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Sexual harassment and patterns of symptoms and functional abilities in a psychiatric sample of adolescents

Maria Jonasson[a], Marie Wiberg[b] and Inga Dennhag[a]

[a]Department of Clinical Science, Child- and Adolescent Psychiatry, Umeå University, Umeå, Sweden; [b]Department of Statistics, USBE, Umeå University, Umeå, Sweden

ABSTRACT

Purpose: To investigate how commonly adolescent psychiatric outpatients with symptoms of depression and anxiety report having been subjected to sexual harassment, and to explore how symptoms and functional abilities differ between adolescent psychiatric outpatients with symptoms of depression and anxiety who do report and those who do not report having been subjected to sexual harassment.

Methods: Swedish adolescent psychiatric outpatients with symptoms of depression or anxiety (n = 324; 66 boys and 258 girls, aged 12–19 years, M=15.6, SD = 1.7) answered the PROMIS paediatric measures. Logistic regression analyses were performed to assess differences between the respondents classified as 'Sexually harassed' and 'Not sexually harassed' based on these self-report questionnaires.

Results: About 60% of the adolescents reported having been subjected to sexual harassment, and reported higher levels of suicidal ideation, disturbed sleep, fatigue, anxiety, depression, anger, and pain interference, as well as lower functional ability in terms of school problems, alcohol consumption, and poor family relationships. Logistic regression analyses showed that the strongest associations were with suicidal ideation, disturbed sleep, anger, and alcohol consumption.

Conclusions: About 60% of the adolescents in the studied psychiatric cohort reported having been subjected to sexual harassment. Reported experiences were high in all three subtypes, with the most reports on having been subjected to verbal harassment. Clinicians should ask about experiences of sexual harassment and give information about the consequences of sexual violence and treatment options. Alcohol consumption should be addressed and tested for. Structured assessment of suicidality should always be done.

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Sexual harassment; child and adolescent psychiatry; logistic regression; suicidal ideation; adolescents

Introduction

Sexual harassment is a widespread phenomenon, the impact of which can be severe also for adolescents. Being subjected to sexual harassment and its associations with different strains on wellbeing has been firmly established in adolescent research [1–6]. However, there seems to be a research gap concerning adolescent psychiatry patients who have been subjected to sexual harassment.

We have not found any research on experiences of having been subjected to sexual harassment on the part of children and adolescents attending psychiatric care, however, research has been conducted on victimisation by interpersonal violence in that population. This is estimated to be higher among children and adolescents attending psychiatric outpatient care than among the general population of children and adolescents [7, 8]. A cross-sectional study shows that among children and adolescents attending psychiatric outpatient care, those that reported having been subjected to interpersonal violence also reported increased severity of externalising problems [9].

Adolescents attending psychiatric outpatient care are a vulnerable group in terms of mental health. Research needs to focus on this group to better understand the symptomatology presented, in order to optimise healthcare responses and, when needed, social care.

Sexual harassment

Sexual harassment can broadly be defined as unwanted sexual attention [10]. Such a definition includes verbal, non-verbal, and physical behaviours, both severe and minor, and emphasises the target's perception of the behaviour [10]. Research suggests that sexual harassment is a form of sexual violence [11] and gender-based violence with the purpose of perpetuating or restoring a (heterosexual) masculine hegemony [3]. Sexual harassment is forbidden by Swedish law [12].

Prevalence of subjection to sexual harassment

Estimates on the prevalence of having been subjected to sexual harassment among adolescents vary for several reasons,

CONTACT Inga Dennhag inga.dennhag@umu.se Department of Clinical Science, Child and Adolescent Psychiatry, Umeå University, SE-90185 Umeå, Sweden
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for example due to methodological differences between studies such as how questions are asked and the number of questions and the response options provided, as well as contextual differences between countries, cultures, socio-economic contexts and so on [13]. A previous cross-sectional Swedish study of a general population of 600 individuals, 12–20 years old, presented a prevalence of 48.5% for females and 28.19% for males, the adolescents reporting having been subjected to sexual harassment online or offline [14]. Another large cross-sectional Swedish study of a general population of 1200 individuals, 14–16 years old, reported a prevalence of offline sexual harassment of 51.6% for females and 45.1% for males, and of online sexual harassment of 35.5% for females and 19.9% for males [15].

Associations between subjection to sexual harassment and symptoms and functions

Several cross-sectional studies on the general population of adolescents have shown associations between reporting having been subjected to sexual harassment and reporting psychological distress in terms of symptoms of depression and anxiety [1, 14, 16–19]. Associations between having been subjected to sexual harassment and the development of symptoms of depression and anxiety have been shown in longitudinal studies on adolescents [3, 20–22], and there also seems to be an association to suicidal ideation [2]. Closely linked to psychological distress and depressive symptoms in particular is sleep disturbances. A large survey of all university students in Norway showed associations between having been subjected to sexual harassment and sleep disturbances [23], and the same association was suggested in a large survey of students in grades 7–12 in the United States [24]. Another indicator of psychological distress is anger: a cross-lagged study of college students showed reciprocal relationships between having been subjected to sexual harassment and anger [25].

Adolescents having been subjected to sexual harassment is also associated with different functional abilities, including use of alcohol and other substances, in cross-sectional research [1, 19] and longitudinal research [2, 5, 21, 26] and school problems [27, 28]. Physical inactivity is directly linked to psychiatric symptoms and disorders [29, 30]. There is a cross-sectional study on adults and associations between having been subjected to sexual harassment and physical activity [31]; however, this area seems to be under-studied. There is some evidence that experiences of having been subjected to sexual harassment leads to somatic symptoms in girls [3], and a cross-sectional study found associations between having been subjected to verbal sexual harassment and somatic symptoms in both girls and boys [17]. A cross-sectional study of adults diagnosed with chronic fatigue syndrome (CFS)) found associations between having been subjected to sexual harassment in childhood and fatigue and poor physical functioning in adulthood [32].

Relationships are seen to affect wellbeing and contribute to resilience to life stressors [33, 34]. Peer relationships have been argued to moderate the link between being subjected to sexual harassment and emotional problems, and a link has been identified between a greater degree of relational support and less sexual harassment victimisation [6]. The findings of cross-sectional studies indicate that parental involvement in the personal lives of adolescents may be a protective factor against sexual harassment, as it is associated with lower reported incidence of being subjected to sexual harassment [35].

It should be noted that the studies referred to above were all conducted on a non-psychiatric population.

Research gap

We have not found any studies on adolescents in outpatient psychiatric care and experiences of being subjected to sexual harassment. Research on the general population suggests that adolescents suffering from anhedonia and adolescents who engage in self-harm behaviours are vulnerable to stressors such as being subjected to sexual harassment [3, 36]. Furthermore, a study shows that wellbeing, in terms of being satisfied with and having a purpose in one's life, seems to be protective against sexual harassment over time [6]. Since anhedonia and other symptoms of depression are common among adolescents in psychiatric care and since behaviours of self-harm seem to be more frequent in the same cohort [37], one could argue that the prevalence of being subjected to sexual harassment might be higher among a population of adolescent psychiatric outpatients than among a general population of the same age.

How well one deals with life in terms of stressful events and regulating one's emotions affects one's well- or ill-being; coping and emotional regulation are associated with psychopathology in adolescents, in terms of both internalising and externalising problems [38, 39]. As stated above, in the general population of adolescents, having been subjected to sexual harassment has been shown to have an association to various symptoms of psychological distress [2, 3, 20–22, 24] as well as to several functional abilities [2, 3, 5, 6, 17, 21, 26–28, 32, 35]. Overall, few – if any – studies on adolescent psychiatry patients having been subjected to sexual harassment and associations between this and symptoms and function have been conducted. With this study, we intend to begin to fill that gap.

Aims of the study

The aims of this study are to investigate how commonly adolescent psychiatric outpatients with symptoms of depression and anxiety report having been subjected to sexual harassment, and to explore how symptoms and functional abilities differ between adolescent psychiatric outpatients with symptoms of depression and anxiety who do report and those who do not report having been subjected to sexual harassment.

Methods

Data collection and procedure

Data were collected from four child and adolescent outpatient psychiatric clinics in the northern part of Sweden

between 2019 and 2022. The research project was titled 'Ungdomars upplevelse av psykisk ohälsa – psykometriska egenskaper i nya svenska versioner av test' ('Adolescents' experiences of mental illness – psychometric properties of new Swedish versions of tests'), which was abbreviated to 'UPOP'. The Regional Ethical Review Board in Umeå, Sweden approved the project (number 2018/59-31, 2019-01313, 2020-00575, and 2021-01696). Flyers with information about the project were posted in the waiting rooms of the four clinics. Information was also sent out by mail and SMS to patients with self-reported or parent-reported symptoms of depression or anxiety. Non-responders were contacted *via* telephone. Verbal and written information was given to patients by research assistants, and written consent for participation in the study was obtained online. Informed consent was also obtained from parents/guardians. Participants received a code to access the web survey at home. The participants were identifiable through the code but only with a key. Participants received a 20-euro gift card upon completion.

Participants

The participants were 324 service users of child- and adolescent psychiatric patient services (258 girls and 66 boys, mean age 15.7, sd = 1.7). The eligibility criteria were (1) Being between 12 and 19 years of age, (2) Being a patient at any of the recruiting sites, (3) Having self-reported or parent-reported symptoms of depression or anxiety (with or without other psychiatric comorbidities), (4) For patients with a recent suicide attempt or experience of psychiatric inpatient care a minimum of three months had to have passed from the suicidal event or discharge from hospitalisation, and (5) Fluency in written Swedish and the ability to complete the online forms. See the Result for the characteristics of the sample.

A total of 857 patients were asked to participate in the study, and 360 (42%) agreed to do so. A total of 36 participants had missing data on the item 'school problems', leading to the other 324 being included in the analyses. This loss of data was caused by the fact that the survey was set up such that every field did not have to be completed for the survey to be submitted.

Diagnoses

Psychiatric diagnoses were extracted from the individual medical records of the participants by a research assistant after the data collection was finished. Days when the diagnoses were coded in the journal by a physician or a psychologist before or after the data collection was in mean 19.57 (SD = 25.39, range = 0–154 d). The clinicians used *Diagnostic and Statistical Manual of Mental Disorders*, fifth edition, published by the American Psychiatric Association [40] or the fifth edition of 'International Statistical Classification of Diseases', published by the World Health Organisation [41]. We have summarised the diagnoses in clusters. The household socioeconomic status of the participants was reported according to the classification system used by Statistics Sweden [42, 43].

The normal procedure at these child and adolescent psychiatric clinics is for a patient new to the clinic, to be assessed and diagnosed by a physician in collaboration with a psychologist or other professional. The structured Mini-International Neuropsychiatric Interview for Children and Adolescents (MINI KID) is mandatory. More complex diagnoses such as autism always involve a psychologist and a senior consultant, and are always thoroughly assessed following the guidelines of Socialstyrelsen (the Swedish National Board of Health and Welfare). Diagnoses are coded in the journal every time the patient meets a physician; when the patient is in contact with other professionals, for example a nurse, psychologist, or CBT therapist, the diagnoses are generally not coded. This means that interventions with other professionals can be ongoing and there can be several months between visits to a physician, resulting in no new diagnosis being coded in the journal during that time. In addition, some patients only receive pharmaceutical treatment (other treatments could have occurred previously) and have been stable for a long period of time and so only meet with a physician once a year, hence no diagnosis is coded in the journal during that year.

Demographics and socioeconomic status

The participants were asked 'Were you born in Sweden', which was answered with 'yes' or 'no'. The participants were asked 'In school, do you receive any sort of educational support' with the response options: 'no', 'yes, in one subject', 'yes, individualised schedule'. The participants were also asked 'What do your parents do', with the response options: 'working', 'unemployed', 'on sick leave', 'partly working, partly on sick leave', 'studying', the question was asked for parent 1 and for parent 2. The participants were asked 'What profession do your parents have' and the participants were asked to 'Please describe the profession as clearly as possible, e.g. "care assistant in elderly care", "carpenter with own company", "industrial worker", "bus driver", "high school teacher", "dental technician", "university teacher"', the question was asked for parent 1 and for parent 2.

Measures

Sexual harassment – dependent variable

Respondents were defined as having been subjected to sexual harassment if they responded 'Yes, at school', 'Yes, online', or 'Yes, elsewhere' (as opposed to 'No, never') to at least one of three questions relating to sexual harassment, which were inspired by previously used questions [14, 44]. The respondents were asked to think back on the previous 6 months when answering the questions. A dichotomous variable called 'Sexually harassed' was created.

Questions on Non Verbal Sexual Harassment: (1) Spread rumours about you with a sexual content, (2) Written something about you with a sexual content or about your body e.g. on the walls of a toilet, (3) Spread pictures or videos of

you with a sexual content, (4) Sent you or shown you pictures, videos or messages with a sexual content (e.g. 'dickpics').

Questions on Verbal Sexual Harassment: (1) Called you a whore, cunt, cock, or similar, (2) Called you a lesbian, fag, or similar, (3) Commented on or made jokes about your looks, your body or your personal life in a sexual manner.

Questions on Physical Sexual Harassment: (1) Grabbed you or touched you in a way you considered invaded your privacy, (2) Cornered you in a sexual manner, (3) Tried to kiss or hug you, (4) Pulled your clothes in a sexual manner (e.g. pulled your bra strap or underwear).

Symptoms and functions – independent variables

Patient-Reported Outcomes Measurement information System (PROMIS)

The Patient-Reported Outcomes Measurement Information System (PROMIS) is a set of measures that evaluates and monitors health parameters: anger [45], anxiety [45], depressive symptoms [45], family relationships [46], fatigue [45, 47, 48], pain interference [45, 48, 49], peer relationships [50], and physical activity [48, 51]. PROMIS is used to measure adult and paediatric physical, mental, and social health [52]. PROMIS paediatric measures document self-reported symptoms and function with a total of eight items (see Table 1) over the previous seven days using five-option responses (never, almost never, sometimes, often, almost all the time) to statements or questions on seven of the items, wherein higher scores indicate a greater severity of the measured symptom or function. For the item Physical activity, the response options are: never, 1 day, 2–3 d, 4–5 d, 6–7 d, except for one item (On a usual day how physically active were you?) that is answered with: not at all, a little bit, somewhat, quite a bit, very much. PROMIS measures are constructed to allow items to be analysed separately, permitting flexible data collection. Swedish translations of the PROMIS paediatric measures have been performed [53]. Definitions of the PROMIS measure domains and their items are found at www.healthmeasures.net. For detailed information on the measures used in the data collection (version, number of items) and scale reliability in this study (see Table 1).

Suicidal ideation questionnaire – junior version (SIQ-JR)

The SIQ-JR is a self-assessment questionnaire used for measuring suicidal ideation in adolescents. The questionnaire includes 15 items on a 7-point scale, with a possible raw score ranging from 0 to 90. The grading ranges from 0 ('Never') to 6 ('Almost every day'), and higher scores indicate a greater severity of suicidal ideation. In this study, we used the raw total score. A raw score of 31 reflects a clinically significant level of suicidal ideation, although a more liberal alternative cut-off score for this of 23 is presented in the SIQ professional manual [54]. A cut-off score of 20 has also been suggested [55]. The scale has been found to be reliable [56], and a high score is significantly associated with a history of suicide attempts [57]. Cronbach's alpha was 0.96 (95% CI [0.95 – 0.97]) in this study.

Insomnia severity index (ISI). The ISI is a self-assessment questionnaire used to measure insomnia in adolescents and adults. The questionnaire contains 7 questions on a 5-point scale, with a possible raw score ranging from 0 to 28. The scale measures sleep which is graded from 0 ('Not at all disturbed') to 4 ('Very disturbed'). The summative raw score was calculated in this study. The scale has been shown to be reliable and valid [58]. Internal consistency was 0.88 (95% CI [0.86 – 0.90]) in this study.

Strengths and difficulties questionnaire (SDQ)

The SDQ measures the psychological adjustment of children and young people. In this study, we only used one item in the SDQ impact subscale: 'Do the difficulties interfere with your classroom learning in everyday life?' Here, we called the variable 'School problems." The item uses a 5-point Likert scale to assess the extent to which psychological problems interfere with life in school, from 1 ('Not at all') to 5 ('All the time') [59, 60].

Table 1. Full name of PROMIS® measures for paediatric self-reporting and internal consistency.

Domain	Ref.	Definition	Number of items	Full name	Cronbach alpha (95% confidence interval) – this study
Anger	[45]	Anger, negative social cognitions, and efforts to control anger.	9	PROMIS Paediatric Item Bank v.2.0 – Anger	0.95 (0.94–96)
Anxiety	[45]	Fear, anxiety, hyper arousal, and related somatic symptoms.	15	PROMIS Paediatric Item Bank v.2.0 – Anxiety	0.94 (0.93 – 0.95)
Depressive symptoms	[45]		14	PROMIS Paediatric Item Bank v.2.0 – Depressive symptoms	0.96 (0.95 – 0.96)
Family relationships	[46]		8	PROMIS Paediatric Item Bank v.1.0 – Family relationships – Short form 8a	0.94 (0.92 – 0.94)
Fatigue	[45, 47,48]		25	PROMIS Paediatric Item Bank v.2.0 – Fatigue	0.98 (0.97 – 0.98)
Pain interference	[45,48,49]		20	PROMIS Paediatric Item Bank v.2.0 – Pain interference	0.97 (0.96 – 0.97)
Peer relationships	[50]		15	PROMIS Paediatric Item Bank v.2.0 – Peer relationships	0.90 (0.88 – 0.91)
Physical activity	[48,51]		10	PROMIS Paediatric Item Bank v.1.0 – Physical activity	0.93 (0.92 – 0.94)

Frequency of alcohol consumption and drug use

Two questions were used: 'How often do you drink alcohol?' and 'How often do you use drugs other than alcohol?' The items used a four-point scale, from 0 ('Never'), to 1 ('Once a month'), 2 ('2–4 times a month'), and 3 ('2–3 times a week').

Statistical analyses

SPSS version 27.0 (SPSS Inc., Chicago, IL) was used for all calculations. To classify the sample and subgroups of respondents into those that had and those that had not experienced sexual harassment, independent sample *t*-tests and chi-square tests were used on demographic variables, and the subgroups 'Sexually harassed' and 'Not sexually harassed' were established.

Independent sample *t*-tests and Pearson's chi-square tests were used to calculate differences between the 'Sexually harassed' and 'Not sexually harassed' subgroups of respondents based on the independent variables in Table 2. Standardised Cohen's *d* [61] with 95% confidence intervals were calculated as effect sizes. These were considered small if *d* was between 0.0 and 0.4, moderate if *d* was between 0.4 and 0.7, and large if *d* was greater than 0.7 [62, 63]. Summative PROMIS, SIQ, and ISI scores were used in the analyses.

Logistic regressions

Due to the dependent variable 'Sexually harassed' being dichotomous, logistic regressions were performed to analyse differences in levels of symptoms and functions between the two groups. Parsimony was strived for in the calculations [64], and the simplest model was saved. First, a logistic regression with all the significant independent variables, as well as sex were calculated. Secondly, the model was reduced with one-by-one variable and the variable with the highest *p* value was removed. Only the variables with significant contributions were saved.

For significant scales in Table 4 , analyses were calculated on individual item scores, with $p < .05$ considered statistically

Table 2. Demographic data, alcohol and drug use, and diagnoses for all Respondents and subgroups of Respondents ('Sexually Harassed' and 'not Sexually Harassed').

Demographic	All	Sexually harassed	Not sexually harassed	*p* Value
n (%)	324 (100)	193 (59,6)	131 (40,4)	
Girls, *n* (%)	258 (79.6)	164 (63.6)	94 (36.4)	
Boys, *n* (%)	66 (20.4)	37 (56.1)	29 (43.9)	
Age, mean (SD) years	15.7 (1.7)	15.7 (1.7)	15.6 (1.7)	.649
Born in Sweden, *n* (%)	305 (94.1)	181 (55.8)	124 (38.3)	−0.743
Parent/Guardian working. n (%)				
Parent 1	263 (81.2)	155 (80.3)	108 (82.4)	.720
Parent 2	269 (83.0)	163 (84.5)	106 (80.9)	.073
Socioeconomic status, *n (%)*				
Unskilled worker	26 (8.0)	19 (9.8)	7 (5.3)	.345
Skilled worker	33(10.2)	22 (11.4)	11 (8.4)	
Non-manual worker	20 (6.2)	6 (3.1)	14 (10.7)	
Civil servant	90 (27.8)	49 (25.4)	41 (31.3)	
High-status profession	92 (28.4)	57 (29.5)	35 (26.7)	
Company owner	25 (7.7)	13 (6.7)	12 (9.2)	
Unknown	38 (11.7)	27 (14.0)	11 (8.4)	
Frequency of alcohol consumption				
Never *n* (%)	211 (65.1)	113 (58.5)	98 (74.8)	.002
Once a month, *n* (%)	76 (23.5)	52 (26.9)	24 (18.3)	
2–4 times a month, n (%)	34 (10.5)	26 (13.5)	8 (6.1)	
2–3 times a week, *n* (%)	3 (0.9)	2 (1.0)	1 (0.8)	
Frequency of drug use				
Never *n* (%)	312 (96.3)	185 (95.9)	127 (96.9)	.329
Once time a month, *n* (%)	7 (2.2)	4 (2.1)	3 (2.3)	
2–4 times a month, *n* (%)	4 (1.2)	3 (1.6)	1 (0.8)	
2–3 times a week, *n* (%)	1 (0.3)	1 (0.5)	0	
Educational support				
No, *n* (%)	137 (42.3)	83 (43.0)	54 (41.2)	.764
Yes, in one subject, *n* (%)	56 (17.3)	33 (17.1)	23 (17.6)	
Customised school or individual programme, *n* (%)	131 (40.4)	77 (39.9)	54 (41.2)	
Diagnoses				Chi-square
Depression and anxiety disorder (%)				
Depressive disorder	45 (13.9)	35 (18.1)	10 (7.6)	.078
Anxiety disorder	37 (11.4)	21 (10.9)	16 (12.2)	
Mixed depressive-anxiety disorder	15 (4.6)	12 (6.2)	3 (2.3)	
Neurodevelopmental disorder (%)				
ADHD	41 (12.7)	22 (11.4)	19 (14.5)	.912
ADD	20 (6.2)	9 (4.7)	11 (8.4)	
Autism	9 (2.8)	4 (2.1)	5 (3.8)	
Tourette's syndrome	2 (.6)	1 (.5)	1 (.8)	
Obsessive Compulsive Disorder (%)	8 (2.5)	2 (1.0)	6 (4.6)	
Eating disorder (%)	13 (3.1)	7 (3.6)	3 (2.3)	
Transgender-related disorder (%)	3 (.9)	1 (.5)	2 (1.5)	
Other (%)	4 (1.2)	1 (.5)	3 (2.3)	
No diagnosis (%)	199 (61.4)	119 (61.6)	80 (61.1)	

Independent sample *t*-tests were used to analyse demographic data.

Table 3. Differences Between the subgroups ('Sexually Harassed' and 'not Sexually Harassed') in terms of scores for all measures.

	Sexually harassed ($n = 193$)		Not sexually harassed ($n = 131$)			95% Conf. interval			
Variables	*M*	SD	*M*	SD	*t*	CI⁻	CI⁺	*p* Value	Effect size Cohen's *d*
Suicidal ideation	34.98	24.24	17.92	19.44	−6.73	−22.06	−12.07	<.001	−0.76
Disturbed sleep	13.00	6.19	9.08	5.67	−5.78	−5.25	−2.58	<.001	−0.65
Depressive symptoms	29.78	13.31	21.25	13.98	−5.54	−11.55	−5.50	<.001	−0.63
Anger	16.45	9.93	10.86	7.35	−5.50	−7.59	−3.59	<.001	−0.62
Fatigue	57.97	25.97	42.86	24.89	−5.23	−20.81	−9.43	<.001	−0.59
Anxiety	26.13	13.72	18.47	13.13	−5.02	−10.67	−4.66	<.001	−0.57
Pain interference	22.66	20.91	13.51	15.04	−4.58	−13.08	−5.22	<.001	−0.49
Family relationships	19.71	7.63	22.92	6.67	3.91	1.60	4.83	<.001	.44
Alcohol consumption	0.57	0.76	0.33	0.63	−3.12	−0.39	−0.09	.002	−0.34
School problems	3.26	0.86	3.05	0.81	−2.20	−0.39	−0.02	.029	−0.25
Peer relationships	37.18	10.15	38.94	11.44	1.45	−0.62	4.14	.147	.16
Drug use	0.07	0.40	0.04	0.23	−0.89	−0.11	.04	.376	−0.10
Physical activity	15.12	9.50	15.05	9.08	−0.07	−2.15	2.01	.945	−0.01

Independent sample *t*-tests were used to calculate differences between the two subgroups (sexually harassed; not sexually harassed). Domains are sorted according to effect size.

significant. No limitations for possible Type-I errors were made because the study had an exploratory approach.

Results

Sample characteristics

Table 2 presents demographic data for the total sample and the two subgroups – 'Sexually harassed' and 'Not sexually harassed' – separately. Most of the respondents were girls who were born in Sweden and had parents/guardians who both worked. The Pearson's chi-square tests showed that sex differed significantly between the two subgroups; among the 'sexually harassed' participants, X^2 (1, $N = 324$) = 8.41, $p = .004$. Two thirds of the adolescents had never used alcohol nor drugs, but the participants who had experienced sexual harassment ($M = 0.57$, SD = 0.76) drank more than those who had not ($M = 0.33$, SD = 0.63); t(322) = −3.12, $p = .002$. Around one third of the adolescents had individual or customised school programmes. Most of the participants (around two thirds), had not received a psychiatric diagnosis during the time for the study (for diagnostic procedure, see Diagnoses and Socioeconomic Status in the Methods). Of those that had received a diagnosis during the time for the study, around one third had affective disorders (depression, anxiety, or mixed depressive-anxiety disorders), and 13% had neuropsychiatric disorders. The Pearson's chi-square tests showed no difference concerning diagnoses between the 'Sexually harassed' and 'Not sexually harassed' subgroups (Table 2).

Prevalence

Of the respondents, 60% (63.6% of the girls and 56.1% of the boys) reported having been subjected to sexual harassment, and were therefore classified as 'Sexually harassed' (Table 2).

The prevalence of the different subtypes of sexual harassment were: 40.7% of girls and 15.2% of boys reported having been subjected to non-verbal sexual harassment, 50.0% of girls and 34.8% of boys reported having been subjected to verbal sexual harassment, and 31.0% of girls and 12.1% of boys reported having been subjected to physical sexual harassment.

Differences in levels of symptoms and functions between 'Sexually Harassed' and 'not Sexually Harassed' subgroups

Except for peer relationships, drug use, and physical activity, there was a statistically significant difference between the groups for most scores in all measure domains ($p \leq .05$). Respondents who had experienced sexual harassment reported higher scores for symptom domains and alcohol consumption. Respondents who had not experienced sexual harassment reported lower scores for the functional domain 'Family relationships' (see Table 3).

Logistic regression analyses were undertaken using all of the significant independent variables listed in Table 3 along with sex. The dependent variable was experience of sexual harassment. Parsimony was sought when building the model, we decreased the model with all non-significant variables one by one. The variables of sex, depressive symptoms, fatigue, anxiety, pain interference, family relationships, school problems, peer relationships, drug use, and physical activity were not associated with experience of sexual harassment in the model.

The final logistic regression model included only significant variables – suicidal ideation, anger, disturbed sleep, and alcohol consumption. The model was statistically significant, X^2 (4, $N = 324$) = 65.42, $p < .001$. The model explained 25.0% (Nagelkerke R^2) of the variance in experience of sexual harassment and correctly classified 69.1% of cases.

Differences in specific symptoms and functions for the two subgroups ('Sexually Harassed' and 'not Sexually Harassed')

Table 5 shows the difference between the 'Sexually harassed' and 'Not sexually harassed' subgroups in terms of the mean score of each for the suicidal ideation, anger, disturbed sleep, and alcohol consumption items, sorted according to the

Table 4. Logistic regression results for the differences between the subgroups ('Sexually Harassed' and 'not Sexually Harassed') on scores for every measure domain.

	Variables	b	Odds ratio	95% Conf. interval for odds ratio		*p* Value	Hosmer–Lemeshow (R^2)	Cox-Snell (R^2)	Nagelkerke (R^2)
				CI^-	CI^+				
Model	Suicidal ideation	0.03	1.03	1.01	1.04	<.001***			
	Anger	0.04	1.04	1.00	1.07	.029*			
	Disturbed sleep	0.05	1.05	1.01	1.10	.024*			
	Alcohol consumption	0.38	1.46	1.01	2.11	.045*			
							.15	.18	.25

Logistic regression was used to calculate differences between the groups ('Sexually harassed' and 'Not sexually harassed'). Variables are sorted according to the odds ratio, from large to small.
*p <= .05, **p <= .01, ***p <= .001.

mean item score as displayed by the regression coefficient for each domain. The largest differences in the mean score of items, were for 'Nobody cares if I am dead or alive', 'Want to break something', 'Want to be alone because of anger', 'Bad mood', and 'Frequency of alcohol drinking'.

Discussion

The aim of this study was to investigate how commonly adolescent psychiatric outpatients with symptoms of depression or anxiety report having been subjected to sexual harassment and to explore how symptoms and functional abilities differ between those adolescent psychiatric outpatients who do report and those who do not report having been subjected to sexual harassment.

Prevalence and gender differences

In our study, 60% of the respondents reported that they had been subjected to sexual harassment, as compared to 38% in a Swedish study of the same age group within a general population [14]. That adolescents attending psychiatric outpatient care report a higher prevalence of being subjected to sexual harassment than the general population of adolescents, corresponds to findings of other studies where people attending psychiatric care report a higher prevalence of being victimised by violence including sexual violence [7, 8, 65].

The high prevalence is alarming in many ways: exposure to sexual harassment predicts future exposure [2, 3, 26], symptoms of negative health and wellbeing increase according to how many events of sexual harassment one is exposed to [1, 66], and the adolescent years are critical in the development of physical and mental health and continuation of this throughout adulthood [67, 68].

This study confirms the sex difference found in previous studies, with a higher prevalence of sexual harassment among girls than boys [6, 14, 15] – in this study 64% of girls, as compared to 56% of boys. However, a prevalence of 56% among boys could still be considered a high number.

Differences in levels of symptoms and functions between those who report having been sexually harassed and those who not

About 60% of the psychiatric sample reported having been sexually harassed, and this rate was higher than for a normative sample. This study shows that reporting having been subjected to sexual harassment is associated with being a girl, greater suicidal ideation, disturbed sleep, fatigue, depression, anxiety, anger, pain interference, alcohol consumption, and worse family relationships in adolescents. This is in line with previous research (albeit not conducted on psychiatric outpatient populations), which also points to psychological and behavioural impairments [1–3, 5, 14–18, 20, 66].

Differences in specific symptoms and functions between those who report having been sexually harassed and those who not

Logistic regression analyses showed that the item with the strongest association with sexual harassment was suicidal ideation, followed by anger, disturbed sleep, and alcohol consumption.

Our cross-sectional study of a psychiatric sample, which showed a strong association between reporting experiences of being subjected to sexual harassment and suicidal ideation, is in line with the results of two longitudinal studies of large general-population samples, pointing to a strong association between sexual violence, including having been subjected to sexual harassment, and suicide attempts in one study and having been subjected to sexual harassment and suicidal thoughts in the other [2, 69]. Most people with suicidal ideation never attempt to commit suicide [70, 71]. The pattern of risk factors for suicidal behaviour is complex; among children and adolescents the pattern is comprised of comorbid psychiatric disorders, personality traits such as poor affect regulation, and stressful life events [72]. It is alarming to conclude that among young people in psychiatric outpatient care, many of whom deal with comorbidity and affect-regulation deficits, the stressor of experiencing sexual harassment is reported to be more common than in the general population.

The second strongest association with sexual harassment according to our model is anger. Anger can be an appropriate emotion when one's boundaries have been crossed but become a problem when it fails to be adaptive, which can be the case when one does not have the power or ability to address the anger towards the transgressor or the skills nor support to adequately regulate the emotion. There is research indicating that anger can precede not just externalising problems but also internalising problems [73]. There is also a study, although on young adults in a non-psychiatry

Table 5. Differences in mean item score, as shown by the regression coefficient, between Respondents in the two subgroups ('Sexually Harassed' and 'not Sexually Harassed') for items.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Suicidal ideation	Nobody cares if I am dead or alive	Thoughts about how others would feel if I killed myself	Testament	Killing methods	Death wishes	Suicidal thoughts	Telling others about plans	Suicide letter	Others would be happier if I was dead	Thoughts about death	Wishing I was never born	Thoughts about dead people	Thoughts about when to kill myself	Thoughts about it being better if I wasn't alive	Killing myself would solve my problems
Anger	Wanting to break something	Wanting to be alone because of anger	Bad mood	Enough of everything	Angry	Angry and sad	Wanting to shout at someone	Silent	Angry when things do not go my way						
Disturbed sleep	Others noticing lower life quality due to disturbed sleep	Problems with early waking	Concerned about your disturbed sleep	Problems with waking up in the night	Disturbing of everyday function	Difficulties falling asleep	Dissatisfaction with your current sleep pattern								
Alcohol consumption	Frequency of alcohol consumption														

B coeff. = col	≥0.20	≥0.10	≥0.01	≥ −0.10	≥ −0.20

population, suggesting a reciprocal causal effect between anger and being subjected to sexual harassment in school [25].

The third strongest association with having been subjected to sexual harassment in our results is disturbed sleep. We have not found any other study on adolescents and sexual harassment that has looked at a connection to problems with sleep. However, a very large study of university students also showed an association between having been subjected to sexual harassment and poor sleep, but also that reporting poor sleep increased with reporting cumulative exposure to sexual harassment [23]. There is a large quantity of evidence pointing to sexual violence as a cause of different sleep problems [74, 75], and it has been shown that these increase vulnerabilities such as emotional dysregulation.

Our model also shows a considerable association between reporting having been subjected to sexual harassment and reporting alcohol consumption, which is in line with findings in other studies of adolescents [19, 26]. Studies have also shown an association between alcohol consumption and future exposure to sexual violence and harassment [25, 26]. Considering young people attending psychiatric care are a vulnerable group, increased alcohol consumption should be taken extremely seriously.

Limitations and strengths

The response rate in the present study was low – around 42%. Lower response rates among people with psychiatric problems have been seen in other studies [76, 77]. There was an uneven distribution of boys and girls, with boys underrepresented, which is seen in many other studies that use self-assessment data [78]. The limited number of boys and the cross-sectional design limit the generalizability of the findings. The results can possibly be generalised to other outpatient psychiatric samples as the sample was relatively large, with enough power to do logistic regressions.

We have not been able to control for other life stressors or adverse childhood experiences that have a potential cumulative effect and that also are associated with various outcomes including suicidal ideation [79].

Due to how the data was collected from the journals, possible associations to specific diagnoses were not exhaustively doable.

Clinical implications

About 60% of the adolescents in our psychiatric cohort reported having been subjected to sexual harassment, with a high prevalence among boys but a higher one among girls, and patients that reported having been subjected to sexual harassment also reported higher levels of symptoms of mental health problems and a higher impact on function. We therefore strongly recommend that clinicians screen for and ask patients about experiences of sexual harassment. Furthermore, since we know that it can be

difficult admitting to having experienced sexual harassment, clinicians should in all cases – even when screening has been undertaken and questions are answered with a 'no' – provide brief psychoeducational information about the prevalence and consequences of sexual violence, including sexual harassment, as well as information about treatment options.

Due to the high prevalence of having been subjected to sexual harassment and its association with symptoms of mental health problems and reduced function, we suggest that clinicians consider offering transdiagnostic trauma-focused treatment to patients in cases where the trauma memory disturbs the individual, even if the diagnosis PTSD is not considered appropriate. Close collaboration with parents and social services should also be a priority.

We stress the importance of viewing experiences of sexual harassment as stressful life events that contribute to the individual's symptoms of psychopathology, and of remembering the high prevalence of such experiences within the patient group. Training operations should be offered on a regular basis to psychiatric staff to secure and maintain good, up-to-date knowledge and awareness of what sexual violence, including sexual harassment, is and how it can affect patients in terms of symptoms and functions.

Recommendations for future research

There is an association between having been subjected to sexual violence, including sexual harassment, and self-harm in general populations [1, 2, 69]. Future research should illuminate whether there is an association between having been subjected to sexual harassment and self-harm in adolescent psychiatric outpatient populations. We welcome longitudinal studies on how sexual violence, including sexual harassment, influences the development of psychopathology among children and adolescents in a psychiatric population, and furthermore why the negative influence on psychopathology of such experiences is greater for some individuals than others [80].

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ORCID

Maria Jonasson http://orcid.org/0009-0002-8183-9766

Data availability statement

Data are available on reasonable request.

References

[1] Bucchianeri MM, Eisenberg ME, Wall MM, et al. Multiple types of harassment: associations with emotional well-being and unhealthy behaviors in adolescents. J Adolesc Health. 2014;54(6):724–729. doi: 10.1016/j.jadohealth.2013.10.205.

[2] Chiodo D, Wolfe DA, Crooks C, et al. Impact of sexual harassment victimization by peers on subsequent adolescent victimization and adjustment: a longitudinal study. J Adolesc Health. 2009;45(3):246–252. doi: 10.1016/j.jadohealth.2009.01.006.

[3] Dahlqvist HZ, Landstedt E, Young R, et al. Dimensions of peer sexual harassment victimization and depressive symptoms in adolescence: a longitudinal cross-Lagged study in a Swedish sample. J Youth Adolesc. 2016;45(5):858–873. doi: 10.1007/s10964-016-0446-x.

[4] Gruber JE, Fineran S. The impact of bullying and sexual harassment on Middle and high school girls. Violence against Women. 2007;13(6):627–643. doi: 10.1177/1077801207301557.

[5] Livingston JA, Wang W, Testa M, et al. Peer sexual harassment, affect, and substance use: daily level associations among adolescents. J Adolesc. 2022;94(7):955–968. doi: 10.1002/jad.12076.

[6] Skoog T, Kapetanovic S. The role of relational support in the longitudinal links between adolescent sexual harassment victimization and psychological health. Dev Psychopathol. 2021;33(4):1368–1380. doi: 10.1017/S0954579420000565.

[7] Hultmann O, Broberg AG. Family violence and other potentially traumatic interpersonal events among 9- to 17-year-old children attending an outpatient psychiatric clinic. J Interpers Violence. 2016;31(18):2958–2986. doi: 10.1177/0886260515584335.

[8] Völkl-Kernstock S, Huemer J, Jandl-Jager E, et al. Experiences of domestic and school violence among child and adolescent psychiatric outpatients. Child Psychiatry Hum Dev. 2016;47(5):691–695. doi: 10.1007/s10578-015-0602-7.

[9] Ford JD, Gagnon K, Connor DF, et al. History of interpersonal violence, abuse, and nonvictimization trauma and severity of psychiatric symptoms among children in outpatient psychiatric treatment. J Interpers Violence. 2011;26(16):3316–3337. doi: 10.1177/0886260510393009.

[10] McMaster LE, Connolly J, Pepler D, et al. Peer to peer sexual harassment in early adolescence: a developmental perspective. Dev Psychopathol. 2002;14(1):91–105. doi: 10.1017/s0954579402001050.

[11] WHO. Understanding and addressing violence against women. Sexual violence. 2012. https://apps.who.int/iris/bitstream/handle/10665/77434/WHO_RHR_12.37_eng.pdf.

[12] Sveriges Riksdag. Diskrimineringslag. 2008. p. 567. https://www.riksdagen.se/sv/dokument-lagar/dokument/svensk-forfattningssamling/12567_sfs-2008-567.

[13] Latzman NE, Casanueva C, Dolan M. 2017). Understanding the scope of child sexual abuse: challenges and opportunities. https://doi.org/10.3768/rtipress.2017.op.0044.1711

[14] Ståhl S, Dennhag I. Online and offline sexual harassment associations of anxiety and depression in an adolescent sample. Nord J Psychiatry. 2020;75(5):330–335. doi: 10.1080/08039488.2020.1856924.

[15] Zetterström Dahlqvist H, Gillander Gådin K. Online sexual victimization in youth: predictors and cross-sectional associations with depressive symptoms. Eur J Public Health. 2018;28(6):1018–1023. doi: 10.1093/eurpub/cky102.

[16] Bendixen M, Daveronis J, Kennair LEO. The effects of non-physical peer sexual harassment on high school students' psychological well-being in Norway: consistent and stable findings across studies. Int J Public Health. 2018;63(1):3–11. doi: 10.1007/s00038-017-1049-3.

[17] Carnelius F, Dennhag I. The association between gender, sexual harassment, and self-compassion on depressive symptoms

in adolescents. Nord J Psychiatry. 2022;77(3):256–265. doi: 10.1080/08039488.2022.2089231.
[18] Kaltiala-Heino R, Fröjd S, Marttunen M. Sexual harassment and emotional and behavioural symptoms in adolescence: stronger associations among boys than girls. Soc Psychiatry Psychiatr Epidemiol. 2016a;51(8):1193–1201. doi: 10.1007/s00127-016-1237-0.
[19] Reed E, Salazar M, Agah N, et al. Experiencing sexual harassment by males and associated substance use & poor mental health outcomes among adolescent girls in the US. SSM Popul Health. 2019;9:100476. doi: 10.1016/j.ssmph.2019.100476.
[20] Copp JE, Mumford EA, Taylor BG. Online sexual harassment and cyberbullying in a nationally representative sample of teens: prevalence, predictors, and consequences. J Adolesc. 2021;93(1):202–211. doi: 10.1016/j.adolescence.2021.10.003.
[21] Rinehart SJ, Espelage DL, Bub KL. Longitudinal effects of gendered harassment perpetration and victimization on mental health outcomes in adolescence. J Interpers Violence. 2020;35(23–24):5997–6016. doi: 10.1177/0886260517723746.
[22] Skoog T, Bayram Özdemir S, Stattin H. Understanding the link between pubertal timing in girls and the development of depressive symptoms: the role of sexual harassment. J Youth Adolesc. 2016;45(2):316–327. doi: 10.1007/s10964-015-0292-2.
[23] Steine IM, Skogen JC, Hysing M, et al. Sexual harassment and assault predict sleep disturbances and is partly mediated by nightmares: findings from a national survey of all university students in Norway. J Sleep Res. 2021;30(6):e13338. doi: 10.1111/jsr.13338.
[24] Hill C, Kearl H. Crossing the line: sexual harassment at school. Washington (DC): American Association of University Women; 2011.
[25] Wolff JM, Rospenda KM, Colaneri AS. Sexual harassment, psychological distress, and problematic drinking behavior among college students: an examination of reciprocal causal relations. J Sex Res. 2017;54(3):362–373. doi: 10.1080/00224499.2016.1143439.
[26] Livingston JA, Wang W, Nickerson AB, et al. Sexual victimization in adolescence: pathways of risk from sexual harassment via risky alcohol use and delinquency among U.S. Adolescents. Arch Sex Behav. 2023;52(7):2823–2834. doi: 10.1007/s10508-023-02582-x.
[27] Gruber J, Fineran S. Sexual harassment, bullying, and school outcomes for high school girls and boys. Violence against Women. 2016;22(1):112–133. doi: 10.1177/1077801215599079.
[28] Lichty LF, Campbell R. Targets and witnesses: middle school students' sexual harassment experiences. J Early Adolesc. 2012;32(3):414–430. doi: 10.1177/0272431610396090.
[29] Firth J, Siddiqi N, Koyanagi A, et al. The lancet psychiatry commission: a blueprint for protecting physical health in people with mental illness. Lancet Psychiatry. 2019;6(8):675–712. doi: 10.1016/S2215-0366(19)30132-4.
[30] Malm C, Jakobsson J, Isaksson A. Physical activity and sports-real health benefits: a review with insight into the public health of Sweden. Sports (Basel). 2019;7(5):127. doi: 10.3390/sports7050127.
[31] Pebole MM, Singleton CR, Hall KS, et al. Sex-specific associations between self-reported physical activity and PTSD among survivors of sexual violence. J Behav Med. 2023. doi: 10.1007/s10865-023-00434-6.
[32] De Venter M, Illegems J, Van Royen R, et al. Differential effects of childhood trauma subtypes on fatigue and physical functioning in chronic fatigue syndrome. Compr Psychiatry. 2017;78:76–82. doi: 10.1016/j.comppsych.2017.07.006.
[33] Masten AS. Ordinary magic. Resilience processes in development. Am Psychol. 2001;56(3):227–238. doi: 10.1037//0003-066x.56.3.227.
[34] Masten AS, Barnes AJ. Resilience in children: developmental perspectives. Children (Basel). 2018;5(7):98. doi: 10.3390/children5070098.
[35] Kaltiala-Heino R, Fröjd S, Marttunen M. Sexual harassment victimization in adolescence: associations with family background. Child Abuse Negl. 2016b;56:11–19. doi: 10.1016/j.chiabu.2016.04.005.
[36] Marshall SK, Faaborg-Andersen P, Tilton-Weaver LC, et al. Peer sexual harassment and deliberate self-injury: longitudinal cross-lag investigations in Canada and Sweden. J Adolesc Health. 2013;53(6):717–722. doi: 10.1016/j.jadohealth.2013.06.009.
[37] Plener PL, Kaess M, Schmahl C, et al. Nonsuicidal self-injury in adolescents. Dtsch Arztebl Int. 2018;115(3):23–30. doi: 10.3238/arztebl.2018.0023.
[38] Compas BE, Jaser SS, Bettis AH, et al. Coping, emotion regulation, and psychopathology in childhood and adolescence: a meta-analysis and narrative review. Psychol Bull. 2017;143(9):939–991. doi: 10.1037/bul0000110.
[39] Paulus FW, Ohmann S, Möhler E, et al. Emotional dysregulation in children and adolescents with psychiatric disorders. A narrative review. Front Psychiatry. 2021;12:628252. doi: 10.3389/fpsyt.2021.628252.
[40] American Psychiatric Association. American psychiatric association: diagnostic and statistical manual of mental disorders, fifth edition, DSM-5™. Washington (DC): American Psychiatric Association; 2013.
[41] World Health Organization. International statistical classification of diseases and related health problems. 10th ed. Geneva, Switzerland: World Health Organization; 2004.
[42] SCB. 1984). Statistics Sweden (SCB) The Swedish socio-economic classification (SEI). Available from: https://www.scb.se/contentassets/22544e89c6f34ce7ac2e6fefbda407ef/english_ov9999_1982a01_br_x11op8204-3.pdf
[43] SCB. 2020). Statistics Sweden (SCB) SEI, yrkesförteckning version 2020-04-16. Available from: https://www.scb.se/contentassets/22544e89c6f34ce7ac2e6fefbda407ef/sei_index_webb_20200416.pdf.
[44] Zetterström Dahlqvist H, Landstedt E, Gillander Gådin K. Depressive symptoms and the associations with individual, psychosocial, and structural determinants in Swedish adolescents. Health. 2012;04(10):881–889. doi: 10.4236/health.2012.410134.
[45] Quinn H, Thissen D, Liu Y, et al. Using item response theory to enrich and expand the PROMIS® pediatric self report banks. Health Qual Life Outcomes. 2014;12(1):160. doi: 10.1186/s12955-014-0160-x.
[46] Bevans KB, Riley AW, Landgraf JM, et al. Children's family experiences: development of the PROMIS(®) pediatric family relationships measures. Qual Life Res. 2017;26(11):3011–3023. doi: 10.1007/s11136-017-1629-y.
[47] Lai JS, Stucky BD, Thissen D, et al. Development and psychometric properties of the PROMIS(®) pediatric fatigue item banks. Qual Life Res. 2013;22(9):2417–2427. doi: 10.1007/s11136-013-0357-1.
[48] Rindestig FC, Wiberg M, Henje E, et al. Psychometrics of three physical pediatric item banks from the patient-reported outcomes measurement information system (PROMIS)®: pain interference, fatigue and physical activity. J Patient-RepOutcomes. 2020;5:105.
[49] Varni JW, Magnus B, Stucky BD, et al. Psychometric properties of the PROMIS ® pediatric scales: precision, stability, and comparison of different scoring and administration options. Qual Life Res. 2014;23(4):1233–1243. doi: 10.1007/s11136-013-0544-0.
[50] Dewalt DA, Thissen D, Stucky BD, et al. PROMIS pediatric peer relationships scale: development of a peer relationships item bank as part of social health measurement. Health Psychol. 2013;32(10):1093–1103. doi: 10.1037/a0032670.
[51] Tucker AC, Bevans BK, Teneralli ER, et al. Self-reported pediatric measures of physical activity, sedentary behavior, and strength impact for PROMIS: item development. Pediatr Phys Ther. 2014;26(4):385–392. doi: 10.1097/PEP.0000000000000074.
[52] Cella D, Riley W, Stone A, et al. The patient-reported outcomes measurement information system (PROMIS) developed and tested its first wave of adult self-reported health outcome item banks: 2005-2008. J Clin Epidemiol. 2010;63(11):1179–1194. doi: 10.1016/j.jclinepi.2010.04.011.
[53] Blomqvist I, Chaplin J, Nilsson E, et al. Swedish translation of eight pediatric item banks from the patient-reported outcomes measurement information system (PROMIS)®. J Patient Rep Outcomes. 2021;5(1):80. doi: 10.1186/s41687-021-00353-7.
[54] Reynolds WM. 1988). Reynolds suicidal ideation questionnaire: professional manual. Lake Magdalene (FL): Psychological Assessment Resources.

[55] Hill K, Van Eck K, Goklish N, et al. Factor structure and validity of the SIQ-JR in a southwest American Indian tribe. Psychol Serv. 2020;17(2):207–216. doi: 10.1037/ser0000298.
[56] Reynolds WM, Mazza JJ. Assessment of suicidal ideation in inner-city children and young adolescents: reliability and validity of the suicidal ideation questionnaire-JR. School Psychology Review. 1999;28(1):17–30. doi: 10.1080/02796015.1999.12085945.
[57] Keane EM, Dick RW, Bechtold DW, et al. Predictive and concurrent validity of the suicidal ideation questionnaire among American Indian adolescents. J Abnorm Child Psychol. 1996;24(6):735–747. doi: 10.1007/BF01664737.
[58] Bastien CH, Vallières A, Morin CM. Validation of the insomnia severity index as an outcome measure for insomnia research. Sleep Med. 2001;2(4):297–307. doi: 10.1016/s1389-9457(00)00065-4.
[59] Goodman R. Psychometric properties of the strengths and difficulties questionnaire. J Am Acad Child Adolesc Psychiatry. 2001;40(11):1337–1345. doi: 10.1097/00004583-200111000-00015.
[60] Malmberg M, Rydell AM, Smedje H. Validity of the Swedish version of the strengths and difficulties questionnaire (SDQ-Swe). Nord J Psychiatry. 2003;57(5):357–363. doi: 10.1080/08039480310002697.
[61] Cohen J. A power primer. Psychol Bull. 1992;112(1):155–159. doi: 10.1037//0033-2909.112.1.155.
[62] Cohen J. 1988). Statistical power analysis for the behavioral sciences. 2nd ed. Mahwah (NJ): Lawrence Erlbaum Associates.
[63] Matthey S. P <.05—but is it clinically significant? Practical examples for clinicians. Behav Change. 1998;15(2):140–146. doi: 10.1017/S0813483900003247.
[64] Field AP. 2018). Discovering statistics using IBM SPSS statistics. 5th ed. Thousand Oaks (CA): Sage Publications.
[65] Carlberg Rindestig F, Gillander Gådin K, Semb O, et al. 2023). Online sexual solicitation among young people in outpatient psychiatric care: prevalence and associations to depression and anxiety. A gender perspective. Child- and adolescent psychiatry, department of clinical science. Umeå, Sweden: Umeå University. Unpublished manuscript.
[66] Eom E, Restaino S, Perkins AM, et al. Sexual harassment in Middle and high school children and effects on physical and mental health. Clin Pediatr. 2015;54(5):430–438. doi: 10.1177/0009922814553430.
[67] Blakemore SJ. Imaging brain development: the adolescent brain. Neuroimage. 2012;61(2):397–406. doi: 10.1016/j.neuroimage.2011.11.080.
[68] Patton GC, Sawyer SM, Santelli JS, et al. Our future: a Lancet commission on adolescent health and wellbeing. Lancet. 2016;387(10036):2423–2478. doi: 10.1016/S0140-6736(16)00579-1.
[69] Bentivegna F, Patalay P. The impact of sexual violence in mid-adolescence on mental health: a UK population-based longitudinal study. Lancet Psychiatry. 2022;9(11):874–883. doi: 10.1016/S2215-0366(22)00271-1.
[70] Mars B, Heron J, Klonsky ED, et al. What distinguishes adolescents with suicidal thoughts from those who have attempted suicide? A population-based birth cohort study. J Child Psychol Psychiatry. 2019;60(1):91–99. doi: 10.1111/jcpp.12878.
[71] Nock MK, Borges G, Bromet EJ, et al. Cross-national prevalence and risk factors for suicidal ideation, plans and attempts. Br J Psychiatry. 2008;192(2):98–105. doi: 10.1192/bjp.bp.107.040113.
[72] Carballo JJ, Llorente C, Kehrmann L, et al. Psychosocial risk factors for suicidality in children and adolescents. Eur Child Adolesc Psychiatry. 2020;29(6):759–776. doi: 10.1007/s00787-018-01270-9.
[73] Folk JB, Zeman JL, Poon JA, et al. A longitudinal examination of emotion regulation: pathways to anxiety and depressive symptoms in urban minority youth. Child Adolesc Ment Health. 2014;19(4):243–250. doi: 10.1111/camh.12058.
[74] Gallegos AM, Trabold N, Cerulli C, et al. Sleep and interpersonal violence: a systematic review. Trauma Violence Abuse. 2021;22(2):359–369. doi: 10.1177/1524838019852633.
[75] Langevin R, Kenny S, Kern A, et al. Sexual abuse and sleep in children and adolescents: a systematic review. Sleep Med Rev. 2022;64:101628. doi: 10.1016/j.smrv.2022.101628.
[76] Haapea M, Miettunen J, Läärä E, et al. Non-participation in a field survey with respect to psychiatric disorders. Scand J Public Health. 2008;36(7):728–736. doi: 10.1177/1403494808092250.
[77] Langhammer A, Krokstad S, Romundstad P, et al. The HUNT study: participation is associated with survival and depends on socioeconomic status, diseases and symptoms. BMC Med Res Methodol. 2012;12(1):143. doi: 10.1186/1471-2288-12-143.
[78] Becker R. Gender and survey participation. An event history analysis of the gender effects of survey participation in a probability-based multi-wave panel study with a sequential mixed-mode design. Methoden, Daten, Analysen. 2022;16(1):3–32
[79] Petruccelli K, Davis J, Berman T. Adverse childhood experiences and associated health outcomes: a systematic review and meta-analysis. Child Abuse Negl. 2019;97:104127. doi: 10.1016/j.chiabu.2019.104127.
[80] Smith KE, Pollak SD. Early life stress and development: potential mechanisms for adverse outcomes. J Neurodevelop Disord. 2020;12(1):34. doi: 10.1186/s11689-020-09337-y.