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Experiences of violence among adolescents: gender patterns in types, perpetrators and associated psychological distress

Evelina Landstedt · Katja Gillander Gådin

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Abstract
Purpose To explore the psychological distress associations of experiences of several types of violence and the victim–perpetrator relationship of physical violence, a gender analysis was applied.
Methods Data were derived from a cross-sectional questionnaire study among 17-year-old upper secondary school students ($N = 1{,}663$). Variables in focus were: self-reported psychological distress, experiences of physical violence, sexual assault, bullying and sexual harassment. Logistic regressions were used to examine associations.
Results Experiences of physical violence, sexual assault, bullying and sexual harassment were associated with psychological distress in boys and girls. The perpetrators of physical violence were predominately males. Whether the perpetrator was unknown or known to the victim seem to be linked to psychological distress. Victimisation by a boyfriend was strongly related to psychological distress among girls.
Conclusions Experiences of several types of violence should be highlighted as factors associated with mental health problems in adolescents. The victim–perpetrator relationships of violence are gendered and likely influence the psychological distress association. Gendered hierarchies and norms likely influence the extent to which adolescents experience violence and how they respond to it in terms of psychological distress.

Keywords Victimisation · Young people · Mental health · Gender differences · Public health

E. Landstedt (✉) · K. Gillander Gådin
Department of Health Sciences, Mid Sweden University, 85170 Sundsvall, Sweden
e-mail: evelina.landstedt@miun.se

Introduction

Poor mental health in youth is considered a serious public health issue and numerous studies have identified prevalent gender differences in adolescent mental health (Patel et al. 2007). Generally, girls are more likely than boys to report internalising problems such as psychological distress, depression, and anxiety, whereas boys in most studies are overrepresented with regard to externalising problems (e.g., Angold et al. 2002; Rescorla et al. 2007). However, research has also reported no gender difference in externalising symptoms (Broberg et al. 2001).

Among possible determinants of adolescent mental health problems, there is strong evidence of adverse mental health effects of victimisation of violence in different forms (Krug et al. 2002). There is, for example, consistent evidence of bullying and sexual harassment being related to depression and psychological distress (Gobina et al. 2008; Gruber and Fineran 2008; Nansel et al. 2004). It is also well established that experiences of physical and sexual violence/abuse are risk factors for poor mental health in adolescents (Haavet et al. 2004; Thompson et al. 2004). Post-traumatic stress and experiences of shame have been suggested as possible mechanisms for this relationship (Ruchkin et al. 2007; Stuewig and McCloskey 2005).

The mental health effects of the victim–perpetrator relationships of violence have been sparsely investigated. According to an American study, physical and sexual victimisation by a non-stranger or a family member increases the risk of post-traumatic stress syndrome in youths (Lawyer et al. 2006). Adverse mental health effects of intimate partner violence (dating violence) among teenagers have also been identified (Ackard and Neumark-Sztainer 2002).

Although reports of victimisation vary across countries, research shows a gender patterns in victimisation;

experiences of sexualised violence has been found more prevalent among girls, whereas boys report more instances of physical aggression (Craig et al. 2009; Edgardh and Ormstad 2000; Leonard et al. 2002; AAUW 2001). With regard to victim–perpetrator relationships, boys and men tend to be offended by a stranger, whereas girls and women are more likely to be victimised by somebody with whom they have or have had a close relationship (Bennett and Fineran 1998). With respect to possible links between gender patterns in victimisation and mental health, some studies indicate that poor mental health in girls is related to elevated levels of experiences of sexualised violence and intimate partner violence (Gillander Gådin and Hammarström 2005; Hand and Sanchez 2000; Molidor and Tolman 1998), and that young male victims of physical violence are less likely to report anxiety and depression than female victims (Lawyer et al. 2006; Sundaram et al. 2004). There are also findings of stronger mental health associations of sexual abuse among boys than girls (Haavet et al. 2004).

Despite convincing evidence of the detrimental mental health effects of violence, there are gaps in the literature with regard to how different types of violence are related to mental health in adolescent boys and girls. There is also a lack of studies that recognise the role of the victim–perpetrator relationship. Moreover, given the identified gender differences in mental health as well as in the experiences of violence, a gender analysis is needed to gain a deeper understanding of young people's experiences of violence and the associations with mental health. The consideration of gender as a contextual factor to be analysed in relation to the emotional health of adolescents has been previously recognised (Ravens-Sieberer et al. 2009). A theoretically grounded gender perspective is, however, rare. The analysis employed in the present study is primarily based on the work by Connell (2002, 2009) and Kenway and Fitzclarence (1997), as well as previous research on gender and violence (e.g., Bennett and Fineran 1998; Courtenay 2000; Gruber and Fineran 2008; Molidor and Tolman 1998). Gender refers to the cultural and social constructions of what it means to be a man/boy or a woman/girl in a given society and how these constructions of masculinities and femininities are enacted in social practice (Connell 2009). Gender is also seen as a fundamental organisational principle in society as well as a social relation and a base of hierarchies and power relations constituting a gender order: a complex system in which men and boys collectively possess higher status than girls and women (Connell 2009).

The aims of this study were to:

1. Explore the gender patterning of (i) experience of physical violence, sexual assault, bullying, and sexual harassment, and (ii) victim–perpetrator relationship of physical violence.
2. Explore the psychological distress associations of physical violence, sexual assault, bullying, and sexual harassment among boys and girls.
3. Explore the psychological distress associations of the victim–perpetrator relationship of physical violence among boys and girls
4. Apply a gender analysis to the findings.

Methods

Sample and data collection

The present study used data collected as a part of a larger full population questionnaire study of second year upper secondary school students (approximately 17 years of age) in the County of Västernorrland, a region of seven municipalities and 250,000 inhabitants in the mid/northern part of Sweden.

In five of the seven municipalities, all students in the second year of upper secondary school were invited to participate. In the other two municipalities (the largest towns), 50% of school classes were randomly sampled. This process was mainly due to practical reasons (primarily time limitations) and resulted in a sample of 2,123 students. The random sampling was accounted for by a weight variable to establish generalisability to an estimated full population sample of second year students (approximately 3,200 students). All data were collected by means of a self-administered questionnaire completed during school hours. A total of 1,663 students (78.3%) completed the questionnaire. The study was approved by the Mid Sweden University Ethical Committee.

Measures

Psychological distress was measured by a composite index of six questions (Cronbach's alpha = 0.83). The participants were asked 'How often during the past 3 months have you felt…' followed by six examples of feelings: (1) nervous, (2) anxious/worried, (3) depressed/low, (4) irritable, (5) worthless, and (6) resigned. The response alternatives were: (0) never, (1) seldom, (2) sometimes, (3) often, and (4) always. These questions are similar to those in the Kessler-6 scale of psychological distress (Kessler et al. 2002). The psychometric properties of the items were evaluated by factor analysis as well as Rasch latent trait analysis and were found to meet the requirements of unidimensionality. That is, in factor analysis, all six items loaded on one component (correlation from 0.62 to 0.83) that explained 54.93% of the variance. The Rasch Infit

MSQ ranged from 0.77 (worried/anxious) to 1.26 (worthless), indicating a good fit to the Rasch model.

A sum score for the six items ranging from 0 to 24 was calculated for each respondent (the higher score, the worse the psychological distress). In accordance with other studies (Hagquist 2007), we used quartiles to classify individuals into cases and non cases. That is, individuals who scored 12 or higher (upper quartile) were considered as cases of 'psychological distress'. This cut-off is similar to the one suggested for the Kessler-6 scale (Kessler et al. 2002).

Experience of violence was indicated by four types of violence: physical violence, sexual assault, bullying, and sexual harassment. All violence questions had the response alternatives 'never', 'once', 'a few times', and 'several times' and were dichotomised into 'not experienced' (no) and 'experienced' (once or more).

Students were asked to indicate the 1-year frequencies of experiencing physical violence: "Have you during the past 12 months experienced physical violence? This includes, for example, that someone has pushed, hit, kicked, pulled your hair, cut or scratched you, and/or roughly shaken you".

Lifetime experience of *sexual assault* was indicated by the question "Have you ever felt forced to have sex?"

Bullying in school was indicated by the experience of specific acts in school during the past 12 months: 'been socially excluded', 'somebody has spread false rumours about you' and/or 'experienced racist comments or actions'. Items were derived from the Olweus bullying questionnaire (Solberg and Olweus 2003). We constructed a bullying variable with the following categories: 'not experienced', 'experienced one act', and 'experienced two or three acts'.

In the same way, acts of *sexual harassment* in school were as follows: 'received unwelcomed comments on body or appearance'; having been called 'whore', 'fag', 'cunt' or other 'four-letter words'; 'been pawed or forced to touch somebody in a sexual way'; 'received degrading comments about your gender or sexuality', and/or 'been grabbed or shouldered/cornered'. These items are similar to those in the frequently cited American Association of University Women study of sexual harassment in school (AAUW 2001). Experiences of sexual harassment were categorised as follows: 'not experienced', 'experienced one act', 'experienced two acts', and 'experienced three or more acts'.

Victim–perpetrator relationship of physical violence. Participants who responded affirmatively to the question about physical violence were asked to indicate who offended them. This option was only available for the variable 'physical violence'. The response alternatives were as follows: 'unknown male', 'unknown female', 'known male', 'known female', 'teacher', 'mother', 'father', 'boyfriend', 'girlfriend', and 'other person'. Due to the limited number of cases in some perpetrator categories, a new categorical indicator variable with the following categories was constructed for logistic regressions: 'not experienced violence' (reference category), 'unknown' (unknown male, unknown female), 'known' (known male, known female, teacher), 'parent' (mother, father), 'partner' (girlfriend, boyfriend), and 'other person'.

To more clearly isolate the violence-variable associations with psychological distress, two control variables were chosen as indicators of socioeconomic background: (1) 'academic orientation' (attendance in academic or vocational educational programme), which has been found to be an accurate proxy for socioeconomic position in young people (Hagquist 2007), and (2) 'parental employment status' ('employed'—both parents having full- or part-time work or running their own business, or 'not employed'—one or both parents not having full- or part-time work or running their own business. The 'not employed' category included those who were unemployed, on pension, on sick leave, on parental leave, a student, a house wife/man, other and do not know).

Statistical analysis

Statistical analyses were performed using SPSS version 17 and Winsteps for the Rasch analysis. Pearson's Chi-squared test with an alpha level of 0.05 was used for descriptive statistics. Logistic regressions, with 95% confidence intervals, were used to examine the psychological distress associations of experiences of violence and the victim–perpetrator relationship of physical violence. To investigate the violence–psychological distress associations in both girls and boys, logistic regressions were conducted separately by gender. The analysis plan was as follows: first, crude odds ratios for each type of violence were calculated. Second, adjusted odds ratios for each form of violence were obtained by multivariate analyses that controlled for socioeconomic indicators.

Results

Boys represented 51% ($n = 837$) of the respondents, while girls represented 49% ($n = 826$). With regard to academic orientation, 45% ($n = 709$) attended academic programmes and 55% ($n = 861$) attended vocational educational programmes. A total of 76% ($n = 1{,}227$) reported that both parents had a part- or full-time job or ran their own business, while 24% ($n = 396$) reported that one or both parents did not. There were no differences between boys and girls with regard to academic orientation and parental employment status.

Girls were twice as likely to be cases of psychological distress compared to boys (32.2%, $n = 256$ vs. 15.2%, $n = 116$; $p < 0.001$). As shown in Table 1, there were some differences in the type of violence experienced. For instance, experience of physical violence during the past year was more frequently reported by boys than girls, whereas girls nearly three times more likely to report a lifetime experience of sexual assault. Reports of bullying and sexual harassment in school revealed less prevalent gender differences, although bullying was more common among girls than among boys, and experiences of sexual harassment were slightly more common among boys.

Table 2 displays that the most frequently reported perpetrator of physical violence during the past 12 months was a male. Significantly more boys than girls reported the perpetrator to be an unknown or known male, whereas a female perpetrator was more frequently reported by girls. Girls reported a range of perpetrators and were more likely than boys to have been offended by a person with whom they had a close relationship (parent and partner). Since no girl reported the perpetrator to be her girlfriend, the category 'partner' means 'boyfriend' among the girls. The undefined category 'other' was also more frequently reported by the girls.

As shown in Table 3, experiences of all types of violence were associated with psychological distress in both boys and girls. This was also the case when adjusting for socioeconomic indicators. However, among girls, all levels of sexual harassment and bullying were significantly associated with psychological distress, whereas only the highest levels of sexual harassment and bullying generated significant odds ratios among boys.

With respect to victim–perpetrator relationship and psychological distress, Table 4 displays the odds of psychological distress among those who had experienced violence the past 12 months by category of perpetrator, compared to those with no experience of physical violence the past 12 months.

Among boys, an unknown perpetrator was significantly associated with psychological distress. Among girls, the perpetrator categories 'known person', 'partner' and 'other' revealed significant associations with psychological distress. Tendencies towards significance were observed for 'known person' among boys and 'unknown person' among girls.

Discussion

Prevalence

We found a high prevalence of experiences of violence among boys and girls. The most prevalent gender differences with respect to type of violence were found in physical violence (overrepresentation of boys) and sexual assault (girls). Gender differences were less evident with respect to bullying and sexual harassment. A gender pattern was also found regarding the victim–perpetrator relationship of physical violence (past 12 months). Boys were mainly offended by another male (predominately an unknown), whereas girls to a higher degree reported that the perpetrator was a partner, a parent, or another female.

The gender patterning of physical violence and sexual assault confirm previous findings (Edgardh and Ormstad 2000; Lawyer et al. 2006; Leonard et al. 2002). Given the previously identified overrepresentation of girls with regard to reports of sexual harassment (Gillander Gådin and Hammarström 2005; AAUW 2001), the high occurrence among boys was somewhat unexpected. Homophobic name calling has, on the other hand, been found to be particularly prevalent among boys (AAUW 2001). Most likely, this was also the case in our study, which might

Table 1 Percentages of 17-year-old students reporting types of violence

Type of violence	Total		Boys		Girls		*p*
	n	% (95% CI)	*n*	% (95% CI)	*n*	% (95% CI)	
Physical violence past 12 months	320	19.7 (18.1–21.3)	201	24.8 (22.3–27.3)	119	15.0 (13.0–17.0)	<0.001
Sexual assault, lifetime experience	200	12.0 (10.7–13.3)	55	6.4 (5.0–7.8)	145	17.3 (15.2–19.4)	<0.001
Bullying in school past 12 months							<0.001
Experienced 1 act	437	27.4 (25.6–29.2)	188	23.1 (20.1–25.5)	249	31.4 (28.8–34.0)	
Experienced 2–3 acts	304	18.5 (16.9–20.1)	134	16.6 (14.5–18.7)	170	20.3 (18.1–22.5)	
Sexual harassment in school past 12 months							0.039
Experienced 1 act	348	22.0 (20.3–23.7)	179	22.5 (20.1–24.9)	169	21.3 (19.0–23.6)	
Experienced 2 acts	178	11.1 (9.8–12.4)	105	12.5 (10.6–14.4)	73	9.8 (8.1–11.5)	
Experienced 3–5 acts	213	13.4 (11.6–14.4)	110	14.0 (12.0–16.0)	103	12.9 (11.0–14.8)	

County of Västernorrland, Sweden, 2007

Table 2 Percentages of 17-year-old students who experienced physical violence during the past 12 months reporting category of perpetrator

Perpetrator	Respondents experienced physical violence						*p*
	Total		Boys		Girls		
	n	% (95% CI)	*n*	% (95% CI)	*n*	% (95% CI)	
Unknown male	106	33.9 (29.5–38.2)	92	48.9 (43.0–54.8)	14	11.0 (6.5–15.5)	<0.001
Known male	85	26.7 (22.7–30.7)	63	32.4 (26.9–37.9)	22	18.1 (12.5–23.7)	0.001
Unknown female	15	5.3 (3.2–7.2)	7	3.6 (1.4–5.8)	8	7.7 (3.8–11.6)	0.054
Known female	12	4.2 (2.3–5.9)	3	1.1 (0.1–2.3)	9	8.8 (4.7–12.9)	<0.001
Teacher	5	1.5 (0.4–2.6)	4	2.2 (0.5–3.9)	1	0.5 (0.05–1.5)	0.167
Mother	8	2.6 (1.1–4.1)	1	0.4 (0.3–1.1)	7	6.0 (2.5–9.5)	<0.001
Father	17	5.5 (3.3–7.5)	6	2.9 (0.9–4.9)	11	9.3 (5.1–13.5)	0.003
Partner	23	8.8 (6.3–11.5)	3	1.4 (0.2–2.8)	20	20.3 (14.5–26.1)	<0.001
Other	39	11.6 (8.7–14.5)	16	7.2 (4.2–10.2)	23	18.1 (12.5–23.7)	0.001

County of Västernorrland, Sweden, 2007

Table 3 Associations between experience of type of violence and psychological distress among 17-year-old students

	Unadjusted				Adjusted[a]			
	Boys		Girls		Boys		Girls	
	OR (CI)	*p*	OR (CI)	*p*	OR (CI)	*p*	OR (CI)	*p*
Physical violence past 12 months								
Not experienced	Ref		Ref		Ref		Ref	
Experienced	**1.82** (1.27–2.61)	0.001	**2.76** (1.99–3.82)	<0.001	**1.90** (1.31–2.76)	0.001	**2.68** (1.90–3.77)	<0.001
Sexual assault, lifetime experience								
Not experienced	Ref		Ref		Ref		Ref	
Experienced	**4.45** (2.68–7.39)	<0.001	**2.77** (2.03–3.78)	<0.001	**5.11** (3.02–8.64)	<0.001	**2.68** (1.95–3.70)	<0.001
Bullying in school past 12 months								
Not experienced	Ref		Ref		Ref		Ref	
Experienced 1 act	**1.79** (1.17–2.74)	0.008	**1.77** (1.33–2.36)	<0.001	1.59 (1.00–2.51)	0.049	**1.58** (1.16–2.12)	0.003
Experienced 2–3 acts	**5.59** (3.72–8.39)	<0.001	**4.14** (3.00–5.71)	<0.001	**5.46** (3.56–8.36)	<0.001	**3.97** (2.85–5.52)	<0.001
Sexual harassment in school past 12 months								
Not experienced	Ref		Ref		Ref		Ref	
Experienced 1 act	1.11 (0.69–1.78)	0.658	**1.74** (1.26–2.39)	0.001	1.18 (0.72–1.94)	0.517	**1.69** (1.21–2.35)	0.002
Experienced 2 acts	1.23 (0.69–2.19)	0.478	**3.81** (2.52–5.75)	<0.001	1.16 (0.68–2.33)	0.470	**4.03** (2.61–6.21)	<0.001
Experienced 3–5 acts	**5.59** (3.65–8.57)	<0.001	**4.70** (3.23–6.82)	<0.001	**5.60** (3.55–8.82)	<0.001	**4.68** (3.12–6.91)	<0.001

County of Västernorrland, Sweden, 2007

Significant odds ratios are indicated in bold

[a] Adjusted for academic orientation (vocational educational programme) and parental employment status (one or both parents not having a part-time or full-time job or running their own business)

explain the high prevalence of male experiences of sexual harassment.

As a means of understanding the reasons behind these gender patterns, a theoretical gender analysis is applied. For example, it appears that being a boy or a man implies a risk of victimisation as well as being a perpetrator of physical violence. These observations are supported by theories on the role of violence in constructions of 'hegemonic masculinity', i.e., norms of masculinity in which physical aggression and risk-taking are expected and young people encounter a reality in which male violent behaviour is used to demonstrate power and to maintain hierarchies in male groups and over girls (Connell 2002; Kenway and Fitzclarence 1997). Hence, if violence plays a role in being 'manly', it likely contributes to boys both exercising and experiencing physical violence to a greater extent than girls.

Girls were at risk of physical violence, bullying, sexual harassment, and, particularly, sexual assault. With reference to gender theory, sexualised violence can be seen as a

Table 4 Associations between category of perpetrator of physical violence during the past 12 months and psychological distress among 17-year-old students

	Unadjusted				Adjusted[a]			
	Boys		Girls		Boys		Girls	
	OR (CI)	*p*	OR (CI)	*p*	OR (CI)	*p*	OR (CI)	*p*
Not exposed	Ref		Ref		Ref			
Unknown person	**1.90** (1.21–2.99)	0.005	1.65 (0.79–3.44)	0.187	**1.89** (1.18–3.02)	0.008	2.18 (1.00–4.77)	0.051
Known person	1.65 (0.95–2.86)	0.074	**2.66** (1.49–4.74)	0.001	1.69 (0.96–2.96)	0.068	**2.53** (1.34–4.77)	0.004
Parent	n.a.		2.10 (0.97–4.58)	0.061	n.a.		1.86 (0.83–4.16)	0.130
Partner	n.a.		**3.58** (1.76–7.30)	<0.001	n.a.		**2.87** (1.38–6.00)	0.005
Other	0.86 (0.20–3.79)	0.860	**3.81** (1.88–7.73)	<0.001	1.12 (0.25–5.09)	0.882	**3.65** (1.79–7.43)	<0.001

County of Västernorrland, Sweden, 2007

Significant odds ratios are indicated in bold

n.a. = not applicable due to the low number of cases

[a] Adjusted for academic orientation (vocational educational programme) and parental employment status (one or both parents not having a part-time or full-time job or running their own business)

consequence of objectifying attitudes towards girls which communicates that girls' bodies and sexuality are objects for the pleasure of men (Fredrickson and Roberts 1997). Our findings also highlight the issue of dating/intimate partner violence; one-fifth of victimised girls reported the perpetrator to be her boyfriend. This gender difference supports prior research (Bennett and Fineran 1998), but is inconsistent with findings of equal rates of victimisation within a relationship (Molidor and Tolman 1998). Several researchers argue that intimate partner violence is considered a means of dominance and control within the relationship and that there is a cultural acceptance for a boy/man to use violence towards his girlfriend (Fredrickson and Roberts 1997). However, violence is not only perpetrated by men; reports of female perpetrators were rare but by no means absent. The sparse literature on violence and constructions of femininity suggest that violent girls are constructed as 'bad girls' crossing the boundaries of 'traditional' femininity (Laidler and Hunt 2001).

Psychological distress associations of experiencing violence

All four types of violence were associated with psychological distress in both girls and boys. The stronger detrimental mental health associations with physical violence in girls than in boys are consistent with Thompson et al. (2004) and Sundaram et al. (2004). One possible explanation could be that girls, to a high degree, were offended by someone with whom they had a close relationship, which has been found to be particularly negative for mental health (Lawyer et al. 2006). The public health relevance of physical violence is, indeed, central among boys as well, especially with respect to the high occurrence and the fact that the most frequently reported perpetrator of physical violence was a male. Drawing on work by Courtenay (2000) on masculinity and health, one can argue that ideals of a violent hegemonic masculinity contribute to psychological distress among boys; apart from the psychological distress related to the insult of victimisation in itself, boys might experience a stressful pressure to adjust to violent practices, possibly due to fear of homophobic bullying (Kenway and Fitzclarence 1997). Moreover, exercise of violence as practice of hegemonic masculinity also afflicts girls and likely their mental health.

The strong psychological distress association of sexual assault among boys confirms reports by Haavet et al. (2004) and highlights the need to acknowledge sexual assault as a potential risk factor for mental health problems among boys. Another interpretation is that experiences of sexual abuse impose particularly strong feelings of shame, and possibly poor mental health, among boys (Darves-Bornoz et al. 1998). One plausible explanation of the weaker association among girls is the high prevalence of psychological distress in the non-exposed group. These findings are interesting in light of previous evidence of more negative consequences of sexual abuse/harassment among girls than among boys (Gillander Gådin and Hammarström 2005; Hand and Sanchez 2000). However, an indication of such relationship was also found in our study; the association between sexual harassment and psychological distress was stronger for girls than boys. Similar relationships are found in previous research and have been suggested to be related to more severe experiences of sexual harassment among girls than boys (Gruber and Fineran 2008). A gender theoretical interpretation also acknowledges possible additional mental health effects because of girls' experiences of denigrating attitudes

towards women as well as their collectively subordinated position relative to boys and men (Fredrickson and Roberts 1997; Gruber and Fineran 2008).

The high rates of school-based bullying and sexual harassment as well as the associations with psychological distress confirm studies on younger adolescents (Gillander Gådin and Hammarström 2005; Gobina et al. 2008; Gruber and Fineran 2008; Nansel et al. 2004), and highlight the importance of a safe school environment even in upper secondary school settings. Previous research on younger teenagers shows a strong relationship between a positive school climate and low rates of bullying (Freeman et al. 2009). Our findings show possible divergent risks of psychological distress among boys and girls depending on the victim–perpetrator relationship of physical violence during the past 12 months. Among boys, the category 'unknown person' was significantly associated with psychological distress whereas the perpetrator being a known person revealed a significant odds ratio among girls. However, given the tendencies towards significance for 'known person' among boys and 'unknown person' among girls, we cannot clearly conclude on stable gender differences in psychological distress associations on the basis of whether the offender was known or unknown. A distinct gender pattern was, however, found regarding victimisation by a partner; the perpetrator being a partner (boyfriend) was more common among girls and was strongly associated with psychological distress. This adds to research suggesting that partner violence within heterosexual dating relationships is more negatively experienced by young females than males (Molidor and Tolman 1998). One previously addressed possible explanation is that girls/women experience more severe partner violence than boys/men (Edwards et al. 2009; Molidor and Tolman 1998). Drawing on gender theory, hierarchies in the gender order (i.e., girls being collectively subordinated to boys) should be taken into consideration, especially given the likeliness of more severe consequences if the target is subordinate to the offender (Banister et al. 2003). The perpetrator category 'other person' was strongly associated with psychological distress in girls only. We hypothesise, with reference to prior findings (Bennett and Fineran 1998), that this 'other person' might be an ex-partner or family member other than their parents. Unexpectedly, the perpetrator category 'parent' was not associated with psychological distress in girls. This is possibly a consequence of the relatively high prevalence of psychological distress among non-victimised girls.

Limitations and future research

The cross-sectional design limits the possibility of drawing conclusions about causal relationships. There is a possibility of reverse relationships; longitudinal findings indicate not only that victimisation is a risk factor for depression but also that depressed adolescents are at risk of being victims of bullying (Sweeting et al. 2006). The present study is based on a sample of predominately white 17-year-old students in a Swedish region, and the extent to which it can be generalised to other settings is unknown. We believe, however, that the findings can be generalised to students in upper secondary schools/senior high schools (late adolescence) in areas outside of the large city regions in Western countries. Based on existing findings of elevated levels of victimisation and mental health problems among school-dropouts (Edgardh and Ormstad 2000), our findings might indicate an underestimation of the experiences of violence as well as mental health problems in the general young population.

The measure of bullying did not include physical aggression, which limits the comparability with other studies on bullying. Moreover, there seems to be a fine line between bullying and sexual harassment; it has, for example, been noted that male bullying of girls is predominately sexual and that male to male homophobic name calling is considered bullying and not sexual harassment (Shute et al. 2008). This might be an explanation to the somewhat unexpected results on reports of bullying and sexual harassment among boys and girls.

The present study cannot provide information on possible bias due to under- or over reporting of experiences of violence. However, with reference to previous studies on the matter (Hartung et al. 2011), we have reasons to believe that girls and boys reported victimisation correctly.

We suggest future research and health-promotion interventions to acknowledge the contextual aspects of gender patterns in type of violence experienced, including a gender analysis. More research is needed on victim–perpetrator relationships of more types of violence as well as the location where the violence occurred. It is also important to explore the relationships between victimisation and other mental health symptoms, e.g., externalising problems. Future studies should also include school drop-outs.

Conclusion

Experiences of several types of violence are widespread, gendered and associated with psychological distress. These findings are important from a public health perspective in identifying factors associated with mental health problems among adolescents. An individual's relationship with the perpetrator of violence plausibly influences the association with psychological distress. Violence against girls in heterosexual relationships should be acknowledged as a public health issue. Gendered hierarchies and norms of masculinity are likely related to the extent to which adolescent

boys and girls experience violence and how they respond to it in terms of psychological distress. A gender analysis can contribute to the understanding of experiences of violence and the mental health implications of violence in adolescents.

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