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OVERLAPPING CORRELATES OF BEING SUBJECTED TO AND PERPETRATION OF ADOLESCENT DATING VIOLENCE

ABSTRACT

Adolescent dating violence (ADV) refers to intimate partner violence (IPV) among adolescents. Research suggests that it may be even more common than among adults, correlates with numerous negative mental health and psychosocial indicators and is predictive of IPV in adulthood. This study set out to explore factors related to family background, mental health, peer relationships, sexual experiences and self-esteem as correlates of ADV victimization and perpetration among 1,386 9th graders who responded in the survey study, Adolescent Mental Health Cohort and Replication Study (AMHC) in 2018. While when studied one by one, variables from all these domains were associated with ADV victimization and perpetration, in final multivariate models independent associations were detected in advanced sexual experiences and experiences of being subjected to sexual harassment. Parental involvement in adolescents' lives was further inversely associated with ADV perpetration. Our findings suggst that to prevent ADV, sexuality education and promotion of parental involvement during adolescent years may be beneficial.

KEYWORDS: DATING VIOLENCE, ADOLESCENCE

INTRODUCTION

Adolescent dating violence (ADV) refers to intimate partner violence among adolescents (1). Evidence suggests that ADV has increased over time and is now considered a global issue, potentially even more prevalent than intimate partner violence among adults (2). A systematic review of 25 cross-sectional and nine cohort studies found that dating violence in adolescence also predicts intimate partner violence in adulthood (3).

ADV encompasses psychological, physical and sexual harm within a romantic relationship. Psychological violence includes manipulation, while physical violence may involve actions such as hitting, pushing and kicking. Sexual violence refers to forcing a partner into various non-consensual sexual acts, ranging from unwanted touching to rape (2,3).

Estimates of ADV prevalence, both in terms of being subjected to and perpetration, vary across studies. Dosil et al. (2) conducted a cross-sectional study on Spanish adolescents aged 12–17 and found that ADV is most common among those aged 15–17. Their findings indicated that dating violence included physical, verbal-emotional and relational abuse. The annual prevalence of victimization was 36.2%, while perpetration was reported at 29%. Similarly, Miller et al. (1) reviewed studies on ADV and concluded that while it occurs in early adolescence, its prevalence increases with age, peaking at 18–22 years. Based on Youth Risk Behavior Surveys from 2013 and 2015 in the USA, they estimated the annual prevalence of physical and sexual ADV victimization to be approximately 20% among females and 10% among males. A Canadian study that included psychological violence and threats found that 63% of girls and 50% of boys had experienced ADV in the past 12 months (4).

Studies indicate that girls are disproportionately subjected to ADV (1–4). Female victims also often endure more severe psychological, psychosocial and physical consequences. Research on sex differences in ADV perpetration remains inconclusive (2).

Several factors correlate with ADV victimization, including low self-esteem, social difficulties, substance use, unprotected sex, risky sexual behaviour, increased suicide risk, physical injury and low stress tolerance (2,3,5). Among mental health

concerns, ADV victimization has been linked to depression, anxiety, antisocial behaviour and other psychiatric disorders. The severity of violence tends to correlate with an increased likelihood of multiple psychiatric conditions. Moreover, the association between ADV victimization and mental health problems varies by age, typically decreasing over time (3). Additionally, cultural inequality correlates with higher rates of ADV victimization among girls (5). Factors such as family and neighbourhood violence, childhood abuse and insecurity at school are associated with both ADV victimization and perpetration (3).

ADV perpetration has been linked to sexist attitudes, low stress tolerance, low self-esteem, social stress and social anxiety (2). Among males, factors that increase the risk of ADV perpetration include experiences of being subjected to physical violence, involvement in bullying (both as a victim and perpetrator), childhood trauma (physical or mental), childhood sexual abuse, alcohol-related problems and poor conflict resolution skills (5).

Prior studies suggest that the correlates of ADV victimization and perpetration overlap to some extent, implying that individuals subjected to ADV may also engage in perpetration. Some individuals may enter relationships characterized by mutual ADV. Taquette & Monteiro (3) noted that reciprocal violence between both partners is the most common form of ADV, further supporting the idea of victimization and perpetration overlap. Research has also demonstrated that gender inequality influences ADV patterns, with girls more frequently experiencing victimization in unequal societies (5). Consequently, boys in these societies are more likely to perpetrate ADV. The dynamics of ADV may differ in gender-equal countries, such as the Nordic nations, where victimization and perpetration may more commonly affect the same individuals.

Given these considerations, we aim to explore the following research questions:

1. What family, peer relationship, sexual and mental health-related factors are associated with ADV victimization?
2. What family, peer relationship, sexual and mental health-related factors are associated with ADV perpetration?
3. To what extent do the correlates of ADV victimization and perpetration overlap?

MATERIALS AND METHODS

This study utilizes data from the 2018 Adolescent Mental Health Cohort and Replication Study (AMHC), a mental health survey conducted among 9th graders in comprehensive schools (15–16-year-olds). The person-identifiable questionnaires were completed in classrooms under the supervision of teachers who ensured a peaceful and private environment without interfering with responses. The survey has been conducted during the academic years 2002–03, 2012–13 and 2018–19 (6). In 2018–19, the questionnaire was conducted online. Participation in the study was voluntary, and both adolescents and their parents were informed about its voluntary nature verbally and in writing.

The study included 1,386 participants in Tampere in the academic year 2018–19, with 710 boys and 676 girls. The average age of respondents was 15.5 years (SD 0.39). Some adolescents skipped questions related to dating violence. The analysable sample regarding being subjected to dating violence consisted of 1,246 participants, while the sample for perpetration of dating violence included 1,238 participants.

The AMHC study explored common behavioural problems (e.g. drinking, bullying), subjective health and prevalent mental health issues (e.g. depression, social anxiety, eating disorders). Ethics approval was granted by Tampere University Hospital's ethics committee, and appropriate administrative permissions for data collection were obtained from the City of Tampere.

MEASURES

ADV victimization and perpetration. The respondents were asked "Have you ever been subjected to violent behaviour (such as hitting, punching, hair-pulling or similar) by a date or steady partner?" and "Have you ever acted violently (for example by hitting, punching, hair-pulling or similar) towards a date or a steady partner?" both with response alternatives "yes" and "no".

Family Variables. Sociodemographic factors and the relationship between adolescents and their parents were analysed. The sociodemographic variables included the following:

- Low maternal education (primary school only)
- Low paternal education (primary school only)
- Parental unemployment (one or both parents during the past year)
- Not living with both parents

A sum variable (Adverse SES) was created, scoring 1–4, with higher values indicating an accumulation of sociodemographic risk factors.

Parents' involvement in their adolescent's life was assessed using three questions, which formed a sum variable of protective factors (scoring 0–3):

- Parents knowing the adolescent's friends
- Parents knowing where the adolescent spends weekend evenings
- Adolescents being able to discuss important topics with their parents

Family social support was measured using the family-related items of the Perceived Social Support Scale–Revised (PSSS-R), a widely used tool for assessing family support (7,8). The PSSS-R includes 12 items covering support from family, friends and others, with responses scored on a 1–4 scale (1=almost never, 4=almost always). The four items of the family scale comprise a sum ranging from 4-12, with higher scores reflecting higher perceived support.

Peer Relationship Variables. Peer relationships were assessed through adolescents' perceived peer rejection and the friends-related items of the PSSS-R. The perceived peer rejection sum variable (scoring 0–3) included the following criteria:

- Lack of friends
- Being bullied during the current semester
- Being excluded from the circle of friends

The sum score of the peer support factor from PSSS-R ranges from 4-12, with higher scores reflecting higher perceived support.

Self-Esteem. Self-esteem was measured using the Rosenberg Self-Esteem Scale (RSES), a globally recognized tool consisting of 10 items scored on a scale of 1–4. While there is no universally defined cut-off for low self-esteem, earlier Finnish research has used a threshold of 25 for distinguishing low from normative self-esteem (9). This study treated RSES scores as a continuous variable, with higher scores reflecting better self-esteem.

Sexuality Variables. Sexuality-related variables included advanced sexual experiences and experiences of sexual harassment. Advanced sexual experiences were represented by a sum score (0–4) derived from endorsing the following experiences: kissing, caressing over clothes, caressing under clothes, sexual intercourse (10). Sexual harassment was measured using a sum variable (0–5), encompassing experiences such as sexual name-calling, unwanted sexual proposals, unwanted touching, coercion or pressure into sexual acts and offers of payment for sex (11).

Mental health variables. Mental health measures included depression, social anxiety, delinquency and aggressive behaviour, all used in the analyses as continuous measures.

- Depression was assessed using a Finnish modification of the short-form (13-item) Beck Depression Inventory (R-BDI). The tool is known for its reliability and includes response options ranging from positive/neutral (scored as 0) to severe (scored 1–3) (12)
- Social Anxiety was measured using the Mini-SPIN, a three-item abbreviated version of the Social Phobia Inventory (SPIN). Responses are scored 0–3, with total scores ranging 0–9 (13)
- Delinquency was defined using the Youth Self-Report (YSR) delinquency scale ((14), which consists of 11 statements scored 0–2 (never/sometimes/often), resulting in a sum score ranging 0–22
- Aggression was evaluated using the YSR aggression scale (14), comprising 17 statements scored 0–2 (never/sometimes/often), with a sum score ranging 0–34

Honesty of Responding. Prior research indicates that some adolescents exaggerate or provide untruthful responses about problem behaviours, symptoms and psychosocial issues (15–17). To mitigate this issue, participants were asked to indicate their sincerity in responding to the survey (yes/no/unsure).

STATISTICAL ANALYSES

Logistic regression analyses were performed to examine ADV victimization and perpetration as dependent variables. The independent variables included family, peer, self-esteem, sexuality and mental health factors, all treated as continuous variables.

First, the relationship of each independent variable with ADV victimization and perpetration was assessed individually. Next, relationships were analysed by grouping variables into the following blocks:

- Family variables: Sociodemographic factors, parental relationships and PSSS-R (parents)
- Peer variables: Exclusion from peer circles and PSSS-R (friends)
- Self-esteem: Measured using the Rosenberg Self-Esteem Scale
- Sexuality variables: Advanced sexual experiences and experiences of sexual harassment
- Mental health variables: Depression, social anxiety, delinquency and aggression

Finally, variables with statistically significant associations in each category were combined into a single model. Age, sex and honesty were controlled for in every model. Odds Ratios (OR) and their 95% confidence intervals (95% CI) are reported.

A p-value of less than 0.01 was considered the threshold for statistical significance.

RESULTS

Of the respondents, 3.9% reported experiences of being subjected to dating violence and 2.8% reported perpetration of dating violence. Being subjected to dating violence was reported by 2.9% of the girls and 4.8% of the boys (p=0.01), perpetration by 1.8% of the girls and 3.8% of the boys (p=0.02).

When each variable was entered individually in Model 1, a statistically significant positive association was observed between having been subjected to dating violence and adverse SES, advanced sexual experiences, experiences of sexual harassment, depression, delinquency and aggression. Inverse associations were identified between having been subjected to ADV and parental involvement, PSSS-R (family), PSSS-R (friends) and self-esteem. No associations were found between having been subjected to ADV and peer rejection or social anxiety (*Table 1*, Model 1). Perpetration of dating violence was positively associated with adverse SES, advanced sexual experiences, experiences of sexual harassment, depression, delinquency, social anxiety and aggression. Inverse associations were observed between perpetration of ADV and parental involvement, PSSS-R (family), PSSS-R (friends) and self-esteem. Peer rejection was not associated with perpetration of dating violence (*Table 2*, Model 1). Thus, common variables statistically significantly associated with both being subjected to and perpetration of dating violence included adverse SES, parental involvement, PSSS-R (family), PSSS-R (friends), self-esteem, sexual experiences, sexual harassment, depression, delinquency and aggression.

In Model 2, variables in each block were entered simultaneously. Statistically significant associations were found between having been subjected to dating violence and adverse SES, both sexuality variables, depression and delinquency, while other associations identified in Model 1 were diminished (*Table 1*, Model 2). Perpetration of dating violence was statistically significantly inversely related to parental involvement and positively associated with sexuality variables, with other associations from Model 1 levelled out (*Table 2*, Model 2). Variables statistically significantly associated with both being subjected to and perpetration of dating violence in Model 2 were advanced sexual experiences and experiences of sexual harassment.

In the final models (Model 3), variables identified as statistically significant in Model 2 were entered all simultaneously as explaining variables. Having been subjected to dating violence was statistically significantly related to advanced sexual experiences and experiences of sexual harassment (*Table 1*, Model 3). Perpetration of dating violence was borderline significantly inversely associated with parental involvement and positively associated with experiences of sexual harassment; additionally, a positive association with advanced sexual experiences approached statistical significance (*Table 2*, Model 3). Thus, variables associated with both being subjected to and perpetration of dating violence were advanced sexual experiences and experiences of sexual harassment. Additionally, parental involvement was statistically significantly inversely associated with perpetration of ADV, but not with having been subjected to it.

Table 1. Associations between being subjected to dating violence and family, peer, self-esteem, sexuality and mental health variables (OR, 95% CI). All analyses are controlled for age, sex and honesty of responding. Associations statistically significant at level p<0.01 are highlighted in bold.

	Model 1. Variables in each block entered one by one			Model 2. Variables in a block entered simultaneously			Model 3. Variables statistically significant in Model 2 entered simultaneously		
	OR	**95% CI**	**p-value**	**OR**	**95% CI**	**p-value**	**OR**	**95% CI**	**p-value**
Block 1. Family variables									
Adverse SES	**1,90**	**1,4-2,58**	**<0.001**	**1,70**	**1,23-2,35**	**0,001**	1,43	0,95-2,14	0,086
Parental involvement	**0,71**	**0,61-0,83**	**<0,001**	0,82	0,67-1,01	0,06			
PSSS-R family	**0,87**	**0,82-0,93**	**<0,001**	0,93	0,86-1,01	0,086			
Block 2. Peer relationships									
Peer rejection	1,76	1,13-2,73	0,013	1,63	0,95-2,8	0,077			
PSSS-R friends	**0,92**	**0,86-0,98**	**0,007**	0,95	0,88-1,02	0,14			
Block 3. Self-esteem									
Rosenberg self-esteem scale	**0,92**	**0,88-0,96**	**<0,001**				0,98	0,92-1,05	0,61
Block 4. Sexuality									
Advanced sexual experiences	**2,10**	**1,69-2,61**	**<0,001**	**1,85**	**1,47-2,32**	**<0,001**	**1,64**	**1,28-2,10**	**<0,001**
Sexual harassment experiences	**2,66**	**2,13-3,33**	**<0,001**	**2,45**	**1,93-3,12**	**<0,001**	**2,16**	**1,66-2,82**	**<0,001**
Block 5. Mental health									
Depression	**1,12**	**1,08-1,16**	**<0,001**	**1,07**	**1,02-1,13**	**0,005**	1,02	0,96-1,09	0,50
Social anxiety	1,12	1,02-1,23	0,018	0,99	0,88-1,11	0,80			
Delinquency	**1,36**	**1,24-1,49**	**<0,001**	1,21	1,10-1,39	**0,006**	1,08	0,96-1,22	0,20
Aggression	**1,15**	**1,10-1,21**	**<0,001**	1,04	0,97-1,12	0,30			

Note: SES = socioeconomic risk factors sum variable, PSSS-R = percieved social support scale - revised

Table 2. Associations between perpetration of dating violence and family, peer, self-esteem, sexuality and mental health variables (OR, 95% CI). All analyses are controlled for age, sex and honesty of responding. Associations statistically significant at level p<0.01 are highlighted in bold.

	Model 1. Variables in each block entered one by one			**Model 2. Variables in a block entered simultaneously**			**Model 3. Variables statistically significant in Model 2 entered simultaneously**		
	OR	**95% CI**	**p-value**	**OR**	**95% CI**	**p-value**	**OR**	**95% CI**	**p-value**
Block 1. Family variables									
Adverse SES	**1,91**	**1,33-2,73**	**<0,001**	1,65	1,12-2,43	0,012	1,40	0,9-2,19	0,14
Parental involvement	**0,65**	**0,54-0,77**	**<0,001**	**0,72**	**0,57-0,91**	**0,006**	0,77	0,62-0,96	0,018
PSSS-R family	**0,86**	**0,8-0,92**	**<0,001**	0,95	0,86-1,04	0,23			
Block 2. Peer relationships									
Peer rejection	1,34	0,75-2,38	0,33	1,05	0,51-2,14	0,89			
PSSS-R friends	**0,91**	**0,84-0,97**	**0,007**	0,91	0,84-0,99	0,026	0,97	0,89-1,06	0,53
Block 3. Self-esteem									
Rosenberg self-esteem scale	**0,93**	**0,88-0,98**	**0,006**				1,01	0,93-1,09	0,90
Block 4. Sexuality									
Advanced sexual experiences	**1,68**	**1,35-2,1**	**<0,001**	**1,49**	**1,19-1,88**	**0,001**	1,30	1,02-1,67	0,038
Sexual harassment experiences	**2,29**	**1,80-2,92**	**<0,001**	**2,14**	**1,66-2,77**	**<0,001**	**1,90**	**1,42-2,55**	**<0,001**
Block 5. Mental health									
Depression	**1,12**	**1,08-1,17**	**<0,001**	1,06	1,0-1,13	0,049	1,04	0,97-1,12	0,27
Social anxiety	**1,19**	**1,07-1,32**	**0,002**	1,08	0,95-1,23	0,24			
Delinquency	**1,30**	**1,17-1,43**	**<0,001**	1,13	0,97-1,32	0,12			
Aggression	**1,14**	**1,07-1,20**	**<0,001**	1,05	0,97-1,15	0,22			

Note: SES = socioeconomic risk factors sum variable, PSSS-R = percieved social support scale - revised

DISCUSSION

In this study exploring correlates of ADV victimization and perpetration, prevalence of ADV was small compared to what has been reported internationally. This is likely due to our focusing only on physical aspects of ADV. When associations with family, peer, sexuality and mental health variables were examined individually, having been subjected to adolescent dating violence (ADV) was linked to adverse sociodemographic factors, increased sexual experiences, experiences of sexual harassment, depression, delinquency and aggression. Conversely, it was negatively associated with parental involvement in an adolescent's life, social support from parents and peers and good self-esteem. These findings largely align with previous research in the field (2,3,5) but introduce a novel insight—delinquency and aggression were also associated with being subjected to sexual harassment. Adolescents prone to delinquency and aggression may engage in social circles where violent behaviour is more common, potentially leading them into relationships that involve ADV.

However, when these variables were analysed simultaneously in the final model, being subjected to ADV was only associated with increased sexual experiences and sexual harassment experiences. While previous research has linked being subjected to dating violence with risk-taking sexual behaviour (2,3,5), our study makes a unique contribution by considering both risk and protective factors across different domains relevant to adolescent life simultaneously. While these factors may influence adolescents' sexual behaviour and even their risk of experiencing sexual harassment, they were ultimately not independently associated with having been subjected to dating violence.

The same patterns apply to the perpetration of dating violence. When examined individually, ADV perpetration was associated with lower socio-economic status, increased sexual experiences, experiences of sexual harassment, depression, social anxiety, delinquency and aggression. It was negatively associated with parental involvement in an adolescent's life, social support from parents and peers and good self-esteem. These associations are generally in agreement with previous research (2,3,5); however, to our knowledge, earlier studies have not explored the roles of parental involvement, depression and delinquency in ADV perpetration.

In the final multivariate model, ADV perpetration was only inversely associated with parental involvement in an adolescent's life and positively associated with experiences of sexual harassment and increased sexual experiences. Previous research supports our findings regarding sexual experiences (2,5), but no prior studies have examined the relationship between ADV perpetration and parental involvement in an adolescent's life. Parental involvement may play a crucial role in the development of emotional regulation (18), which could explain why it serves as a protective factor against ADV perpetration.

The common correlates of both being subjected to and perpetration of ADV remained largely the same when risk and protective factors were considered individually and in the final models. Among all the examined family, peer, mental health and sexuality-related variables, increased sexual experiences and experiences of sexual harassment consistently remained associated with both being subjected to and perpetration of ADV in the fully adjusted models. Previous studies have also linked both being subjected to and perpetration of ADV with sexual experiences (2,3,5).

Prior research has shown that in countries with greater gender inequality, girls are more frequently victims of ADV (5). However, our findings suggest that in more gender-equal societies, such as Nordic countries, both being subjected to and perpetration of ADV tend to accumulate in the same individuals. This supports the idea that ADV occurs within relationships where both partners are actively involved.

While most family, peer, mental health and self-esteem variables initially appeared to be associated with both being subjected to and perpetration of adolescent dating violence (ADV), these associations were levelled out in the final models. During adolescence, challenges related to family, peers and mental health tend to accumulate and interact in complex ways. Ultimately, independent associations with ADV persisted only in sexuality-related variables, suggesting that the effects of other domains are mediated through sexual behaviour and experiences.

In their systematic review of the causes and consequences of ADV, Taquette and Monteiro (3) emphasized the urgency of recognizing and addressing ADV early. Their review primarily called for efforts to dismantle cultural patterns of gender-based violence within families, schools and communities. Our findings highlight sexuality education as an essential avenue for preventing ADV.

METHODOLOGICAL CONSIDERATIONS

A strength of the collected data is the relatively large sample of homogeneous middle adolescents regarding age. This age group is particularly relevant for studying adolescent dating violence, as it represents a developmental phase in which initial dating experiences emerge, shaping future romantic and sexual encounters. Our study only focused on physical

aspects of dating violence. This can be seen both as strength and as limitation. A strength is that we focused on the most severe aspects of ADV. On the other hand, including verbal and emotional abuse would have given a more comprehensive picture.

Mental health problems, social support and self-esteem were measured using internationally recognized rating scales, while other variables have been widely used in Finnish adolescent health surveys and have been shown to associate with problem behaviours and emotional symptoms (10,11,19–21). The classroom survey method allows for comprehensive reach within this age group, and the supervised survey setting ensures respondent privacy. Additionally, the inclusion of a sincerity check helped control for mischievous responses. However, a limitation of the study is the lack of more detailed information about dating violence. A limitation is also that the data were cross-sectional and therefore not able to advise about causal relationships. In the future, longitudinal studies are needed. Finally, phenomena such as adolescent dating violence may both decrease and increase over time; education, societal attitudes and sensitivity may change. However, while these might impact reported prevalence, they might impact less on the correlations detected.

CONCLUSION

Both being subjected to and perpetration of ADV are associated with advanced sexual experiences and experiences of sexual harassment. Additionally, ADV perpetration is linked to a lower likelihood of parental involvement in an adolescent's life. Investing in sexuality education in schools and healthcare settings is crucial for preventing such issues in later adolescence. Furthermore, fostering positive parent-child relationships across adolescent years may play a protective role in reducing behavioural problems, including ADV perpetration.

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