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Violence among adolescents: A study of overlapping of bullying, cyberbullying, sexual harassment, dating violence and cyberdating violence

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ABSTRACT

Background: Face-to-face and virtual violence among adolescents could lead to polyvictimisation and polyaggression. More studies are needed to simultaneously analyse various types of violence to understand the extent of involvement in violence during adolescence.

Objective: This study explores the overlap of bullying, cyberbullying, sexual harassment, dating violence, and cyber dating violence, considering dating experience, gender, and stage of adolescence.

Participants and setting: This study involved 2514 Spanish middle school students (49.8 % girls) aged 11–19 years (M = 13.97, SD = 1.40).

Methods: The design of this study was cross-sectional. Data were collected through a survey. Results: Among adolescents with no dating experience, 39.7 % were not victims, and 55.9 % were not aggressors. By contrast, among adolescents with dating experience, 7.1 % were not victims, and 10.5 % were not aggressors. Gender differences in poly-involvement were found between adolescents with and without dating experience. Girls were significantly less involved than boys as polyvictims and polyaggressors when they had no dating experience. They were significantly more involved than boys as polyvictims (9.7 %) and polyaggressors (23.9 %) in dating violence and cyber dating violence when they had dating experience. Age differences in poly-involvement were found only in adolescents with dating experience. Adolescents were more polyinvolved late than early adolescence, especially in dating violence, sexual harassment, and cyber dating violence as polyvictims (22.8 %) and polyaggressors (26.7 %).

Conclusions: Experiences of poly-involvement are diverse according to dating experience, gender, and stage of adolescence. More comprehensive peer and dating violence prevention strategies need to be designed.

1. Introduction

Violence among adolescents is a global public health problem (UNESCO, 2017). It includes "all forms of physical or mental violence, injury or abuse, neglect or negligent treatment, maltreatment or exploitation, including sexual abuse" (UN, 2011, Art. 19,

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para. 1). The most investigated types of violence, either because of their higher prevalence or their severe consequences, and primarily related to psychological maltreatment (i.e., spurning, terrorizing, corrupting/exploiting, denying emotional responsiveness, or isolating; Brassard et al., 2019), are bullying (Chu et al., 2018), cyberbullying (Khong et al., 2019), sexual harassment (Duncan et al., 2018), dating violence (Wincentak et al., 2017), and cyber dating violence (Sánchez-Jiménez et al., 2015). There is ample evidence that adolescents may engage in more than one type of violence in physical or virtual contexts (Leemis et al., 2018), i.e., be polyinvolved. Thus, nowadays, multiple violent episodes may be impairing peer socialisation (Ojanen & Findley-Van Nostrand, 2014), sexuality (Charmaraman et al., 2013) and dating experiences (Jennings et al., 2017).

Bullying is a form of psychosocial violence in which a defenceless victim is targeted by repeated physical, psychological, or social aggressions (Smith, 2016), based on the power imbalance with the aggressor (Vivolo-Kantor et al., 2014). When it occurs in the virtual context, it is named cyberbullying (Kowalski et al., 2019). Cyberbullying shares with bullying the main characteristics of the intention to cause harm and the power imbalance (Smith et al., 2019). However, cyberbullying is also characterised by the potential anonymity of the aggressor (Menesini et al., 2012) and the constant exposure to aggression due to the lack of space and time boundaries on the Internet and social networks (Kowalski et al., 2019).

Previous studies reflect a significant disparity in the prevalence of these phenomena. In the case of bullying, victims account for 15 %–63 % and aggressors for 5 %–35 % in China, Australia, or Finland (Chu et al., 2018; Jadambaa et al., 2019; Kurki-Kangas et al., 2018). In the case of cyberbullying, cybervictims account for 3 %–72 % and cyberaggressors for 1 %–41 % in Ecuador, Spain, Singapore, and the United States (Calmaestra et al., 2020; Khong et al., 2019; Selkie et al., 2016). In addition, there is ample evidence of overlap between the two phenomena (Khong et al., 2019; Kowalski et al., 2019), either in the same role (Cosma et al., 2020) or a different one (e.g., traditional victim and cyberaggressor; Chu et al., 2018).

Sexual harassment is the presence of any sexual behaviour without mutual consent, either physical (e.g., forced contact or obscene looks or gestures) or verbal (e.g., sexual comments and insults; Charmaraman et al., 2013; Lei et al., 2020). In Australia or the United States, victims range from 0.5 % to 68 % (Duncan et al., 2018; Espelage et al., 2016) and aggressors from 9 % to 32 % (Espelage et al., 2012; Leemis et al., 2018).

Dating violence is any aggression of a psychoemotional (e.g., coercive tactics), physical or sexual nature, either unidirectional or bidirectional (Jennings et al., 2017), within the couple (Leen et al., 2013). Cyber dating violence is a virtual counterpart (Sánchez-Jiménez et al., 2015), characterised by online public aggression through control and surveillance tactics (Rodríguez-Dearriba et al., 2021). According to international studies, the prevalence of victims is around 3.8 %–59 % and of aggressors 3 %–25 % (Jennings et al., 2017; Leen et al., 2013; Wincentak et al., 2017); whereas cybervictims account for 5.8 %–92 % and cyberaggressors for 8.1 %–93.7 % (Caridade et al., 2019; Yahner et al., 2015). An overlap between face-to-face and virtual dating violence was found (Rodríguez-Dearriba et al., 2021).

As already identified in previous systematic reviews on bullying and cyberbullying, there is considerable inconsistency in measurement strategies (Vivolo-Kantor et al., 2014), which is also reflected in the assessment of sexual harassment, dating violence and cyber dating violence. Specifically, there is no internationally standardised instrument to measure involvement in these phenomena (Jadambaa et al., 2019), either as a victim or an aggressor, so the prevalence reported varies considerably across studies. In this regard, Vivolo-Kantor et al. (2014) demonstrated that the significant disparity in prevalence may be due to the terminology used, the temporal referent period (e.g., "the last two months", "the last six months", "last year", or "during the current school term/year") and even the components of the definition (e.g., repetition in the case of bullying or cyberbullying).

In addition to the overlap between counterpart phenomena in the physical and virtual contexts, other types of violence have been shown to overlap, highlighting the polyvictimisation or polyaggression that some adolescents tend to experience (Pinto-Cortez et al., 2020). Thus, we know most of the victims of bullying are also victims of cyberbullying and sexual harassment (Oriol et al., 2019), 10 % of the aggressors of sexual harassment are also aggressors of bullying and cyberbullying (Leemis et al., 2018), and more than 10 % of victims and aggressors of cyber dating violence are involved in bullying, cyberbullying, and dating violence (Yahner et al., 2015). However, studies that analyse all five phenomena simultaneously are needed to provide a complete picture of violence among adolescents.

The vast majority of studies evidence differences between boys and girls involved in peer violence (Kowalski et al., 2019) or dating violence (Caridade et al., 2019), although some results are inconsistent (Kurki-Kangas et al., 2018; Lei et al., 2020). Boys tend to be victims and aggressors of bullying (Smith et al., 2019) and aggressors of cyberbullying (Calmaestra et al., 2020; Kurki-Kangas et al., 2018) and cyber dating violence (Caridade et al., 2019; Leen et al., 2013). On the other hand, girls tend to be victims of cyberbullying (Calmaestra et al., 2020), dating violence (Wincentak et al., 2017), and cyber dating violence (Caridade et al., 2019; Leen et al., 2013), especially in the case of sexual assaults. However, gender differences in sexual harassment are less clear, as similar patterns of victimisation and aggression are reported for boys and girls (Duncan et al., 2018; Ybarra & Thompson, 2018). In cases of polyinvolvement, girls are more involved as polyvictims (Le et al., 2015; Pinto-Cortez et al., 2020), and, while studies about polyaggression are scarce, boys seem to be more involved as polyaggressors (Baldry et al., 2017).

Similarly, involvement in peer or dating violence appears to differ by age. In bullying, the peak incidence is reached at 11–14 years (Smith, 2016), in cyberbullying and dating violence at 13–15 years (Leen et al., 2013), in sexual harassment at 13–16 years (Ybarra & Thompson, 2018), and in cyber dating violence from the age of 12 (Caridade et al., 2019). In terms of poly-involvement, studies controlling for age seem to focus on analysing polyvictimisation rather than polyaggression. Specifically, adolescents tend to be more involved as polyvictims at the age of 15–18 than 12–14 (54.4 % vs 42.3 %; Pinto-Cortez et al., 2020). More studies on the role of polyaggressors are also needed.

1.1. The current study

Studies on overlap have addressed the analysis of counterpart phenomena, focusing on polyvictimisation rather than polyaggression. However, violence among adolescents is a global public health problem (UNESCO, 2017) and manifests itself through various forms, in physical or virtual contexts (Ojanen et al., 2015). It is necessary to advance the understanding of poly-involvement from both perspectives, polyvictimisation and polyaggression, in order to find more effective keys to prevent. This study pursues a twofold objective. First, to explore the overlap of bullying, cyberbullying, sexual harassment, dating violence, and cyber dating violence, as a victim or an aggressor, distinguishing between adolescents who have dating experience and adolescents who do not. Second, to analyse whether involvement or poly-involvement differs by gender and stage of adolescence, also considering the dating experience.

2. Materials and methods

2.1. Study participants

In this cross-sectional study, 2526 students (49.8 % girls, 49.7 % boys, 0.5 % others) participated. Ages ranged from 11 to 19 years (M=13.97, SD=1.40). Participants were recruited from nine middle schools (grades 7–10) in southern Spain, where 29.8 % were in grade 7, 27.3 % in grade 8, 22.7 % in grade 9, and 20.2 % in grade 10. Depending on the stage of age, 63.6 % belonged to the group of "early adolescence" (11–14 years) and 36.4 % to "late adolescence" (15–19 years). Almost 74 % had had a dating partner in the previous six months (see the section Procedure and data analysis). The characteristics of the study participants are shown in Supplementary Table 1.

2.2. Measurements

A battery of validated double Likert-type instruments was administered.

2.2.1. Bullying

Measured using the *European Bullying Intervention Project* Questionnaire, *EBIP-Q* (Ortega-Ruiz et al., 2016), validated in Spanish samples. This questionnaire is composed of 14 items, 7 referring to victimisation and 7 to aggression, with 5 response options based on the frequency of aggressions in the previous two months (1 = "never", 2 = "yes, once or twice", 3 = "yes, once or twice a month", 4 = "yes, about once a week" and 5 = "yes, more than once a week"), which allow the identification of roles of involvement (see the section Procedure and data analysis). Some statements refer, for example, to beatings, theft of belongings, or exclusion. Good overall reliability (Cronbach's $\alpha = 0.84$), acceptable partial reliability for victimisation (Cronbach's $\alpha = 0.79$) and good partial reliability for aggression (Cronbach's $\alpha = 0.81$) were obtained.

2.2.2. Cyberbullying

Measured using the European Cyberbullying Intervention Project Questionnaire, ECIP-Q (Del Rey, Casas, Ortega-Ruiz, et al., 2015), validated in Spanish samples by Ortega-Ruiz et al. (2016). This questionnaire is composed of 22 items, 11 referring to cybervictimisation and 11 to cyberaggression, with 5 response options based on the frequency of cyberaggressions in the previous two months (1 = "never", 2 = "yes, once or twice", 3 = "yes, once or twice a month", 4 = "yes, about once a week" and 5 = "yes, more than once a week"), which allow the identification of roles of involvement (see the section Procedure and data analysis). Some statements refer, for example, to the spreading of rumours, threats, or identity theft. Good overall reliability (Cronbach's $\alpha = 0.85$), and good partial reliability for cybervictimisation (Cronbach's $\alpha = 0.80$) and cyberaggression (Cronbach's $\alpha = 0.80$) were obtained.

2.2.3. Sexual harassment

Measured using a version of the *Sexual Harassment Survey* (AAUW, 1993), validated in Spanish samples by Ortega et al. (2010). This questionnaire is composed of 26 items with 5 response options (1 = "never", 2 = "once or twice", 3 = "more than twice a month", 4 = "every two or three days", and 5 = "every day"), which evaluates victimisation and aggression in both verbal and physical peer sexual violence during the current school year (e.g., comments on sexual behaviour, actions with sexual intentions). Optimal overall reliability (Cronbach's $\alpha = 0.91$), and good partial reliability for victimisation (Cronbach's $\alpha = 0.84$) and aggression (Cronbach's $\alpha = 0.83$) were obtained.

2.2.4. Dating violence

The presence of physical, psychological, and sexual dating partner violence in the previous six months was measured using 27 items with 5 response options (1 = "never", 2 = "seldom", 3 = "sometimes", 4 = "often", and 5 = "always"). For physical violence, a version of the *Conflict Tactics Scale, CTS2* (Straus et al., 1996), adapted and validated in Spanish samples by Viejo et al. (2014), was used (e.g., shoving, spitting, attempts to suffocate). For psychological violence, a version of the items of psychological abuse (Foshee, 1996), adapted and validated in Spanish samples by Sánchez-Jiménez et al. (2018), was used (e.g., throwing objects, controlling actions, comments to provoke jealousy). For sexual dating partner violence, a version of Foshee's (1996) scale of sexual violence, adapted and validated in Spanish samples by Muñoz-Fernández et al. (2019), was used (e.g., pressure or coercion to engage in sexual intercourse, touching without consent). Following previous studies (Wolfe et al., 2001), 'dating violence' overall scale and subscales were

computed. Optimal overall reliability (Cronbach's $\alpha = 0.92$), and good partial reliability for victimisation (Cronbach's $\alpha = 0.84$) and aggression (Cronbach's $\alpha = 0.87$) were obtained.

2.2.5. Cyber dating violence

The control, intrusiveness, and jealousy subscales in *Scale Cyber dating Q_A* (Sánchez-Jiménez et al., 2015), validated in Spanish samples, were used. A total of 28 items with 5 response options (1 = "never", 2 = "seldom", 3 = "sometimes", 4 = "often", and 5 = "always") measured cyber dating aggressions in the previous six months (e.g., control through a friend of the dating partner, jealousy after reading private messages). Optimal overall reliability (Cronbach's $\alpha = 0.94$), and good partial reliability for victimisation (Cronbach's $\alpha = 0.89$) and aggression (Cronbach's $\alpha = 0.88$) were obtained.

In addition, participants were asked about their gender, age, academic year, dating experience in the previous semester ("yes"/"no") and current or past specific circumstances about dating (1 = "I am currently dating someone", 2 = "I am currently dating more than one person", 3 = "I have dated someone in the last two months", 4 = "I am not dating anyone now, but I have been dating someone more than two months ago", and 5 = "I have never dated anyone"; Connolly et al., 2004).

2.3. Ethics approval

The study was approved by the Coordinating Committee on Biomedical Research Ethics of Andalusia (blind code for review).

2.4. Procedure and data analysis

We accessed a convenience sample (Etikan et al., 2016) of middle schools in the Andalusia region (south of Spain). We contacted the executive teams of the educational centres to request their collaboration by email. The middle schools that showed their willingness to participate (mainly based on their availability of time) were included in the study. After obtaining written informed consent from parents or legal guardians, a paper-based survey was administered to students. Participants were informed in advance of the study's anonymous, voluntary, and confidential nature, the possibility of withdrawing from their participation, and the importance of responding honestly to all questions. Completing the survey took approximately 25–30 min and was supervised by teachers and our research team members.

After codifying the data, two variables related to victimisation and aggression were created for each type of violence (where the value 0 was "not involved" and the value 1 was "involved"). The original criteria of the authors of the instruments (see the section Measurements) were applied. Specifically, the conditions for inclusion as victims or aggressors were the following: in bullying or cyberbullying, those who had suffered or perpetrated aggressions "at least once or twice a month"; in sexual harassment, those who had suffered or perpetrated aggressions "at least once or twice"; and in dating violence or cyber dating violence, those who had suffered or perpetrated aggressions "at least once". Later, the variables "polyvictim" and "polyaggressor" were created based on the combination of involvement as a victim or an aggressor in peer settings (i.e., bullying, cyberbullying, or sexual harassment) and with a dating partner (i.e., dating violence or cyber dating violence). There were 31 combinations: five options of single phenomenon involvement, ten of involvement in two phenomena, ten of involvement in three phenomena, five of involvement in four phenomena, and one of involvement in five phenomena. To analyse the variable "stage of adolescence", two age groups were identified: "early adolescence" (11–14 years) and "late adolescence" (15–19 years) according to Steinberg's (2014) recommendations, which were represented by the values 1 and 2, respectively. Finally, the variable "dating experience" was created to distribute the participants into two groups according to their self-reported current or past partner status (Connolly et al., 2004). The value 0 was coded as "without dating experience" (if the response option chosen was 5 = "I have never dated anyone"). The value 1 was coded "with dating experience" (if any of the other four response options were chosen; see the section Measurements).

Statistical analyses were carried out in several steps. First, the "other" gender was excluded due to its low frequency (n=12), resulting in a final sample of 2514 participants. The prevalence of victims and aggressors in each type of violence was tested. Second, the means and z scores of victimisation and aggression were calculated with Pearson's correlations. Third, differences in polyinvolvement by gender and stage of adolescence were analysed using the Chi-square test (\times 2), including the nominal statistic Phi and Cramer's V and the adjusted standardised residuals, whose p < .05 was obtained with a critical value $>\pm 1.96$ (Field, 2009). Results were compared by dating experience, gender, and stage of adolescence. SPSS version 26 was used.

3. Results

3.1. General descriptive results on peer and dating violence as a victim or an aggressor

3.1.1. Victims of peer/dating violence in general

The prevalence of victims of particular types of violence was 65.5 % in sexual harassment, 49.6 % in cyber dating violence, 47.8 % in dating violence, 38.7 % in bullying, and 15.2 % in cyberbullying (see Supplementary Table 1).

3.1.2. Aggressors of peer/dating violence in general

The prevalence of aggressors of particular types of violence was $53.7\,\%$ in sexual harassment, $50.3\,\%$ in cyber dating violence, $47.1\,\%$ in dating violence, $19.5\,\%$ in bullying, and $10.0\,\%$ in cyberbullying (see Supplementary Table 1).

Strong direct correlations were found for victims and aggressors, especially between cyber dating violence, sexual harassment, and

Table 1 Correlations between bullying, cyberbullying, sexual harassment, dating violence and cyber dating violence.

Variables	M	SD	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
Victimisation												
1. Bullying	0.01	0.99	_									
2. Cyberbullying	0.01	1.00	0.573**	_								
3. Sexual harassment	0.01	0.99	0.353**	0.383**	_							
4. Dating violence	0.04	1.03	0.282**	0.303**	0.371**	_						
5. Cyber dating violence	0.05	1.02	0.215**	0.309**	0.329**	0.620**	-					
Aggression												
6. Bullying	0.01	1.01	0.470**	0.404**	0.416**	0.233**	0.226**	_				
7. Cyberbullying	0.01	1.01	0.338**	0.554**	0.400**	0.197**	0.235**	0.565**	_			
8. Sexual harassment	0.01	0.99	0.240**	0.293**	0.824**	0.263**	0.254**	0.459**	0.436**	_		
9. Dating violence	0.04	1.01	0.236**	0.246**	0.304**	0.787**	0.586**	0.277**	0.283**	0.285**	_	
10. Cyber dating violence	0.05	1.02	0.174**	0.224**	0.269**	0.476**	0.854**	0.216**	0.232**	0.225**	0.616**	-

N = 2514.** p < .01.

dating violence (see Table 1).

3.2. Poly-involvement in peer and/or dating violence depending on dating experience

3.2.1. Polyvictims of peer violence in general

In polyvictimisation among those who did not have dating experience (see Table 2), 37.6 % were victims of a single type of violence, 17.7 % of two types, and 5 % of three (i.e., bullying, cyberbullying, and sexual harassment). By contrast, 39.7 % had not been victims of violence.

3.2.2. Polyaggressors of peer violence in general

In polyaggression among those who did not have dating experience (see Table 2), 31.2 % were aggressors of a single type of violence, 8.7 % of two types, and 4.2 % of three (i.e., bullying, cyberbullying, and sexual harassment). By contrast, 55.9 % had not been aggressors of violence.

3.2.3. Polyvictims of peer and dating violence in general

In polyvictimisation among those who had dating experience (see Table 3), 14.2 % were victims of a single type of violence, 21.7 % of two types, 28.7 % of three, 18.4 % of four, and 9.9 % of five (i.e., bullying, cyberbullying, sexual harassment, dating violence, and cyber dating violence). By contrast, 7.1 % had not been victims of violence.

3.2.4. Polyaggressors of peer and dating violence in general

In polyaggression among those who had dating experience (see Table 3), 16.6 % were aggressors of a single type of violence, 28.9 % of two types, 28.6 % of three, 10.3 % of four, and 4.6 % of five (i.e., bullying, cyberbullying, sexual harassment, dating violence and cyber dating violence). By contrast, 10.5 % had not been aggressors of violence.

3.3. Victimisation and aggression in peer and/or dating violence in boys and girls

3.3.1. Victims of peer/dating violence according to gender

Regarding involvement as victims in each type of violence (see Supplementary Table 1), boys were significantly more involved as victims of sexual harassment (34.6 % vs 30.9 %) [χ^2 (2, N=2514) = 16,778, p<.001, V=0.082], and girls of dating violence (26.0 % vs 21.8 %) [χ^2 (2, N=2514) = 17,271, p<.001, V=0.083] and cyber dating violence (26.8 % vs 22.7 %) [χ^2 (2, N=2514) = 16,561, p<.001, V=0.081]. There were no gender differences in bullying [χ^2 (2, N=2514) = 2365, p=.124, V=0.031] or cyberbullying [χ^2 (2, N=2514) = 3479, p=.062, V=0.037] for victim role.

3.3.2. Aggressors of peer/dating violence according to gender

Regarding involvement as aggressors in each type of violence (see Supplementary Table 1), boys were significantly more involved as aggressors in bullying (11.7 % vs 7.8 %) [χ^2 (2, N=2514) = 24,199, p<.001, V=0.098], cyberbullying (6.0 % vs 4.0 %) [χ^2 (2, N=2514) = 11,693, p=.001, V=0.068] and sexual harassment (32.4 % vs 21.4 %) [χ^2 (2, N=2514) = 124,682, p<.001, V=0.223], and girls in dating violence (26.1 % vs 21.0 %) [χ^2 (2, N=2514) = 25,392, p<.001, V=0.101] and cyber dating violence (27.6 % vs 22.7 %) [χ^2 (2, N=2514) = 23,291, p<.001, V=0.096].

Table 2Percentages of gender groups without dating experience involved in different types of violence.

No partner (N = 614)												
	Victims						Aggressors						
	Overall		Boys (<i>n</i> = 315)		Girls (n = 299)		Overall		Boys (<i>n</i> = 315)		Girls (n = 299)		
	n	%	n	%	n	%	n	%	n	%	n	%	
N. I.	244	39.7	102	32.4	142	47.5	343	55.9	131	41.6	212	70.9	
В	62	10.1	27	8.6	35	11.7	32	5.2	17	5.4	15	5.0	
CB	0	0	0	0	0	0	2	0.3	1	0.3	1	0.3	
SH	169	27.5	92	29.2	77	25.8	158	25.7	105	33.3	53	17.7	
B-CB	10	1.6	5	1.6	5	1.7	2	0.4	0	0	2	0.7	
B-SH	94	15.4	61	19.4	33	11.0	43	7.0	32	10.2	11	3.7	
CB-SH	4	0.7	4	1.3	0	0	8	1.3	7	2.2	1	0.3	
B-CB-SH	31	5.0	24	7.6	7	2.3	26	4.2	22	7.0	4	1.3	

Note. N. I. = Not involved; B = Bullying; CB = Cyberbullying; SH = Sexual harassment.

Table 3 Percentages of gender groups with dating experience involved in different types of violence.

Partner (<i>N</i> = 1716)												
	Victims	5					Aggress	sors				
	Overall		Boys (<i>n</i> = 83	3)	Girls (n = 88	33)	Overall		Boys $(n = 833)$		Girls (n = 88	33)
	n	%	n	%	n	%	n	%	n	%	n	%
N. I.	121	7.1	56	6.7	65	7.4	180	10.5	84	10.1	96	10.9
В	33	1.9	22	2.6	11	1.2	14	0.8	10	1.2	4	0.5
CB	1	0.1	1	0.1	0	0	1	0.1	0	0	1	0.1
SH	111	6.5	70	8.4	41	4.6	121	7.1	91	10.9	30	3.4
DV	40	2.3	20	2.4	20	2.3	60	3.5	21	2.5	39	4.4
CDV	58	3.4	23	2.8	35	4.0	88	5.1	34	4.1	54	6.1
B-CB	7	0.4	4	0.5	3	0.3	1	0.1	0	0	1	0.1
B-SH	49	2.9	31	3.7	18	2.0	23	1.3	14	1.7	9	1.0
B-DV	9	0.5	3	0.4	6	0.7	2	0.1	0	0	2	0.1
B-CDV	8	0.5	5	0.6	3	0.3	4	0.2	2	0.2	2	0.2
CB-SH	5	0.3	3	0.4	2	0.2	7	0.4	5	0.6	2	0.2
CB-DV	1	0.1	1	0.1	0	0	1	0.1	0	0	1	0.1
CB-CDV	1	0.1	1	0.1	0	0	4	0.2	3	0.4	1	0.1
DV-SH	66	3.8	36	4.3	30	3.4	69	4.0	44	5.3	25	2.8
DV-CDV	130	7.6	44	5.3	86	9.7	274	16.0	63	7.6	211	23.9
CDV-SH	95	5.5	56	6.7	39	4.4	112	6.5	73	8.8	39	4.4
B-CB-SH	22	1.3	13	1.6	9	1.0	10	0.6	10	1.2	0	0
B-CB-DV	0	0	0	0	0	0	1	0.1	0	0	1	0.1
B-CB-CDV	2	0.1	2	0.2	0	0	3	0.2	0	0	3	0.3
B-SH-DV	46	2.7	20	2.4	26	2.9	16	0.9	11	1.3	5	0.6
B-SH-CDV	41	2.4	25	3.0	16	1.8	16	0.9	10	1.2	6	0.7
B-DV-CDV	44	2.6	21	2.5	23	2.6	26	1.5	16	1.9	10	1.1
CB-SH-DV	6	0.3	5	0.6	1	0.1	4	0.2	3	0.4	1	0.1
CB-SH-CDV	4	0.2	3	0.4	1	0.1	5	0.3	3	0.4	2	0.2
CB-DV-CDV	6	0.3	3	0.4	3	0.3	9	0.5	5	0.6	4	0.5
DV-SH-CDV	323	18.8	144	17.3	179	20.3	402	23.4	191	22.9	211	23.9
B-CB-SH-DV	18	1.0	11	1.3	7	0.8	8	0.5	5	0.6	3	0.3
B-CB-SH-CDV	225	13.1	94	11.3	131	14.8	117	6.8	60	7.2	57	6.5
B-CB-DV-CDV	14	0.8	4	0.5	10	1.1	14	0.8	4	0.5	10	1.1
B-SH-DV-CDV	28	1.6	18	2.2	10	1.1	13	0.3	11	1.3	2	0.2
CB-SH-DV-CDV	32	1.9	17	2.0	15	1.7	32	1.9	15	1.8	17	1.9
B-CB-SH-DV-CDV	170	9.9	77	9.2	93	10.5	79	4.6	45	5.4	34	3.9

Note. N. I. = Not involved; B = Bullying; CB = Cyberbullying; SH = Sexual harassment; DV = Dating Violence; CDV = Cyber dating Violence.

3.4. Poly-involvement in peer and/or dating violence depending on dating experience in boys and girls

3.4.1. Polyvictims of peer violence according to gender

Regarding poly-involvement in victimisation among those who did not have dating experience (see Table 2), gender differences were found [χ^2 (6, N = 614) = 30,188, p < .001, V = 0.222]. Boys were significantly more involved as polyvictims of bullying and sexual harassment (19.4 % vs 11.0 %), bullying, cyberbullying and sexual harassment (7.6 % vs 2.3 %) and cyberbullying and sexual harassment (1.3 % vs 0 %), and girls were significantly more likely to be non-victims (47.5 % vs 32.4 %).

Table 4 Gender correlations between victim and aggressor roles in bullying, cyberbullying and sexual harassment in boys and girls without dating experience.

						-
Variables	1.	2.	3.	4.	5.	6.
Victimisation						
1. Bullying	_	0.625**	0.399**	0.388**	0.295**	0.109
2. Cyberbullying	0.553**	_	0.299**	0.222**	0.319**	0.050
3. Sexual harassment	0.459**	0.521**	_	0.322**	0.312**	0.492**
Aggression						
4. Bullying	0.511**	0.497**	0.497**	-	481**	0.297**
Cyberbullying	0.284**	0.664**	0.579**	0.400**	-	0.254**
6. Sexual harassment	0.371**	0.455**	0.868**	0.500**	0.593**	-

Note. "Boys" in the lower triangle, "girls" in the upper triangle.

N = 614.** p < .01.

3.4.2. Polyaggressors of peer violence according to gender

Regarding poly-involvement in aggression among those who did not have dating experience (see Table 2), gender differences were found [χ^2 (7, N=614) = 65,212, p < .001, V=0.326]. Boys were significantly more involved as polyaggressors of bullying and sexual harassment (10.2 % vs 3.7 %), bullying, cyberbullying and sexual harassment (7.0 % vs 1.3 %) and cyberbullying and sexual harassment (2.2 % vs 0.3 %), and girls were significantly more likely to be non-aggressors (70.9 % vs 41.6 %).

For polyvictimisation and polyaggression scales, strong direct correlations were found between most types of violence, especially among boys. There were the strongest positive correlations among boys between sexual harassment and cyberbullying and, among girls, between cyberbullying, sexual harassment, and bullying (see Table 4).

3.4.3. Polyvictims of peer and dating violence according to gender

Regarding poly-involvement in victimisation among those who had dating experience (see Table 3), gender differences were found [χ^2 (30, N=1716) = 64,939, p<.001, V=0.195]. Boys were significantly more involved as polyvictims of cyber dating violence and sexual harassment (6.7 % vs 4.4 %), bullying and sexual harassment (3.7 % vs 2.0 %), and bullying, dating violence, cyber dating violence and sexual harassment (2.2 % vs 1.1 %), and girls were significantly more involved as polyvictims of dating violence and cyber dating violence (9.7 % vs 5.3 %).

3.4.4. Polyaggressors of peer and dating violence according to gender

Regarding poly-involvement in aggression among those who had dating experience (see Table 3), gender differences were found [χ^2 (31, N=1716) = 178,608, p<.001, V=0.323]. Boys were significantly more involved as polyaggressors of cyber dating violence and sexual harassment (8.8 % vs 4.4 %), bullying, dating violence, cyber dating violence and sexual harassment (7.2 % vs 6.5 %) and dating violence and sexual harassment (5.3 % vs 2.8 %), and girls were significantly more involved as polyaggressors of dating violence and cyber dating violence (23.9 % vs 7.6 %).

Strong direct correlations were found for polyvictimisation and polyaggression scales, especially between sexual harassment, cyber dating violence, and dating violence for both boys and girls (see Table 5).

3.5. Victimisation and aggression in peer and/or dating violence in early and late adolescence

3.5.1. Victims of peer/dating violence according to the stage of adolescence

Regarding involvement as victims in each type of violence (see Supplementary Table 1), adolescents in "early adolescence" were significantly more involved as victims of cyberbullying (8.4 % vs 6.4 %) [χ^2 (2, N=2476) = 5983, p=.014, V=0.049], sexual harassment (39.2 % vs 26.5 %) [χ^2 (2, N=2476) = 31,664, p<.001, V=0.113], dating violence (26.4 % vs 21.6 %) [χ^2 (2, N=2476) = 72,819, p<.001, V=0.171] and cyber dating violence (27.7 % vs 22.0 %) [χ^2 (2, N=2476) = 65,241, p<.001, V=0.162]. There were no differences in bullying for the victim role between early and late adolescence [χ^2 (2, N=2476) = 2670, p=.102, V=0.033].

3.5.2. Aggressors of peer/dating violence according to the stage of adolescence

Regarding involvement as aggressors in each type of violence (see Supplementary Table 1), adolescents in "early adolescence" were significantly more involved as aggressors of sexual harassment (30.7 % vs 23.1 %) [χ^2 (2, N=2476) = 52,708, p<.001, V=0.146], dating violence (26.0 % vs 21.3 %) [χ^2 (2, N=2476) = 72,130, p<.001, V=0.171] and cyber dating violence (28.8 % vs 21.8 %) [χ^2 (2, N=2476) = 50,481, p<.001, V=0.143]. There were no differences in bullying [χ^2 (2, N=2476) = 0.337, p=562, V=0.012] nor in cyberbullying [χ^2 (2, N=2476) = 3149, P=.076, V=0.036] for the aggressor role between early and late adolescence.

Table 5
Gender correlations between victim and aggressor roles in bullying, cyberbullying, sexual harassment, dating violence and cyber dating violence in boys and girls with dating experience.

Variables	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
Victimisation										
1. Bullying	_	0.604**	0.372**	0.289**	0.215**	0.462**	0.342**	0.261**	0.252**	0.131**
2. Cyberbullying	0.583**	_	0.354**	0.246**	0.303**	0.309**	0.413**	0.242**	0.216**	0.220**
3. Sexual harassment	0.309**	0.338**	_	0.376**	0.315**	0.393**	0.387**	0.782**	0.275**	0.229**
4. Dating violence	0.275**	0.360**	0.325**	_	0.656**	0.266**	0.212**	0.282**	0.782**	0.476**
5. Cyber dating violence	0.218**	0.318**	0.347**	0.505**	_	0.270**	0.290**	0.290**	0.615**	0.840**
Aggression										
6. Bullying	0.493**	0.418**	0.411**	0.225**	0.201**	_	565**	0.402**	0.344**	0.262**
7. Cyberbullying	0.395**	0.581**	0.397**	0.159**	0.212**	0.592**	_	0.465**	0.313**	0.298**
8. Sexual harassment	0.198**	0.230**	0.883**	0.275**	0.281**	0.456**	0.366**	_	0.307**	0.246**
9. Dating violence	0.206**	0.257**	0.328**	0.733**	0.480**	0.264**	0.258**	0.340**	_	0.646**
10. Cyber dating violence	0.228**	0.248**	0.326**	0.375**	0.870**	0.198**	0.207**	0.288**	0.499**	_

Note. "Boys" in the lower triangle, "girls" in the upper triangle.

** p < .01.

N = 1716.

3.6. Poly-involvement in peer and/or dating violence depending on dating experience in early and late adolescence

3.6.1. Polyvictims of peer violence according to the stage of adolescence

Regarding poly-involvement in victimisation among those who did not have dating experience (see Supplementary Table 2), age group differences were not found [χ^2 (6, N = 603) = 4812, p = .568, V = 0.089].

3.6.2. Polyaggressors of peer violence according to the stage of adolescence

Regarding poly-involvement in aggression among those who did not have dating experience (see Supplementary Table 2), age group differences were not found [χ^2 (7, N=603) = 13,547, p=.060, V=0.150].

Correlations were particularly significant and extraordinarily strong in the "late adolescence" group, especially between sexual harassment and bullying, while in "early adolescence" the strongest positive correlations were between bullying, cyberbullying and sexual harassment (see Table 6).

3.6.3. Polyvictims of peer and dating violence according to the stage of adolescence

Regarding poly-involvement in victimisation among those who had dating experience (see Table 7), age group differences were found [χ^2 (30, N=1690) = 69,833, p<.001, V=0.203]. Those in "early adolescence" were significantly more likely to be non-victims (8.4 % vs 4.9 %), but also polyvictims of bullying, sexual harassment and dating violence (3.5 % vs 1.5 %) and bullying, cyberbullying, dating violence and cyber dating violence (1.2 % vs 0.3 %). Those in "late adolescence" were significantly more involved as polyvictims of dating violence, sexual harassment and cyber dating violence (22.8 % vs 16.0 %) and cyberbullying, dating violence and cyber dating violence (0.7 % vs 0.1 %).

3.6.4. Polyaggressors of peer and dating violence according to the stage of adolescence

Regarding poly-involvement in aggression among those who had dating experience (see Table 7), age group differences were found [χ^2 (31, N=1690) = 68,686, p<.001, V=0.202]. Those in "early adolescence" were significantly more likely to be non-aggressors (12.5 % vs 7.2 %). Those in "late adolescence" were significantly more involved as polyaggressors of dating violence, sexual harassment and cyber dating violence (26.7 % vs 21.2 %).

Correlations in both groups were significant and exceptionally strong, especially between cyber dating violence, sexual harassment, and dating violence (see Table 8).

4. Discussion

This study aimed to explore the overlap of bullying, cyberbullying, sexual harassment, dating violence, and cyber dating violence, as a victim or an aggressor, according to dating experience, gender, and stage of adolescence. To our knowledge, no study has addressed the overlap of five types of violence in adolescents, so these results advance the understanding of violence during adolescence.

4.1. Key findings of poly-involvement in peer/dating violence among adolescents

Our findings suggest that, at least occasionally, adolescents can be involved in multiple violent episodes with peers or dating partners (Espelage et al., 2021; Yahner et al., 2015). Considering the overall poly-involvement, we can observe that adolescents without dating experience do not seem to be highly represented in the simultaneous involvement in bullying, cyberbullying, and sexual harassment, with 5 % being polyvictims and 4.2 % polyaggressors. Adolescents with dating experience do not seem to be highly represented in the simultaneous involvement in bullying, cyberbullying, sexual harassment, dating violence and cyber dating violence, with 9.9 % of polyvictims and 4.6 % of polyaggressors. However, the figures for overlap in two or more types of violence are striking.

Table 6Correlations between the victim and aggressor roles in bullying, cyberbullying and sexual harassment according to age in adolescents without dating experience.

Variables	1.	2.	3.	4.	5.	6.
Victimisation						
1. Bullying	_	0.626**	0.648**	0.594**	0.464**	0.651**
2. Cyberbullying	0.574**	_	0.631**	0.614**	0.728**	0.676**
3. Sexual harassment	0.381**	0.321**	-	0.785**	0.596**	0.924**
Aggression						
4. Bullying	0.443**	0.331**	0.333**	-	0.562**	0.837**
Cyberbullying	0.277**	0.458**	0.283**	0.466**	-	0.638**
6. Sexual harassment	0.155**	0.070	0.551**	0.351**	0.227**	-

Note. "Early adolescence" group in the lower triangle, "late adolescence" group in the upper triangle. N=603.

^{**} *p* < .01.

Table 7Percentages of age groups with dating experience involved in different types of violence.

Partner ($N = 1690$)												
	Victim	S					Aggres	ssors				
	Overal	1	Early a $(n = 9)$	ndolescence 79)	Late at $(n = 7)$	lolescence 11)	Overall		Early adolescence $(n = 979)$		Late adolescence $(n = 711)$	
	n	%	n	%	n	%	n	%	n	%	n	%
N. I.	117	6.9	82	8.4	35	4.9	173	10.2	122	12.5	51	7.2
В	32	1.9	27	2.8	5	0.7	14	0.8	10	1.0	4	0.6
CB	1	0.1	0	0	1	0.1	1	0.1	1	0.1	0	0
SH	110	6.5	58	5.9	52	7.3	119	7.0	61	6.2	58	8.2
DV	39	2.3	27	2.8	12	1.7	60	3.6	40	4.1	20	2.8
CDV	58	3.4	44	4.5	14	2.0	88	5.2	67	6.8	21	3.0
B-CB	7	0.4	4	0.4	3	0.4	1	0.1	1	0.1	0	0
B-SH	49	2.9	33	3.4	16	2.3	22	1.3	14	1.4	8	1.1
B-DV	9	0.5	6	0.6	3	0.4	2	0.1	2	0.2	0	0
B-CDV	8	0.5	6	0.6	2	0.3	4	0.2	3	0.3	1	0.1
CB-SH	5	0.3	3	0.3	2	0.3	7	0.4	2	0.2	5	0.7
CB-DV	1	0.1	1	0.1	0	0	1	0.1	1	0.1	0	0
CB-CDV	1	0.1	1	0.1	0	0	4	0.2	4	0.4	0	0
DV-SH	64	3.8	33	3.4	31	4.4	66	3.9	31	3.2	35	4.9
DV-CDV	126	7.5	64	6.5	62	8.7	271	16.0	148	15.1	123	17.3
CDV-SH	93	5.5	54	5.5	39	5.5	109	6.4	68	6.9	41	5.8
B-CB-SH	20	1.2	11	1.1	9	1.3	9	0.5	7	0.7	2	0.3
B-CB-DV	0	0	0	0	0	0	1	0.1	1	0.1	0	0
B-CB-CDV	2	0.1	1	0.1	1	0.1	3	0.2	3	0.3	0	0
B-SH-DV	45	2.7	34	3.5	11	1.5	16	0.9	9	0.9	7	1.0
B-SH-CDV	39	2.3	26	2.7	13	1.8	16	0.9	8	0.8	8	1.1
B-DV-CDV	43	2.5	29	3.0	14	2.0	25	1.5	19	1.9	6	0.8
CB-SH-DV	6	0.4	5	0.5	1	0.1	4	0.2	3	0.3	1	0.1
CB-SH-CDV	4	0.2	2	0.2	2	0.3	5	0.3	2	0.2	3	0.4
CB-DV-CDV	6	0.4	1	0.1	5	0.7	9	0.5	8	0.8	1	0.1
DV-SH-CDV	319	18.9	157	16.0	162	22.8	398	23.6	208	21.2	190	26.7
B-CB-SH-DV	18	1.1	10	1.0	8	1.1	8	0.5	6	0.6	2	0.3
B-CB-SH-CDV	28	1.7	18	1.8	10	1.4	13	0.8	5	0.5	8	1.1
B-CB-DV-CDV	14	0.8	12	1.2	2	0.3	14	0.8	8	0.8	6	0.8
B-SH-DV-CDV	225	13.3	125	12.8	100	14.1	117	6.9	60	6.1	57	8.0
CB-SH-DV-CDV	32	1.9	15	1.5	17	2.4	32	1.9	18	1.8	14	2.0
B-CB-SH-DV-CDV	169	10.0	90	9.2	79	11.1	78	4.6	39	4.0	39	5.5

Note. N. I. = Not involved; B = Bullying; CB = Cyberbullying; SH = Sexual harassment; DV = Dating Violence; CDV = Cyber dating Violence.

Table 8
Correlations between the victim and aggressor roles in bullying, cyberbullying, sexual harassment, dating violence and cyber dating violence according to age in adolescents with dating experience.

Variables	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
Victimisation										
1. Bullying	_	0.579**	0.329**	0.351**	0.304**	0.475**	0.382**	0.219**	0.279**	0.199**
2. Cyberbullying	0.603**	_	0.321**	0.245**	0.321**	0.391**	0.440**	0.291**	0.166**	0.222**
3. Sexual harassment	0.374**	0.340**	_	0.340**	0.287**	0.411**	0.355**	0.813**	0.241**	0.250**
4. Dating violence	0.242**	0.305**	0.342**	_	0.670**	0.204**	0.194**	0.221**	0.773**	0.472**
5. Cyber dating violence	0.174**	0.276**	0.342**	0.568**	-	0.282**	0.326**	0.277**	0.642**	0.832**
Aggression										
6. Bullying	0.474**	0.358**	0.390**	0.220**	0.165**	_	0.571**	0.459**	0.254**	0.248**
7. Cyberbullying	0.362**	0.519**	0.336**	0.107**	0.163**	0.608**	_	0.405**	0.265**	0.312**
8. Sexual harassment	0.256**	0.197**	0.818**	0.236**	0.208**	0.436**	0.365**	_	0.245**	0.256**
9. Dating violence	0.204**	0.248**	0.301**	0.765**	0.534**	0.261**	0.229**	0.268**	_	0.658**
10. Cyber dating violence	0.156**	0.212**	0.251**	0.447**	0.870**	0.167**	0.170**	0.173**	0.576**	-

Note. "Early adolescence" group in the lower triangle, "late adolescence" group in the upper triangle.

N = 1690.

** p < .01.

Approximately 23 % of adolescents without a dating partner and 79 % of adolescents with a dating partner are involved in multiple types of violence at the same time. Thus, some adolescents seem to be deeply involved in violence in various ways.

It is noteworthy that many possibilities for poly-involvement yield meagre percentages (less than 5 %). However, if we take these

data together, we get a broad view of the frequent involvement of adolescents in violent phenomena, either with their peers or with dating partners. Specifically, among adolescents with dating experience, the majority are polyvictims (78.7 %) and polyaggressors (72.9 %), especially of two or three types of violence, compared to adolescents without dating experience, among whom the minority are polyvictims (22.6 %) and polyaggressors (12.8 %). These differences in the greater or lesser involvement in violence among adolescents according to their dating experience are not only because there are types of violence that only affect dating (i.e., dating violence and cyber dating violence). In particular, the existing differences align with previous evidence that young people who have a dating partner are considerably more likely to suffer or perpetrate violence in the physical and virtual context (Lapierre & Dane, 2019; Ojanen et al., 2015). Thus, frequent poly-involvement could reflect a background of socio-emotional difficulties in relating to others, which are accentuated by immersion in a new context, such as dating relationships (Jennings et al., 2017; Leen et al., 2013; Rodríguez-Dearriba et al., 2021; Wincentak et al., 2017). This hypothesis has been tested in different studies (Espelage et al., 2021; Josephson & Pepler, 2012), and longitudinal studies have confirmed this association (Cutbush et al., 2016; Humphrey & Vaillancourt, 2020). However, alternative explanations can be informative. For example, some studies report more maladaptive stress responses among adolescents with a dating partner due to conflicts within the relationship dynamics, such as control through social networking sites or eliciting jealousy (Van Ouytsel et al., 2016) that could lead to aggressive episodes (Sánchez-Jiménez et al., 2015). In this sense, dating or sexual behaviours play a relevant role in adolescents engaging in non-dating violence, e.g., cyberbullying based on intrasexual competition for dating partners (Lapierre & Dane, 2019).

According to the types of violence, some relevant findings refer to sexual harassment and cyberbullying. On the one hand, surprisingly, we can observe that adolescents who do not have a partner are particularly involved in sexual harassment, both as victims and aggressors. This finding could evidence that adolescents, even if they do not have a dating relationship, begin to engage in more sexual behaviours at this age (Lapierre & Dane, 2019), which may lead to more difficulties in experiencing sexuality in a positive way (Leen et al., 2013). These difficulties include an inability to detect or cope with very subtle and seemingly generalised assaults, such as verbal sexual harassment (Duncan et al., 2018; Lei et al., 2020). However, it is also necessary to consider the measurement criteria for sexual harassment (i.e., at least once in the current school year), different than for bullying and cyberbullying (i.e., at least once or twice a month in the previous two months; Ortega et al., 2010; Vivolo-Kantor er al., 2014). On the other hand, we can observe that cyberbullying often overlaps with other types of violence and rarely occurs in isolation. This overlap would be a key consideration in the design of preventive measures in a double sense: anti-cyberbullying programmes should address other types of violence, and other programmes should address cyberbullying. There is ample evidence of the overlap of cyberbullying with bullying and common risk factors (Baldry et al., 2017; Del Rey, Casas, & Ortega, 2015; Kowalski et al., 2019).

4.2. Differences in poly-involvement in violence among boys and girls

Our results on gender indicate that differences between boys and girls in violence vary according to whether it is single or multiple involvement. The role also seems to be important (victim or aggressor). Specifically, in our study, there are no differences between boys and girls in bullying victimisation, which contrasts with previous findings that boys tend to be victims of bullying and girls tend to be victims of cyberbullying (Cosma et al., 2020). However, our results are consistent with boys' greater involvement as aggressors in bullying and cyberbullying (Smith et al., 2019). Moreover, in our sample, many boys are involved in sexual harassment and many girls in dating and cyber dating violence (Caridade et al., 2019; Duncan et al., 2018; Le et al., 2015; Ybarra & Thompson, 2018). In terms of poly-involvement, it is curious that girls without dating experience are less likely to suffer or perpetrate aggression than girls with such experience and, on the other hand, when they start to have dating partners, they are more involved even than boys in dating and cyber dating violence, much more as polyaggressors (23.9 %) than as polyvictims (9.7 %). Thus, in studies of polyvictimisation and polyaggression, it would be interesting to examine whether gender differences vary when distinguishing the type of aggression (e.g., psychological vs sexual; Hokoda et al., 2012), the motives and context (Pronk & Zimmer-Gembeck, 2010), and the goals of the aggression, such as gaining, maintaining, or increasing popularity within the peer group (Ojanen & Findley-Van Nostrand, 2014). Including the measure of boys' and girls' dating history could also detect possible negative experiences, such as learning negative romantic relationship patterns (Reed et al., 2018; Van Ouytsel et al., 2016). In this regard, it is known that girls are more likely than boys to date older partners (Vivolo-Kantor et al., 2016), which in turn may involve risky behaviour.

4.3. Differences in poly-involvement in violence among early and late adolescence

Our results on the adolescent stage point especially to the fact that adolescents start to be involved in sexual harassment, dating violence or cyber dating violence in general from early adolescence. However, in late adolescence, these types of violence co-occur to a greater extent (with 22.8 % of polyvictims and 26.7 % of polyaggressors), a period in which adolescents tend to increase their dating and sexual experiences (Charmaraman et al., 2013). These findings are consistent with the lower prominence of bullying and cyberbullying with increasing age (Humphrey & Vaillancourt, 2020; Smith, 2016). However, as recognised in the present study, less involvement in bullying and cyberbullying does not imply an absence of violence, as adolescents could be involved in sexual harassment, dating violence or cyber dating violence (Hokoda et al., 2012; Le et al., 2015; Pinto-Cortez et al., 2020). Based on our findings, an early response to violence in children and adolescents is critical to avoid the risk of growing up involved or polyinvolved in violence with peers and first dating partners. In addition, we know that most adolescents have some dating experience in early adolescence (Lapierre & Dane, 2019). Therefore, they are at risk of engaging in aggressive behaviour in peer and dating partner settings. Early prevention in all types of violence becomes a tool that could also prevent poly-involvement and persistent involvement, that is, repeated or prolonged experiences of victimisation or aggression.

It should also be assumed that, in some cases, effect sizes have been slightly small, so these data need to be interpreted cautiously. However, they provide an accurate picture of the occurrence of violence among adolescents.

4.4. Conclusions and implications for practice

Poly-involvement is expected given the relationship between all the types of violence analysed, especially between more similar ones. In other words, the types of violence that share characteristics tend to overlap more frequently, for example, bullying and cyberbullying, or dating violence and cyber dating violence (Leemis et al., 2018; Oriol et al., 2019; Yahner et al., 2015). This poly-involvement is in line with evidence that counterpart phenomena in the physical and virtual environments often overlap (Cosma et al., 2020; Khong et al., 2019; Kowalski et al., 2019) and that involvement in one type of violence leads to an increased risk of involvement in another (Humphrey & Vaillancourt, 2020). In this sense, the frequent poly-involvement suggests that violence may be, to some extent, normalised by adolescents, both in the context of peers and partners, where socio-cultural factors may be playing a relevant role (Le et al., 2015).

This study provides insight into violence among adolescents (UNESCO, 2017), explicitly considering what types of violence tend to co-occur. This kind of information is handy for parents, caregivers, school administrators, teachers, and health practitioners to be sensitive to the problems of adolescents in managing their interpersonal relationships and to reflect on the need to respond early and how. The frequent occurrence of poly-involvement, especially in both boys and girls who have dating partners, highlights the need to promote gender and sexuality education. However, many current sexuality education programmes focus primarily on biology (e.g., reproductive system) or preventing unwanted pregnancies (Boonmongkon et al., 2019). Thus, there is a need for comprehensive and consistent awareness-raising on other issues affecting sexuality and relationship dynamics face-to-face or through ICTs, such as the normalisation of violent or non-consensual behaviour (e.g., coercion or control), gender stereotypes, sexual double standards or privacy and bodily integrity beliefs (Jennings et al., 2017; Lei et al., 2020; Rodríguez-Dearriba et al., 2021; UNESCO, 2018). In this regard, we also know that social beliefs about gender and dating etiquette can play an even more critical role than gender in the involvement of boys and girls in violence, either as a victim or an aggressor. It is essential to address these issues (Reed et al., 2018; Van Ouytsel et al., 2016) from an early age (UNESCO, 2018) in girls and boys.

The detailed description of the involvement in violence among adolescents serve to reflect on why there are psychoeducational programmes focused on a single type of violence that is not effective with all students. This lack of effectiveness could be explained by the very high burden of polyvictimisation or polyaggression among adolescents. Second, to design more inclusive and, therefore, potentially more effective prevention programmes, while reducing efforts and costs. Precisely, this need to design more comprehensive measures, i.e., addressing more than one type of violence instead of just one, is already supported by previous successful experiences in reducing several types of violence in combination, for example, bullying and cyberbullying (Del Rey, Casas, & Ortega, 2015) or dating violence and bullying (Muñoz-Fernández et al., 2019).

4.5. Limitations and future lines of research

This study substantially expands current knowledge on poly-involvement in violence among adolescents through a detailed descriptive analysis of a relatively large sample and the use of an unusual filter (dating experience). However, the results should be considered in light of some limitations, such as the cross-sectional nature of our study. Future lines of research should longitudinally examine the overlap between all types of peer and dating violence analysed, that is, whether the involvement in violence decreases, increases, or persists over time and under what circumstances (Humphrey & Vaillancourt, 2020); include the analysis of the dual role, i.e. being polyinvolved as a victimised aggressor (Chu et al., 2018); measure indicators of socio-emotional development, e.g., prosociality, coping strategies or resilience, and of health and well-being, e.g. mental health, as a cause and effect of involvement as a polyvictim and/or polyaggressor (Crowley & Cornell, 2020; Duncan et al., 2018; Le et al., 2015); and explore possible common predictors of polyvictimisation and polyaggression. This knowledge would be beneficial for designing comprehensive prevention measures that could impact a larger population (Leemis et al., 2018), helping adolescents break out of the cycle of violence.

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CRediT authorship contribution statement

VS-J and RR designed the study. EE, JO-R, MO, VS-J and RR collected the data. EE and MO designed and conducted the statistical analyses in close consultation with JO-R, VS-J and RR. EE wrote the first draft of the paper, in close consultation of all the authors. JO-R and MO reviewed and edited the writing. VS-J and RR supervised the work. VS-J and RR acquired the funding. All authors contributed to and have approved the final manuscript.

Conflict of interest

None.

Data availability

Data will be made available on request.

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Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.chiabu.2022.105921.

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