriptive statistics were carried out for both dependent and independent variables as well as variables important for describing our sample. Gender differences in mean scores was analyzed using independent samples t-test. T-tests were also used for analyzing the differences in mean scores between the two different schools for sexual harassments and bullying.

Linear multiple regressions were used to examine whether sexual harassment, bullying, self-compassion, gender, age and socioeconomic status could predict the depressive symptoms surveyed by RADS-2. Gender, age, and socioeconomic status was entered in the first block of the regression. In the second block, bullying and the three different types of sexual

harassment were entered and, in the third block, we entered self-compassion. The data were then split into files based on gender and the same hierarchical multiple regression analyses was run in order to compare the differences between girls and boys.

Tests of assumptions for multiple regression were calculated. Analysis of linearity and homoscedasticity was conducted using residual P-plots and scatterplots. No multicollinearity was found between the independent variables, variance inflation factor (VIF) <2. Normality was examined using scores for kurtosis and skewness as well as Kolmogorov–Smirnov and Shapiro–Wilk. None of the dependent variables met the assumption of normality based on the results of previously stated tests, however, QQ-plots and histograms looked good and few outliers were found, and the violation of the assumption was therefore accepted [32]. Analyses with and without outliers were conducted and no significant differences were found, thus outliers were kept in the final analyses.

Results

Bullying and sexual harassment

See Table 1 for prevalence of bullying and sexual harassment. A large majority of the students reported that they had never been bullied and no boys reported being bullied 'almost always', see Figure 1. For bullying, no significant differences in mean values were found between boys and girls. The most common type of sexual harassment was verbal followed by physical. The least common type was non-verbal harassment. All sexual harassments were more frequently present in girls and mean values differed significantly ($p < 0.05$) for all three types of sexual harassment, see Table 1. No significant differences in the mean values were found between the two different schools when it came to neither sexual harassment nor bullying.

Depressive symptoms

Frequently being exposed to bullying as well as being subjected to verbal harassment was associated with higher scores on RADS-2 for both girls and boys, see Figure 1. On an average, girls reported higher levels of depressive symptoms on RADS-2 than boys. Mean values differed significantly ($p < 0.001$) on the total RADS-2 scale between girls and boys, see Table 1. For the subscales, gender differences were significant for all symptoms except for anhedonia (dysphoric mood: girls [$M = 2.49$, SD = 0.55]; boys [$M = 2.04$, SD = 0.63], anhedonia: girls [$M = 1.55$, SD = 0.49]; boys [$M = 1.52$, SD = 0.47], negative self-evaluation: girls [$M = 1.96$, SD = 0.67]; boys [$M = 1.64$, SD = 0.60], somatic complaints: girls [$M = 2.52$, SD = 0.56]; boys [$M = 2.25$, SD = 0.62]).

Socioeconomic status and age were included in the first block of the initial hierarchical multiple regression. However, no significant correlation was found ($p > 0.05$) for RADS-2 total scale (age [$\beta = 0.09$]; socioeconomic status [$\beta = 0.02$]),

both variables were therefore excluded from later analyses in order to increase power.

Results from the hierarchical multiple regression for the total sample showed that bullying was positively, and gender and self-compassion were negatively correlated to all types of depressive symptoms (RADS-2 total scale), see Table 2. The model explained 39% of variance in depressive symptoms (Adj. $R^2 = 0.39$). Gender alone explained 6.5% of the variance (Adj. $R^2 = 0.065$). Gender together with sexual harassments and bullying explained 22.7% (Adj. $R^2 = 0.227$) of the variance. Self-compassion explained 24.5% of the variance (Adj. $R^2 = 0.245$).

For the four subscales, the model explained 27–30% of the variance, see Table 2. Gender alone explained between 0.3 and 11.8% of the variance in the subscales. Sexual harassment and bullying explained between 8.3 and 18.2% of the variance. Self-compassion explained between 14.7 and 22.1% of the variance. Gender and verbal harassment did not have a significant correlation to anhedonia, and anhedonia was the only depressive symptom that did not correlate significantly to these variables for the total sample. Physical harassment only had a significant correlation to somatic complaints. For dysphoric mood and negative self-evaluation, the same independent variables showed a significant correlation. Non-verbal harassment did not have a significant correlation to any depressive symptoms. Bullying had a strong positive correlation to all depressive symptoms, especially negative self-evaluation. Self-compassion correlated negatively to all depressive symptoms with the strongest correlation for anhedonia, see Table 2.
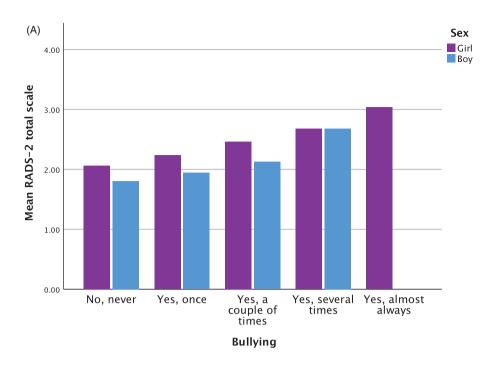
Gender

Gender showed a significant correlation to depressive symptoms and therefore separate analyses were run for boys and girls, see Table 3 for the results. Multiple regression showed that independent variables explained depressive symptoms more for boys than for girls (Adj. R^2 for girls was 0.31 and for boys 0.40, $p < 0.001$) for the total RADS-2 scale. Bullying showed stronger positive correlations for boys than girls in somatic complaints and negative self-evaluation. For anhedonia and dysphoric mood bullying had no significant correlations for boys, whereas a large significant correlation could be found for girls.

For boys, verbal sexual harassments positively correlated to negative self-evaluation and somatic complaints, whereas a correlation only could be seen for negative self-evaluation for girls. Physical harassments only showed a significant correlation to somatic complaints for girls. No significant correlations could be found for physical harassment in boys nor non-verbal harassments independent of gender.

Self-compassion

Self-compassion showed the strongest correlations to the depressive symptoms, compared with other independent variables, in all regression analyses (see Tables 2 and 3). The correlation was particularly large for both boys and girls
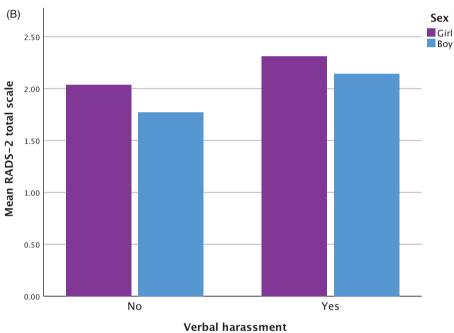
Figure 1. (A) Mean scores on Reynolds Adolescent Depression Scale, 2nd edition (RADS-2) total scale associated with bullying. Frequent bullying was associated with higher scores on RADS-2 for both boys and girls. Girls, on average, reported higher scores on RADS-2 for all categories of bullying. (B) Mean scores on RADS-2 total scale associated with verbal harassment. Being subjected to verbal harassments was associated with higher mean scores on RADS-2 for both girls and boys. Girls generally presented higher scores on RADS-2 both with and without exposure to verbal harassments.

Table 2. Results from multiple regression for the total sample.

	RADS 2-total scale		Dysphoric mood		Anhedonia		Negative self-evaluation		Somatic complaints	
	Adj. R^2	β	Adj. R^2	β	Adj. R^2	β	Adj. R^2	β	Adj. R^2	β
Model	0.39***		0.30***		0.27***		0.30***		0.28***	
Gender		−0.16***		−0.26***		0.05		−0.16**		−0.11*
Verbal harassment		0.17**		0.15**		0.09		0.13**		0.18**
Non-verbal harassment		−0.01		−0.01		−0.00		−0.01		−0.00
Physical harassment		0.01		0.06		−0.09		−0.05		0.12*
Bullying		0.27***		0.17**		0.23***		0.29***		0.20***
Self-compassion		−0.41***		−0.30***		−0.45***		−0.35***		−0.30***

Note: $^*p < 0.05$, $^{**}p < 0.01$, $^{***}p < 0.001$.

Table 3. Results from multiple regression for girls and boys separately.

	Dysphoric mood		Anhedonia		Negative self-evaluation		Somatic complaints	
	Girls Adj. R^2	Boys Adj. R^2	Girls Adj. R^2	Boys Adj. R^2	Girls Adj. R^2	Boys Adj. R^2	Girls Adj. R^2	Boys Adj. R^2
Model	0.18***	0.22***	0.26***	0.28***	0.23***	0.37***	0.24***	0.26***
	β	β	β	β	β	β	β	β
Verbal harassment	0.14	0.17	0.07	0.11	−0.02	0.22*	0.16*	0.20*
Non-verbal harassment	0.01	0.02	−0.03	0.10	−0.03	0.04	0.03	−0.07
Physical harassment	0.08	−0.04	−0.09	−0.06	−0.35	−0.14	0.17*	−0.00
Bullying	0.20**	0.16	0.27***	0.09	0.32***	0.26**	0.17*	0.31**
Self-compassion	−0.28***	−0.39***	−0.42***	−0.50***	−0.31***	−0.46***	−0.29***	−0.32***

Note: *$p < 0.05$; **$p < 0.01$; ***$p < 0.001$.

when it came to anhedonia and negative self-evaluation. Boys had a stronger negative correlation between depression and self-compassion than girls.

Mean values for self-compassion differed significantly between boys and girls ($p < 0.05$) and boys generally reported higher scores, see Table 1. Participants who experienced higher levels of self-compassion generally reported lower scores on RADS-2, see Figure 2. Also seen in Figure 2 is that self-compassion had a stronger correlation to RADS-2 for boys ($R^2 = 0.308$) than girls ($R^2 = 0.193$).

Discussion

The aim of this study was to examine the prevalence of bullying and sexual harassments, as well as identify how age, socioeconomic status, gender, bullying, sexual harassment, and self-compassion was associated with depressive symptoms in adolescents in northern Sweden. We were also interested in investigating if different depressive symptoms could be seen when subjected to different types of harassment.

Bullying and sexual harassment linked to depression

No significant difference in the prevalence of bullying could be seen between boys and girls. A trend could be seen where more frequent bullying was associated with higher levels of depression; this has been seen in previous studies as well where adolescents being bullied reported depressive symptoms to a greater extent than others [33–35].

The prevalence of sexual harassment in our sample in the last six months was between 18.9% and 32.7% depending on the type of harassment. This indicates that sexual harassment is common among adolescents in Sweden as well as all over the world. A study conducted in Finland showed that 47.7% of adolescents had been exposed to sexual harassment [36]. In 2007 in Norway, 80% of girls and 74% of boys reported being exposed harassments and in 2013 the prevalence of sexual harassment was a bit lower: 64% in girls and 62% in boys [37]. In the USA, 29.0% of girls and 20.4% of boys reported experiences of sexual harassment [38]. It seems sexual harassment was not as prevalent in our study as the studies conducted in other Nordic countries, even though we included online sexual harassments. Both Nordic studies [36,37] also used dichotomous scales, however they both included more questions about harassment than was included in our study. The Finnish study [36]

asked if participants 'had ever experienced' harassments and the Norwegian study [37] included harassments in the last year which makes it difficult to draw conclusions that the prevalence is lower in Sweden.

Verbal sexual harassment was the most common type of harassment and had the strongest association to most depressive symptoms. In girls, verbal harassments correlated positively to somatic complaints, this had been seen in a previous study conducted on Swedish adolescents [39]. For boys, a connection between verbal harassments and somatic complaints as well as negative self-evaluation could be seen. Non-verbal harassment was the least common type of harassment and did not show a significant variance in any depressive symptoms. It is possible that adolescents more frequently express themselves in a verbal manner and that nonverbal communication is not as common. In adults, the gap between verbal and non-verbal is not as big as seen in our study, however verbal harassment was still more commonly occurring [40]. This could possibly be adults realizing the consequences of verbal and physical harassments and resort to non-verbal harassment to a greater extent than youths in order to not be reprimanded. Adolescents may not have developed this way of thinking to the same extent as adults and thus non-verbal harassment is not as commonly occurring as in adults.

The positive correlation between sexual harassment, bullying, and depression has previously been established through both longitudinal [41,42] and previous cross-sectional studies [16,35]. This further confirms what has been observed in our study that both bullying and sexual harassments could be risk factors for developing depression.

Gender differences in bullying and depressive symptoms

It has previously been shown that girls are more prone to depression than boys [3], however few to no studies have used RADS-2 (including subscales related to diagnostic criteria) for researching gender differences in depressive symptoms among adolescents. What has been seen in adults using other self-evaluation scales is that females tend to show depressive symptoms earlier, have more frequent episodes of depression and express a greater number of depressive symptoms compared to males [43].

The expression of depressive symptoms seem to vary between girls and boys. In our sample, girls showed
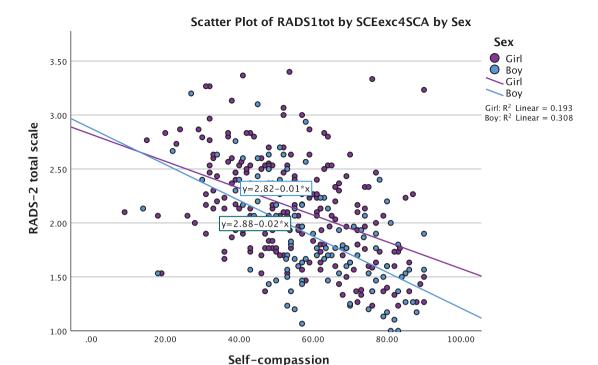
Figure 2. The impact of self-compassion on RADS-2 total scale between girls and boys. Scatterplot with scores on RADS-2 total scale of the y-axis and self-compassion scores on the x-axis. Girls are represented with darker grey and boys lighter grey filled dots and line. R^2-values for boys and girls comes from multiple regression analysis, $p < 0.001$.

significant correlations for all depressive symptoms when it came to bullying whereas boys showed significant correlations for negative self-evaluation and somatic complaints. There were no significant correlations found for anhedonia and dysphoria in boys. Both anhedonia and dysphoria are related to expression of feelings and emotions. The difference between girls and boys in this aspect could be related to differences in how boys and girls cope with emotional distress [44]. This is an important finding as it could help with the detection of depression between boys and girls. Not asking boys about somatic complaints or negative self-evaluation could possibly result in missing depression in boys.

Self-compassion correlated with depression

This study implies the importance of self-compassion in adolescence in order to reduce depressive symptoms. Since there is a limited number of studies conducted on the effect of self-compassion on depression in adolescents, our study is an important contributor to further knowledge about this. As seen in a meta-analysis including 19 studies on the effect of self-compassion on emotional distress in adolescents, higher levels of self-compassion served as a protective factor against depression and other mental disorders [25].

In our study, this effect was especially seen in boys where the negative correlation was stronger than for girls for all depressive symptoms. Self-compassion was more protective for boys than girls related to depressive symptoms. This has partly been observed previously in adolescents, where girls tend to report lower levels of self-compassion in adolescence than boys, who generally report high levels of self-compassion [21]. However, our study is one of the first to relate gender differences in self-compassion to depression in adolescents [45].

Why this can be seen is hard to say, it could come from insecurity and self-consciousness among girls or feelings of not being as deserving of kindness. However, previous studies show that teaching self-compassion and mindfulness to kids and adolescents could help in dealing with emotional stress [46,47].

There are a study questioning whether or not self-compassion really is a protective factor for depression [48]. The article consists of two different studies using the self-assessment scale, Self-Compassion Scale (SCS) [49] which contains other questions than those seen in CEASY [24]. CEASY focuses on engagement and actions to achieve compassion, whereas SCS inquiries about both compassionate and uncompassionate ways of acting and thinking. The uncompassionate part of SCS is closely associated to mental health issues, thus there is no surprise SCS correlates with these kinds of difficulties. What has been suggested is that the uncompassionate part of SCS hinders investigation of the protective role of self-compassion [48]. However, a lot of studies using SCS have shown that self-compassion is a protective factor for depression [20–22]. A previous study [31] showed that self-compassion is a construct of its own and does not fully correlate with either depression or well-being. This study [31] also showed that the positive part of SCS correlates with the self-compassion subscale of CEASY by 0.57, which means they measure some of the same things. However, CEASY focuses on other aspects of self-compassion and does not include the same uncompassionate questions that seem to cause trouble with the SCS.

Clinical relevance

This study conducted on a school sample shows that both sexual harassment (especially verbal) and bullying are important factors among adolescents and are associated with increased depressive symptoms. Knowledge of the prevalence and effects of these harassments is important to take further actions to discover and help prevention in the future.

The expression of depressive symptoms differ between adolescent girls and boys. Boys mainly express negative self-evaluation and somatic complaints whereas girls also express dysphoric mood and anhedonia. It is especially important to ask boys about negative self-evaluation and somatic complaints in order to not miss depression in adolescent boys. For girls, all depressive symptoms in RADS-2 are equally important to inquire about.

Self-compassion showed the strongest negative correlation to all depressive symptoms for both boys and girls, compared with all the other independent factors. The fact that self-compassion can be taught to both children and adolescents and as a result help decrease depressive symptoms [46,47] is a very important lesson and actions should be taken to teach kids self-compassion in school from a young age.

Limitations and strengths

As this is a cross-sectional study, it makes it difficult to claim causality. A limited number of variables were examined in our study and other factors than those observed could be the underlying cause for depression in our sample. Another issue with cross-sectional studies is the risk for recall-bias, it is possible that students did not accurately report sexual harassments or bullying because of this.

The two schools investigated were from the same city in northern Sweden and the gender ratio was unequal with a much higher rate of girls than boys. This indicates that the population was not geographically stratified and that our sample did not match the adolescent population in Sweden. It could be of interest to conduct further studies on a larger, more stratified population to examine if the findings can be applied to a community sample.

Few students filled out that they had been subjected to non-verbal and physical harassments. This could lead to more uncertainty regarding the results of the hierarchical linear regression as fewer measuring points can lead to uncertain results.

An advantage with the questionnaire used in our study is that examples of sexual harassments included being exposed both online and offline, for example, non-verbal harassment included spreading pictures and videos online. This way we did not miss any online harassments which, as stated above, are common among adolescents.

Analyses were conducted both with and without outliers identified during tests of assumptions. No significant difference was found when outliers were removed from the sample, thus we decided to keep them. Another strength is that we compared the two schools mean values in scores on bullying and sexual harassment and found no significant difference.

Conclusion

Sexual harassment and bullying are important problems among adolescents in Sweden and are possible risk factors for development of depression. Knowledge of this is important for both the teens and adults in order to continue the work of reducing the number of victims of both bullying and sexual harassments. As seen in the results somatic complaints and negative self-evaluation are important symptoms of depression in adolescent boys whereas all symptoms presented in RADS-2 are important for discovering depression in girls. It is possible to miss depression in boys if somatic complaints and negative self-evaluation is not included in scales made for detection of depression. This study has given us better and deeper knowledge about depressive symptoms seen in criteria for depression according to DSM IV [26].

Self-compassion is possibly an important protective factor for depression in adolescents. In the future, focusing on teaching self-compassion to children and adolescents could possibly help reduce depressive symptoms for both boys and girls.

Disclosure statement

Funding

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