

ORIGINAL ARTICLE



Transgender identity and experiences of sexual harassment in adolescence

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Abstract

Gender-diverse adolescents have reported excessive experiences of sexual harassment, but studies on this are few and suffer from methodological problems. Our aim was to compare experiences of sexual harassment between adolescents belonging to different gender-identity groups. A nationally representative cross-sectional survey of 127,210 adolescents aged 14–20 in Finland in 2017 was used. The respondents were pupils in the eighth and ninth grades of the compulsory nine-year comprehensive school with mean (sd) age of 14.83 (0.82) years and students in upper secondary school (age: mean (sd) 16.84 (0.83) years) and vocational school (17.29 (2.43) years). Cisgender, opposite sex-identifying and non-binary adolescents were compared. Self-reports of experiences of sexual harassment, emotional symptoms and externalising behaviours (bullying perpetration, frequent alcohol use, truancy, drug use) were elicited. The data were analysed using cross-tabulations and logistic regression. When confounders were controlled for, odds ratios were increased for gender harassment (OR 2.0), unwelcome sexual attention (OR 1.7) and sexual coercion (OR 2.0) among adolescents with non-binary gender identity, and for gender harassment (OR 2.1) among those identifying with the opposite sex. Subjection to sexual harassment is particularly associated with non-binary gender identity. This may reflect that others use sexual harassment as a form of control of gender-nonconforming self-expression.

KEYWORDS

adolescence, gender identity, sexual harassment, transgender

Key Practitioner Messages

- Gender-diverse adolescents appear to experience excessive subjection to sexual harassment but other factors than gender identity *per se* explain a good share of this.
- Programmes that reduce heteronormativity and promote acceptance of diversity will likely reduce sexual harassment targeted at gender-diverse adolescents. They are needed particularly in schools, which are an important environment for adolescents, but also in society at large.
- Transgender adolescents may need counselling to deconstruct internalised negative attitudes and risk for attribution bias.

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INTRODUCTION

Adolescent gender-diverse identity experience and gender non-conforming self-expression are currently increasingly apparent in Western societies (Marchiano, 2017; Kaltiala-Heino & Lindberg, 2019; Kaltiala et al., 2020) but gender-diverse adolescents have also been reported to face prejudice and discrimination disproportionately frequently (Almeida et al., 2009). Sexual harassment may be a form of such discrimination. In this study we explore the associations between transgender identity and experiences of sexual harassment among adolescents of different ages. We begin by introducing the central concepts related to sexual harassment and gender identity. We discuss sexual harassment as a mechanism for maintaining heteronormativity and the implications of this for gender-diverse youth. We discuss the existing evidence of the associations between gender diversity and subjection to sexual harassment and the weaknesses in the research so far available. This is what motivates our own study.

Sexual harassment

Sexual harassment refers to gender-based discrimination that creates a hostile environment and may seriously impair the victim's well-being and functioning or ability to participate, for example, at work or in school (Pina et al., 2009). From a public health perspective, sexual harassment can be seen as a form of aggressive behaviour that may be a traumatic experience for those subjected to it. Sexual harassment can be divided into gender harassment, unwelcome sexual attention and sexual coercion (Fitzgerald *et al.*, 1995). Gender harassment entails verbal and non-verbal gender-based hostile/derogatory communication or gender-related name-calling. Unwelcome sexual attention includes any sexual behaviour, propositions, invitations, etc. which are distasteful and unwelcome to the target and perceived to be insulting. Sexual coercion includes actual sexual assault but also behaviour that attempts to achieve sexual compliance by means of promises/benefits or threats (Fitzgerald *et al.*, 1995). In most studies, one- to two-thirds of adolescent students have reported subjection to sexual harassment; sexual harassment is therefore common, is also associated with a variety of negative psychosocial outcomes among adolescents (Bucchianeri et al., 2014; Kaltiala-Heino et al., 2016a) and appears to be more detrimental than other types of harassment to adolescent mental health (Bucchianeri et al., 2014). Adolescents' subjection to sexual harassment is therefore a significant problem, and research needs to explore the factors that predispose youth to subjection to sexual harassment in order to find ways to prevent this.

Identity and gender identity

Identity is the way one understands, describes and expresses oneself and how this is presented to others. Identity comprises many integrated aspects, such as gender, nationality, language, academic and occupational goals and also religious and political convictions. Identity is affected by interpersonal relationships, society and various events throughout the life course (Kroger, 2007). Adolescence is an important period of identity formation and integration (Kroger, 2007; Kroger et al., 2010). Adolescents and young adults establish their identities by actively exploring identity-related choices and making identity commitments in their chosen directions.

Gender identity refers to individuals' core sense of their gender. The development of gender identity is a complex process affected by multiple factors (Gray et al., 2012). Transgender identity refers to a variety of gender identities incongruent with one's natal sex (Zucker, 2017), such as identifying with the opposite sex, in between male and female, with both sexes, outside the male–female continuum or experiencing gender differently in different contexts. Transgender identities may be binary (male or female) or non-binary (somewhere on the male–female continuum, outside it or fluctuating). Cisgender, on the other hand, refers to individuals whose gender identity is congruent with their natal sex (APA Dictionary of Psychology, 2020).

Heterosexism and the status of gender-nonconforming youth

Heteronormativity is a discourse assuming that a binary division of genders into male and female is normal and natural, as are clearly defined norms for male and female self-expression and behaviour. Heteronormativity also presumes heterosexuality (Toomey et al., 2012). Heterosexism refers to a systematic process of privileging heterosexuality relative to other sexualities, based on heteronormativity. Privileging heterosexuality and discriminating against those not conforming to it comprises explicitly expressed prejudice and, beyond that, contextual processes that favour one group over

others, for example by reinforcing the invisibility of sexual and gender minorities or condoning not intervening in expressions of discrimination against minority groups or their victimisation (Toomey et al., 2012). Regulating gender expression has been suggested to be a critical component of heteronormativity and heterosexism (Toomey et al., 2012), and sexual harassment has been suggested to be a mechanism of such regulation (Pina et al., 2009). Adolescents commonly perpetrate aggression and compete for social dominance by using communications that refer scornfully to same-sex interest and gender-nonconforming self-expression (Poteat & Rivers, 2010; Toomey et al., 2012). Whether or not the target of such communications is assumed to belong to a sexual or gender minority, this implies negative attitudes towards gender-nonconforming appearance and behaviour and reinforces the heterosexual norm (Poteat & Rivers, 2010; Toomey et al., 2012). Even though the status of sexual and gender minorities has recently improved in many countries, heterosexism is widespread (Dunn & Szymanski, 2018), thus adolescents not conforming to gender norms may be more likely to suffer from sexual harassment than their heterosexual gender-conforming peers.

In line with the theory of heteronormativity and heterosexism, sexual minority (Alanko, 2014; Kaltiala-Heino et al., 2019) and gender minority (Alanko, 2014; Mitchell et al., 2014; Toomey et al., 2012; Ybarra et al., 2015) adolescents appear to suffer from sexual harassment more commonly than those belonging to cisgender, the heterosexual majority. Sexual minority (Kurki-Kangas et al., 2019; Ybarra et al., 2015) and gender minority (Ybarra et al., 2015) youth have also been found to report disproportionately frequent experiences of bullying, a considerable share of which is of a sexual nature (Ashbaug & Cornell, 2008) and may indirectly relate to gender and sexuality even when explicitly having unrelated content (Alanko, 2014; Lehtonen, 2003). A Spanish study reported that among transgender people, those disclosing their gender identity during adolescence experienced more harassment related to gender expression and sexuality than did those disclosing their gender identity only later (Devis-Devis et al., 2017). In a large college-based study of health disparities between gender identities (Lefevor et al., 2019), transgender students reported experiences of harassment, trauma and sexual assault about twice as frequently as did cisgender students. Students with non-binary identities further reported more of these negative events than binary transgender individuals. In an online survey focusing on LGBT youth well-being, about four-fifths of transgender-identifying adolescents reported subjection to harassment (Alanko, 2014). However, research suggesting associations between gender identity and subjection to sexual harassment in adolescence is scarce, not based on samples representative of general population (Alanko, 2014; Devis-Devis et al., 2017; Mitchell et al., 2014; Toomey et al., 2012; Ybarra et al., 2015), not always focused explicitly on sexual harassment (Alanko, 2014; Lefevor et al., 2019), not analysing gender minorities separately from sexual minorities (Hatchel et al., 2018; Kosciw et al., 2009) and mainly only from the United States. More knowledge is clearly needed about the topic.

Many factors may confound the associations between gender identity and subjection to sexual harassment

Sexual harassment experiences are unevenly distributed among males and females and across age groups (Kaltiala-Heino et al., 2016b). Gender minority youth display an excess of emotional disorders that may be both a consequence of distress related to gender identity and the gendered body, a predisposing factor for challenges in identity development or a reaction to a social environment perceived as hostile (Kaltiala-Heino et al., 2018). Sexual harassment is also associated with emotional disorders (Bucchianeri et al., 2014; Kaltiala-Heino et al., 2016a). Emotional disorders may be a consequence of traumatising experiences of sexual harassment, but they may also increase hostile attribution bias and therefore a tendency to interpret interactions as harassing, or to recall harassment. In order to study independent associations (main effects) between gender identity and experiences of sexual harassment, emotional disorders need to be controlled for in the analyses, as they may distort the observed associations. Both emotional disorders and subjection to sexual harassment are associated with family background, in terms of sociodemographics and characteristics related to the adolescent-parent relationship (Kaltiala-Heino et al., 2016b), which likewise need to be controlled for. Finally, victimisation and externalising (aggressive, rule-breaking) behaviours largely overlap in adolescence and this therefore needs to be accounted for (Jennings et al., 2012).

The present study

The aim of our study was to explore the associations between transgender identity (opposite sex identification and non-binary) and experiences of sexual harassment in a large, nationally representative data of 14–20-year-old adolescents in Finland. We hypothesised that:

- i. Transgender identity is associated with increased experiences of sexual harassment, and this will be seen across different types of sexual harassment.
- ii. The associations detected at the bivariate level will decline considerably when emotional disorders, family variables and externalising (perpetration of bullying, frequent alcohol use, truancy, drug use) behaviours are controlled for, indicating that the associations between transgender identity and experiences of sexual harassment are partially explained by these confounders.

METHODS

The school health promotion study

The School Health Promotion Study (SHPS) of the National Institute for Health and Welfare is a school-based cross-sectional anonymous survey designed to examine the health, health behaviours and school experiences of teenagers. The survey is sent to every municipality in Finland and the municipalities decide if the schools in their area will participate in the survey. The survey is run primarily for health policy and administrative purposes, with the main aim of producing national adolescent health indicators that municipalities can utilise in planning services and that can be used at a national level to assess the effectiveness of health policies. Researchers can apply for a permission to use the data for purposes of scientific research from the National Institute for Health and Welfare. The authors of the present study applied for and were granted such permission, and consequently the data, from the National Institute for Health and Welfare. The School Health Promotion Study has received ethical approval from Tampere University Hospital ethics committee and the ethics committee of the National Health Institute (decisions 98 944 and THL/1704/6.02.01/2016, respectively).

The survey is conducted among eighth and ninth graders of comprehensive school (age range 14–16 years) and second year students of upper secondary education (upper secondary school and vocational school) which follow completion of the nine years of comprehensive school (age range mainly 16–18 years). Survey participants in 2017 numbered 139,829. Of these, 48.9 per cent (68,333) reported that they were male and 50.4 per cent (70,539) that they were female. Of all respondents, 0.7 per cent (957) did not report their sex, and these were excluded from further analyses. Of the respondents, 52.7 per cent were in comprehensive school grades 8 or 9, 25.0 per cent were attending upper secondary school and 23.3 per cent vocational school. The mean (sd) age of respondents in the comprehensive school sample was 14.83 (0.82) years, of those in upper secondary school was 16.84 (0.83) years and of those in vocational school was 17.29 (2.43) years. Of the respondents, 2.1 per cent ($n = 4386$) reported that they were 21 years old or older. These were excluded from further analyses.

Measures

Sex and gender identity

The respondents were first asked ‘What is your sex?’, with response alternatives ‘boy’ and ‘girl’ in the comprehensive school survey, and ‘male’/‘female’ in the upper secondary education forms. This was intended to elicit the respondent’s sex as noted in their identity documents and was the opening question of the whole survey. Later, in the section of the survey addressing health, respondents were asked about their perceived gender as follows: ‘Do you perceive yourself to be ...’, with response options ‘a boy/a girl/both/none/my perception varies’. Based on these two questions we placed the respondents in one of the three gender identity groups used in the analyses: cisgender identity (indicated male sex and perceives himself as a boy, or female sex and perceives herself as a girl), opposite sex identification (male sex, perceives herself as a girl; or female sex, perceives himself as a boy), and other/non-binary gender identity (independent of sex: perceived to be both a boy and a girl, perceived to be neither a boy nor a girl, variable).

Sexual harassment

The adolescents were asked if during the past 12 months they had experienced any of the following: 1) disturbing sexual propositions or harassment at school, while doing hobbies, on the street, in shopping malls or other public spaces, or via telephone or the Internet; 2) bullying, name-calling or criticism that insulted their bodies or sexuality; 3) being touched in intimate parts of the body against their will; 4) being pressured or coerced into intercourse or other sexual activity; 5) being offered money, goods or drugs/alcohol in return for sexual favours. The response options to each

question were: yes, repeatedly/yes, sometimes/no. The five items were classified to gender harassment, unwelcome sexual attention and sexual coercion (Fitzgerald et al., 1995). Gender harassment was recorded if the respondents reported that they had repeatedly experienced sexual name-calling (question 2). Unwelcome sexual attention was recorded if the respondents reported that they had repeatedly experienced disturbing sexual propositions (question 1) or being touched in intimate parts of the body against their will (question 3). Sexual coercion was recorded if the respondents reported that they had repeatedly been pressured or coerced into giving sexual favours or offered payment for sexual favours (questions 4 and 5).

Internalising symptoms

Internalising symptoms studied were depression and generalised anxiety. Depression was measured with two screening questions: 'During the past month, have you often been bothered by feeling down, depressed, or hopeless?' (yes/no) and 'During the past month, have you often been bothered by little interest or pleasure in doing things?' (yes/no). These two questions have shown good psychometric properties in detecting depression in adolescents (Richardson et al., 2010). In the analyses, a sum score of these items was used as continuous variable. Generalised anxiety symptoms were elicited by the GAD-7, a self-report questionnaire designed to identify probable cases of generalised anxiety disorder and to assess symptom severity. The GAD-7 items describe the most prominent diagnostic features of the *DSM-IV* generalised anxiety disorder. The GAD-7 elicits how often, during the last two weeks, the respondent has been bothered by each of the seven core symptoms of generalised anxiety disorder. Response options are 'not at all', 'for several days', 'for more than half the days' and 'nearly every day', scored respectively as 1,2,3 and 4. The GAD-7 has been shown to be a reliable and valid measure for detecting generalised anxiety disorder in primary care and population (Tiirikainen et al., 2019). In the analyses, the sum score of these seven items was used as continuous variable.

Externalising behaviours controlled for were frequent perpetration of bullying, monthly truancy, frequent alcohol use and drug use at least once in the respondent's lifetime. Perpetration of bullying was elicited using a question derived from a World Health Organization study on youth health (King et al., 1996). After a short introduction (see King et al., 1996), respondents were asked how frequently they had bullied others during the ongoing school term: many times a week, about once a week, less frequently or not at all. In the analyses, responses to these questions were dichotomised to 'many times or about once a week' versus 'less frequently or not at all'. Truancy was elicited by asking how frequently respondents had skipped school without parental or school's permission: daily, weekly, monthly, a few times a year, never. In the analysis, responses were dichotomised to 'at least monthly' versus 'less than monthly'. Alcohol use was elicited as follows: 'How often do you use even small amounts of alcohol, for example half a can of beer or more?' with response alternatives 'once a week or more often/once or twice a month/about once a month/less frequently/not at all'. In the analyses the responses were dichotomised to once a week or more often (= frequently) versus all other alternatives. Finally, drug use was elicited listing several types of illegal drugs and asking how frequently a respondent had used these drugs: never, once, two to four times and five times or more. In the analysis, responses were dichotomised to 'have used some illegal drug at least sometimes' versus 'no drug use experience'. These variables represent both aggressive and rule-breaking aspects of externalising behaviours.

Family variables used were mother's and father's education (basic education, i.e. comprehensive school only vs. at least upper secondary education), family structure (living with both parents (= nuclear family) vs. any other family constellation), parental unemployment (none vs. at least one parent) and difficulties in parent-adolescent communication (never able to discuss important things with parents vs. can talk with parents at least sometimes).

Implausible, likely facetious responding

It has been demonstrated that some adolescents deliberately misrepresent themselves in survey studies, exaggerating their belonging to minorities as well as their problem behaviours, symptoms and psychosocial problems (Cornell et al., 2012; Robinson-Cimpian, 2014). Consequently, the proportion of those reporting belonging to minorities (such as disabled adolescents, immigrants, sexual minorities) appears implausibly high and associations between minority status and psychosocial problems are overestimated. In relation to gender identity, such overestimation may risk a perception in society that gender variant youth are victims rather than active subjects participating in building the contemporary adolescent community. Particularly in light of the excessive media coverage of gender identity issues (Marchiano, 2017), gender identity is likely to be a topic which tempts adolescents to give facetious responses.

Excluding respondents reporting highly unlikely combinations of extreme responses has been shown to be an appropriate method for controlling for facetious responding (Kaltiala-Heino & Lindberg, 2019; Robinson-Cimpian, 2014). In line with this, respondents reporting implausibly young age for being enrolled in the grades studied (<13 yrs), implausible shortness or height (extreme outliers) or who were calculated to have extreme BMI (< 10 or >40) or reporting *both* extremely poor hearing, sight *and* mobility were classified as mischievous responders (for a detailed description, see Kaltiala-Heino & Lindberg, 2019). Being classified as a mischievous respondent was strongly associated with reporting transgender identity in this data (Kaltiala-Heino & Lindberg, 2019). These respondents (2.7%) were excluded from further analyses. The data in the analysis was from 127,210 respondents, of whom 95.8 per cent were classified with cisgender identity, 0.6 per cent with opposite sex identification and 3.5 per cent with other/non-binary gender identity. Descriptive statistics of the variables are presented in Table 1.

TABLE 1 Descriptive statistics

Demographic variables	N (%)	M (SD)	Range
Sex (n = 123 997)			
Girl	63 409 (51.1%)		
Boy	60 588 (48.9%)		
Mother's education (n = 115 573)			
Only basic	6820 (5.9%)		
Other	108 753 (94.1%)		
Father's education (n = 113 496)			
Only basic	10 624 (9.4%)		
Other	102 872 (90.6%)		
Family structure (n = 121 014)			
Nuclear family	80 351 (66.4%)		
Other	40 663 (33.6%)		
At least one parent unemployed/laid off past 12 months (n = 120 075)			
Yes	37 431 (31.2%)		
No	82 644 (68.8%)		
Difficulties to communicate with parents (n = 120 016)			
Yes	8222 (6.9%)		
No	111 794 (93.1%)		
Drinking alcohol weekly (n = 122 393)			
Yes	8887 (7.3%)		
No	113 506 (92.7%)		
Bullying weekly (n = 123 629)			
Yes	2410 (1.9%)		
No	121 219 (98.1%)		
Depression (n = 122 923)		3.0 (1.5)	2–8
GAD7 (n = 121 557)		3.8 (4.6)	0–21
Age (n = 120 560)		16.3 (1.2)	14–20
Gender identity (n = 123 663)			
Cisgender	118 522 (95.8%)		
Opposite sex	790 (0.6%)		
Non-binary gender	4351 (3.5%)		
Sexual harassment (n = 120 174–124 546) ^a			
Gender harassment	10 549 (8.7%)		
Unwelcome sexual attention	20 971 (16.8%)		
Sexual coercion	4786 (4.0%)		

^aBased on three different variables, frequency of “yes” is reported from all of those.

Statistical analyses

Associations between gender identity and experiences of sexual harassment were first studied using cross-tabulations with chi-square statistics. Logistic regression was used to study multivariate associations. Gender identity was used as the independent variable, with cisgender as the reference category. Gender harassment, unwelcome sexual attention and sexual coercion were entered each in turn as the dependent variable. As covariates in the first model, age and sex were added; in the second model, family characteristics were added; and finally in the third model, internalising symptoms and externalising behaviours were added. Odds ratios (OR) with 95 per cent confidence intervals (95% CI) are given. Due to the large size of the data and in order to avoid bias related to multiple testing, we set the limit for statistical significance at $p < 0.001$.

RESULTS

Descriptive results

Recurring gender harassment was reported by 8.7 per cent of all participants, unwelcome sexual attention by 16.8 per cent and sexual coercion by 4.0 per cent (Table 1). All forms of sexual harassment were reported more commonly by adolescents with opposite sex and non-binary gender identity than by cisgender adolescents (Table 2).

Associations adjusted for confounding

The associations detected between gender identity and the three forms of sexual harassment all diminished when age and sex were controlled for (Table 3, Model 1) and weakened still further when family characteristics (Table 3, Model

TABLE 2 Experiences of sexual harassment according to gender identity, %

	Cis-gender	Opposite sex	Non-binary gender ^a	P-value
Gender harassment	8.0	22.1	24.7	< 0.001
Unwelcome sexual attention	16.1	25.3	35.1	< 0.001
Sexual coercion	3.5	9.0	12.6	< 0.001

^aThe differences between the two transgender groups were not statistically significant.

TABLE 3 Logistic regression model for sexual harassment, unwelcome sexual harassment and sexual coercion*

	Unadjusted model		Model 1		Model 2		Model 3	
	OR	95% CI	OR	95% CI	OR	95% CI	OR	95% CI
Gender harassment								
Cisgender	1		1		1		1	
Opposite gender	3.32	2.72–3.87	3.00	2.52–3.58	2.61	2.13–3.18	2.10	1.68–2.63
Non-binary gender	3.79	3.48–4.08	3.94	3.64–4.25	3.17	2.91–3.36	2.01	1.86–2.26
Unwelcome sexual attention								
Cisgender	1		1		1		1	
Opposite gender	1.79	1.47–2.12	1.50	1.26–1.78	1.30	1.07–1.57	1.13	0.92–1.40
Non-binary gender	2.82	2.58–3.02	3.16	3.95–3.40	2.71	2.50–2.94	1.79	1.65–1.96
Sexual coercion								
Cisgender	1		1		1		1	
Opposite gender	2.69	2.14–3.52	2.71	2.11–3.46	1.9	1.4–2.6	1.59	1.05–2.20
Non-binary gender	3.94	3.51–4.34	4.55	4.3–5.02	3.3	2.9–3.6	1.99	1.74–2.26

*Unadjusted: Sexual harassment, unwelcome sexual harassment, sexual coercion (unadjusted). Model 1: controlled for age and biological gender. Model 2: controlled for age, biological gender, family structure, mother's education, father's education, parental unemployment, able to discuss with parents. Model 3 controlled for age, biological gender, mother's education, father's education, parental unemployment, able to discuss with parents, drinking alcohol weekly, bullying weekly, monthly truancy, experiences of drug use, depression, GAD7. Statistically significant associations are bolded. Interpretation of statistical significance is based on confidential intervals, although p-values ($p < 0.001$) supported the interpretation. OR among opposite gender to sexual coercion is borderline based on 95% CI and nonsignificant based on p-value ($p > 0.001$) and therefore it is interpreted as nonsignificant.

2) and internalising symptoms and externalising behaviours (Table 3, Model 3) were added. Thus, the associations first seen were partially explained by these confounders, particularly by externalising behaviour (see OR's of all independent variables in Appendix). In the final models, those identifying with the opposite gender, however, differed statistically significantly (95% CI) from the cisgender group in experiences of gender harassment (OR 2.10) and sexual coercion, and among those with non-binary gender identity, increased odds ratios were seen for gender harassment (OR 2.01), unwelcome sexual attention (OR 1.79) and sexual coercion (OR 1.99) (Table 3, Model 3).

DISCUSSION

In our uniquely large adolescent population sample, experiences of subjection to sexual harassment were more commonly reported by those identifying with the opposite sex and those with non-binary gender identity than among cisgender youth. This is in line with earlier reports on transgender identity and experiences of subjection to sexual harassment (Devis-Devis et al., 2017; Lefevor et al., 2019; Mitchell et al., 2014; Toomey et al., 2012; Ybarra et al., 2015). When confounding factors that correlate with both subjection to sexual harassment and transgender identity per se were controlled for, the 1.79–3.94-fold increased odds ratios for the various sexual harassment experiences among opposite-sex identifying and non-binary adolescents in the unadjusted models decreased to 1.79–2.10-fold as compared to cisgender respondents, but most of the associations nevertheless persisted as statistically significant.

The novel contributions of the present study were that we explored the associations between gender identities and subjection to sexual harassment in a nationally representative adolescent population sample, did not combine gender minorities with sexual minorities, controlled for appropriate confounding and were able to distinguish between opposite sex identification and non-binary gender identities. Gender identity issues are associated with mental health problems (Kaltiala-Heino et al., 2018), as is subjection to sexual harassment (Kaltiala-Heino et al., 2016a). The confounding factors studied, particularly the emotional and behavioural disorders, partially explained the associations between transgender identities and sexual harassment experiences but did mainly not level them out.

In line with the findings by Lefevor et al. (2019), reporting subjection to sexual harassment was most consistently associated with non-binary gender identity. Even if gender harassment was similarly associated with both opposite sex and non-binary identification, odds ratios for unwelcome attention and sexual coercion were increased among those reporting non-binary gender identity but not among those reporting opposite sex compared to their cisgender identifying peers. Gender-nonconforming behaviour and physical appearance may attract attention and make gender minority youth easy targets for discrimination and peer aggression (Berlan et al., 2010; Toomey et al., 2012). Sexual harassment targeted at gender-nonconforming youth may serve as regulating gender expression, which has been suggested as a critical component of heteronormativity and heterosexism (Pina et al., 2009; Toomey et al., 2012). Non-binary identifying youth may be perceived as particularly infringing heteronormativity and this may provoke aggression more than opposite sex identification, which remains binary. However, as the study was based on cross-sectional data, causality cannot be concluded. Gender minority youth may also be more sensitive to social cues related to gender and sexuality than cisgender and thus pay attention to and report more episodes as sexually harassing than cis-gender youth, who perhaps do not perceive similar interactions as harassment. Minority stress (Lefevor et al., 2019) could contribute to such sensitivity through internalised heterosexism and anticipation of discrimination. Adolescents are particularly sensitive to how they meet societal expectations and societal expectations regarding conforming to gender roles likely pose particular developmental challenges for gender minority adolescents (Lefevor et al., 2019; Toomey et al., 2012). Opposite-sex identifying adolescents may perceive themselves as meeting heteronormative expectations better than non-binary youth. Therefore, non-binary youth may experience greater minority stress and be more sensitive to recording sexual harassment.

Implications for interventions

Subjection to sexual harassment is associated with a number of negative consequences such as fear and avoidant behaviours and also emotional and behavioural symptoms (Bucchianeri et al., 2014; Kaltiala-Heino et al., 2016a). Tackling sexual harassment thus likely offers approaches for promoting adolescent mental health and preventing the onset of disorders. Our findings suggest that young people belonging to gender minorities, particularly those whose identity is non-binary, are a group especially vulnerable to subjection to sexual harassment. Reducing sexual harassment requires action at societal, environmental and individual levels (macro, meso and micro levels, respectively). At the societal level, health policies need to target the negative impact of heterosexism. At community level, schools are an important target of intervention. As is the case regarding sexual minority youth (Kashubeck-West et al., 2008), interventions addressing the school atmosphere and promoting the inclusion of gender minority youth are needed. Increasing the school personnel's awareness of heterosexism may well bring about a change in the

climate at school and a reduction of harassing interactions. Establishing activities that reduce prejudice and promote sexual and gender equality in schools, for example Gay-Straight alliances, can both reduce sexually harassing behaviours towards gender as well as sexual minority youth and offer them empowerment and effective coping (Kashubeck-West et al., 2008; Taavetti et al., 2015; Wormington et al., 2016). This may reduce minority stress. In order to target prejudice and harassment in society at large, similar approaches promoting gender equality and inclusion among the adult population are likewise needed (Taavetti et al., 2015). When adolescents perpetrating sexual harassment are identified, schools and families need to work together to support a change towards respective attitudes and behaviour. On the other hand, it is also important to identify those groups of adolescents at greatest risk of becoming targets of sexual harassment in order to offer adequate support and promote coping and self-protecting skills. At the individual level, learning effective coping skills and deconstructing internalised heterosexism will likely alleviate minority stress and improve well-being by both increasing self-acceptance and relieving excessive vigilance and disproportionate expectations of discrimination (Dunn & Szymanski, 2018; Kashubeck-West et al., 2008). To a certain extent, it is of course an appropriate coping mechanism for minority members to be vigilant. Further, given the strong role of emotional and behavioural disorders in the association between gender identity and experiences of sexual harassment, interventions should also focus on identifying and treating mental health problems in gender minority youth.

Methodological considerations

A strength of our study is its uniquely large, nationally representative population data comprising subjects across middle and late adolescence. A major limitation is the cross-sectional design that does not allow conclusions on causality.

We focused on recurring experiences of subjection to sexual harassment and thus understandably found a smaller prevalence than reported in most of the studies focusing on any experiences of sexual harassment in a given time frame (Bucchianeri et al., 2014; Kaltiala-Heino et al., 2016b) and also a smaller prevalence than has been reported in earlier SHPS samples (Kaltiala-Heino et al., 2016a, 2016b). The smaller prevalence may also be due to ‘framing’: the effect of the context in which experiences of sexual harassment are elicited affects how they are reported (Kaltiala-Heino et al., 2016a, 2016b). In the present data, questions related to sexual harassment were placed in a section focusing on delinquency and crime, whereas earlier they were placed among questions on sexual health. However, comparisons between identical questions from the 2013 and 2015 rounds of the SHPS study also suggest that adolescents’ subjection to sexual harassment may indeed be diminishing in Finland (National Institute for Health and Welfare, 2020).

As has been recommended (Eisenberg et al., 2017; Reisner et al., 2014), we used a two-step approach to identify subjects with different gender identities, eliciting sex and gender perception separately. Eliciting sex was the opening question of the whole survey, while perceived gender was elicited in the section on health after eliciting perceived health, height and weight. The possibility that some respondents identifying strongly with the opposite sex already reported perceived gender rather than natal sex in the first step cannot be controlled for, as has been the case in earlier studies of this kind (Eisenberg et al., 2017). This is a limitation inherent in the anonymous survey method and a limitation in the present study. Most likely the respondents understood that the first question (What is your sex?) referred to sex as noted in identity documents, as this is common practice in any official documents and forms in Finland.

Excluding implausible and potentially facetious responding is a strength of the present study. It is of course possible that some facetious responders were still included in the analyses thus possibly distorting the findings. Likely implausible responding particularly influenced the prevalence of other/non-binary gender identification (Kaltiala-Heino & Lindberg, 2019), thus the possible bias can be assumed to be most influential regarding findings on youth with other/non-binary gender identity.

A limitation is that our data did not include adolescents not in mainstream education. Adolescents in Finland participate in compulsory education up to the age of 16, but of those aged 17–24, about 8 per cent are outside education (have not completed and are currently not in upper secondary or higher education) (Hyvinvointikompassi, 2020).

According to theories of identity development (Kroger, 2007; Kroger et al., 2010), those outside education could be assumed to display identity diffusion more commonly than their peers, who are integrated into age-appropriate commitments, but we are not aware of studies focusing on gender identity among them.

Sexual harassment may overlap with both child sexual abuse (Stoltenborgh et al., 2011) and bullying of a sexual nature (Ashbaug & Cornell, 2008). Future research on these topics may further increase the understanding of sexual harassment among gender minority youth. Gender-nonconforming behaviour, likely common among gender minority youth, has been associated with increased risk of both child sexual abuse (Xu & Zheng, 2017) and being bullied (Friedman et al., 2006).

CONCLUSION

Excessive experiences of subjection to sexual harassment among transgender adolescents are partially explained by confounding family-related and mental health factors and not exclusively by gender identity per se. Opposite sex identification, however, is associated in general adolescent population with increased experiences of gender harassment and non-binary gender identity with both gender harassment, unwelcome sexual attention and sexual coercion. Adolescents with non-binary gender identity may particularly challenge heteronormativity. Health policies need to tackle heteronormativity at cultural and environmental levels.

CONFLICT OF INTEREST

The authors report no conflict of interest.

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APPENDIX

Logistic regression model for sexual harassment with all estimates

	Unadjusted		Model 1		Model 2		Model 3	
	OR	95% CI	OR	95% CI	OR	95% CI	OR	95% CI
<i>Gender identity</i>								
Cis	1		1		1		1	
Opposite	3.3	2.7–3.9	3.0	2.5–3.6	2.6	2.1–3.2	2.1	1.7–2.6
Non-binary	3.8	3.5–4.1	3.9	3.6–4.3	3.2	2.9–3.4	2.0	1.9–2.3
<i>Biological gender</i>								
Male			1		1		1	
Female			2.2	2.1–2.3	2.2	2.1–2.3	1.6	1.5–1.7
<i>Age</i>								
			0.9	0.9–0.9	0.9	0.9–0.9	0.8	0.8–0.9
<i>Family structure</i>								
Nuclear family					1		1	
Other structure					1.3	1.2–1.3	1.1	1.1–1.2
<i>Mother's education</i>								
Basic education					1		1	
at least upper secondary					1.2	1.1–1.3	1.2	1.1–1.3
<i>Father's education</i>								
Basic education					1		1	
at least upper secondary					1.0	1.0–1.1	1.0	0.9–1.1
<i>Parental unemployment</i>								
None					1		1	
At least one parent					1.4	1.4–1.5	1.3	1.2–1.3
<i>Able to discuss with parents</i>								
At least sometimes					1		1	
Never					2.6	2.5–2.8	1.5	1.4–1.7
<i>Drinking alcohol weekly</i>								
No							1	
Yes							1.2	1.1–1.3
<i>Drug use</i>								
Never							1	
At least once							1.7	1.6–1.8
<i>Bullying weekly</i>								
No							1	
Yes							3.1	2.7–3.5
<i>Monthly truancy</i>								
No							1	
Yes							1.2	1.2–1.3
<i>Depression</i>								
							1.1	1.1–1.1
<i>Gad7</i>								
							1.1	1.1–1.1

Logistic regression model for unwelcome sexual attention with all estimates

	Unadjusted		Model 1		Model 2		Model 3	
	OR	95% CI	OR	95% CI	OR	95% CI	OR	95% CI
<i>Gender identity</i>								
Cis	1		1		1		1	
Opposite	1.8	1.5–2.1	1.5	1.3–1.8	1.3	1.1–1.6	1.1	0.9–1.4
Non-binary	2.8	2.6–3.0	3.2	3.0–3.4	2.7	2.5–2.9	1.8	1.6–2.0
<i>Biological gender</i>								
Male			1		1		1	
Female			5.1	4.9–5.3	5.3	5.1–5.5	5.0	4.7–5.2
<i>Age</i>			1.1	1.0–1.1	1.1	1.0–1.1	1.0	1.0–1.0
<i>Family structure</i>								
Nuclear family					1		1	
Other structure					1.4	1.3–1.4	1.2	1.2–1.2
<i>Mother's education</i>								
Basic education					1		1	
At least upper secondary					1.1	1.1–1.2	1.1	1.0–1.2
<i>Father's education</i>								
Basic education					1		1	
At least upper secondary					1.0	1.0–1.1	1.0	0.9–1.2
<i>Parental unemployment</i>								
None					1		1	
At least one parent					1.3	1.3–1.4	1.2	1.1–1.2
<i>Able to discuss with parents</i>								
At least sometimes					1		1	
Never					2.2	2.1–2.4	1.4	1.3–1.5
<i>Drinking alcohol weekly</i>								
No							1	
Yes							1.6	1.5–1.7
<i>Drug use</i>								
Never							1	
At least once							2.5	2.3–2.6
<i>Bullying weekly</i>								
No							1	
Yes							3.6	3.2–4.1
<i>Monthly truancy</i>								
No							1	
Yes							1.4	1.3–1.5
<i>Depression</i>							1.1	1.1–1.1
<i>GAD7</i>							1.1	1.1–1.1

Logistic regression model for sexual coercion with all estimates

	Unadjusted		Model 1		Model 2		Model 3	
	OR	95% CI	OR	95% CI	OR	95% CI	OR	95% CI
<i>Gender identity</i>								
Cis	1		1		1		1	
Opposite	2.7	2.1	2.7	2.1–3.5	1.9	1.4–2.6	1.6	1.1–2.2
Non-binary	3.9	3.5–4.3	4.6	4.1–5.0	3.3	2.9–3.6	2.0	1.8–2.3
<i>Biological gender</i>								
Male			1		1		1	
Female			2.5	2.4–2.7	2.8	2.6–3.0	2.8	2.5–3.0
<i>Age</i>								
			1.1	1.1–1.1	1.1	1.0–1.1	1.0	1.0–1.0
<i>Family structure</i>								
Nuclear family					1		1	
Other structure					1.5	1.4–1.6	1.2	1.2–1.3
<i>Mother's education</i>								
Basic education					1		1	
at least upper secondary					1.6	1.4–1.8	1.5	1.3–1.8
<i>Father's education</i>								
Basic education					1		1	
at least upper secondary					1.1	1.0–1.2	1.0	0.9–1.1
<i>Parental unemployment</i>								
None					1		1	
At least one parent					1.3	1.2–1.4	1.1	1.0–1.2
<i>Able to discuss with parents</i>								
At least sometimes					1		1	
Never					3.1	2.8–3.4	1.8	1.7–2.0
<i>Drinking alcohol weekly</i>								
No							1	
Yes							1.9	1.7–2.1
<i>Drug use</i>								
Never							1	
At least once							3.9	3.6–4.2
<i>Bullying weekly</i>								
No							1	
Yes							4.1	3.4–4.8
<i>Monthly truancy</i>								
No							1	
Yes							1.4	1.3–1.6
<i>Depression</i>								
GAD7							1.1	1.1–1.1