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Short Communication: Adolescent Cyber Dating Abuse Victimization and Its Associations with Substance Use, and Sexual Behaviors

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Abbreviations: CDA = Cyber Dating Abuse

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Introduction

Cyber dating abuse (CDA) is often defined as “the control, harassment, stalking, and abuse of one’s dating partner via technology and social media” (1; p. 1306). Although the literature is replete with studies on the association between traditional teen dating violence victimization and a host of risky behaviors, such as substance use and sexual risk behavior (2-5), only scant research is available on the associations between health risk behaviors and online forms of victimization (1). An increased understanding of the link between CDA victimization and health risk behaviors will inform prevention and intervention programs (1, 3). Therefore, the current study aims to look at the associations between substance use, sexual behaviors, and CDA victimization.

Methods

Sample

The current data are drawn from the *Teen Digital Dating Survey* and were collected between March and May 2015 in 7 secondary schools in Flanders, Belgium. The final sample comprised of 1187 students (61.3% female). In this study, we only report on data from respondents who indicated that they were “in a romantic relationship with someone or had a romantic partner” (39.3%, $n = 466$). All students in a romantic relationship (71.0% girls, $n = 331$) were between 16 and 22 years old ($M = 17.99$ years, $SD = .92$). The study’s protocol was approved by the Ethical Committee of the University of Antwerp.

Dependent variable: Cyber Dating Abuse (CDA) Victimization

The scale measuring CDA focused on victimization of controlling behaviors in the six months prior to the survey (*Cronbach's* $\alpha = .76$). The scale was adapted from the control dimension of the Cyber Dating Abuse Questionnaire (6) in which adolescents were asked, for instance, whether their e-mail messages were read without permission or whether their romantic partner had called or sent messages multiple times in a row (5/10/20/30 times an hour) through the internet or the mobile phone to control where the respondent was or with whom he/she was together. The scores of the items were summed and for the purpose of the data analyses dichotomized in 0 = *did not experience victimization* (35.0%, $n = 161$) and 1 = *experienced victimization* (65.0%, $n = 299$).

Independent variables: Substance Use and Sexual Behavior

Substance use and sexual behavior items were selected and adapted from the 2015 Youth Risk Behavior Survey (7). In addition sexual behaviors and sexual risk behaviors, adolescents reported on their alcohol use, marijuana use, and smoking behavior.

Alcohol use

If the respondents indicated that they had ever tried alcohol, they were also asked at which age they had their first drink of alcohol (ranging on a 6-point scale from *8 years old or younger* to *17 years old or older*). Furthermore, the respondents' drinking behavior in the 30 days prior to the survey was assessed by asking "on how many days the respondents had at least one drink of alcohol" (ranging from *0 days* to *all 30 days*) and on "how many days they had 5 or more drinks of alcohol in a row, within a couple of hours" (ranging from *0 days* to *20 or more days*).

Marijuana use

If the respondents indicated that they had ever tried marijuana, they were subsequently asked how many times they had consumed marijuana in the 30 days prior to the survey (ranging from *0 times* to *40 times or more*).

Cigarette use

The respondents who answered affirmatively to the question whether they had ever tried cigarette smoking, were asked on how many days they did smoke cigarettes in the 30 days prior to the survey (ranging from *0 days* to *all 30 days*).

Sexual behaviors

If the respondents indicated that they ever had sexual contact, they were asked at which age they had sexual contact for the first time (ranging from *11 years old or younger* to *17 years or older*), with how many partners they had sexual contact in their lifetime (ranging from *1 person* to *6 or more people*). Moreover, it was assessed whether the respondents had *consumed alcohol or drugs before their last sexual intercourse* and whether they have had *unsafe sex* at the last time of sexual intercourse (e.g., if their partner had not used a condom when this was necessary).

Results

The data were analyzed with SPSS v.22.0. Respondents with a recent history of CDA victimization were compared to their counterparts without a recent history. The analyses were then stratified by gender. To assess the differences between the groups we used chi-square tests for dichotomous variables and t-tests for ordinal variables. We employed Fisher's Exact Tests (FET) to analyze the differences between the groups if more than 20% of the expected counts were less than 5 when using the chi-square tests (see Table 1).

Substance Use

Youth victimized by CDA more frequently engaged in heavy episodic drinking ($t(430) = -4.02, p < .001$) compared to youth who did not report victimization. With respect to gender, only male victims were found to consume alcohol more frequently ($t(119) = -3.03, p < .01$), and started drinking at an older age ($t(122) = -2.11, p < .05$) than male non-victims. The association with episodic drinking was significant for both genders ($t \text{ males } (120) = -3.44, p < .01$; $t \text{ females } (282.454) = -2.82, p < .01$).

Sexual Behaviors and Sexual Risk Behaviors

Youth victimized by CDA had, on average, a higher amount of sexual partners in their lifetime ($t(339.957) = -3.85, p < .001$) and were more likely to have not used protection at their last sexual encounter than those who had not experienced victimization ($\chi^2(1) = 5.93, p < .05$). When stratified by gender, only female victims were found to have, on average, sexual debut at a younger age ($t(300) = 2.29, p < .05$), more sexual partners ($t(300) = -3.05, p < .01$), and were more likely to have had unsafe sex ($\chi^2(1) = 5.52, p < .05$).

Discussion

Investigating the associations between CDA victimization and other types of health behavior is important for future research and practice. Building on previous research concerning the associations between offline forms of dating violence and alcohol use (2, 3, 5, 8, 9), our study found that CDA victimization is linked to engagement in binge drinking for both males and females. However, we only found significant associations with frequency of alcohol use for males. Therefore, our finding is partially in line with a study by Zweig,

Lachman (1) who found that a more broad measure of CDA victimization was linked with frequency of alcohol use in the past 30 days, for both genders. As opposed to Zweig and colleagues, we did not find an association between CDA victimization and marijuana use (1). While the inconsistency of findings indicate a need for additional research, our results indicate that practitioners could consider mentioning alcohol use when discussing CDA with adolescents, and especially males (3).

Extending previous studies with regards to the associations between sexual risk behavior and teen dating violence (4, 8), our study found that online victimization was associated with having unsafe sex at the last sexual encounter among girls. We did not find a link between the use of alcohol before having sex. The associations between CDA victimization and sexual (risk) behaviors also differed across genders. As with substance use, our results suggest that practitioners could consider discussing safe sexual behaviors with adolescent victims of CDA. Also when discussing sexual health behaviors, advice could be included concerning related online risks, including CDA. Future studies could focus more in depth on how cyber dating abuse is related to sexual behaviors and sexual risk behaviors, both within offline and online contexts (such as the sharing of sexually explicit images), while paying attention to gender differences.

Our study found that 65.0% of our respondents had at least experienced one of the four controlling behaviors that were assessed in our study. This relatively high rate of cyber dating abuse victimization, underscores the necessity to incorporate information about online forms of abuse within dating violence prevention and intervention efforts. Existing intervention programs on healthy relationships might not yet be adapted to digital forms of dating abuse. Adolescents could be informed about how digital forms of controlling behavior are related to offline forms of abusive behaviors and negative health outcomes, and practitioners could discuss ways in which adolescents can protect themselves from perpetration (10).

Some limitations should be kept in mind when interpreting the data such as the use of a predominantly female convenience sample, the cross-sectional nature of the study, and the reliance on self-reports. Moreover, we focused on the controlling dimension of CDA. Future studies could investigate the associations of other types of CDA victimization. Future research should also focus on explanations for *why* associations between alcohol use, sexual behaviors and CDA victimization may not be consistent across genders.

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Statement of ethical approval

The study's protocol was approved by the Ethical Committee of the University of Antwerp.

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Conflict of Interest

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All respondents

	Did not experience victimization (n = 161)		Did experience victimization (n = 299)		χ^2 / t-value
	n	% / M [SD]	n	% / M [SD]	
<i>Substance Use</i>					
Ever tried alcohol (No/Yes)	5 / 156	3.1% / 96.9%	20 / 279	6.7% / 93.3%	2.615 (p = .106) ^a
Age first tried alcohol	156	4.40 [.96]	279	4.46 [.79]	-.644 (433) (p = .520) ^b
Amount of days alcohol consumed (past 30 days)	155	1.83 [1.17]	277	2.04 [1.04]	-1.897 (289.092) (p = .059) ^b
Episodic heavy drinking (past 30 days)	153	.80 [1.16]	279	1.34 [1.42]	-4.025 (430) (p < .001) ^b
Ever tried marihuana (No/Yes)	105 / 56	65.2% / 34.8%	172 / 127	57.5% / 42.5%	2.585 (p = .108) ^a
Amount of times marihuana use (past 30 days)	59	1.29 [1.52]	127	1.31 [1.67]	-.105 (184) (p = .917) ^b
Ever tried a cigarette (No/Yes)	62 / 97	39.0% / 61.0%	98 / 200	32.9% / 67.1%	1.700 (p = .192) ^a
Amount of cigarettes (past 30 days)	97	1.90 [2.37]	201	1.95 [2.30]	-.169 (296) (p = .866) ^b

<i>Sexual Behaviors and Sexual Risk Behaviors</i>					
Ever had sexual contact (No/Yes)	18 / 140	11.4% / 88.6%	19 / 277	6.4% / 93.6%	3.404 ($p = .065$) ^a
Age of first sexual contact	142	5.54 [1.26]	279	5.36 [1.07]	1.402 (246.934) ($p = .162$) ^b
Amount of sexual partners	142	1.84 [1.28]	278	2.39 [1.58]	-3.85 (339.957) ($p < .001$) ^b
Alcohol/drug use before sex (No/Yes)	132 / 7	95.0% / 5.0%	259 / 17	93.8% / 6.2%	.214 ($p = .644$) ^a
Had unsafe sex (No/Yes)	109 / 30	78.4% / 21.6%	186 / 92	66.9% / 33.1%	5.932 ($p = .015$) ^a

Table 1
Differences in Substance Use, Sexual Behaviors and Sexual Risk Behaviors, Between Youth Who Did Not Experience Cyber Dating Abuse Victimization And Youth Who Did Experience Cyber Dating Abuse Victimization

^a chi-square value; ^b t -value

	<i>Male respondents</i>					<i>Female respondents</i>				
	Did not experience victimization <i>n</i> = 45		Did experience victimization <i>n</i> = 86		χ^2 / <i>t</i> -value / Fisher's Exact Test	Did not experience victimization <i>n</i> = 116		Did experience victimization <i>n</i> = 213		χ^2 / <i>t</i> -value / Fisher's Exact Test
	<i>n</i>	% / M [SD]	<i>n</i>	% / M [SD]		<i>n</i>	% / M [SD]	<i>n</i>	% / M [SD]	
<i>Substance Use</i>										
Ever tried alcohol (No/Yes)	1 / 44	2.2% / 97.8%	6 / 80	7.0% / 93.0%	<i>p</i> = .238 ^c	4 / 112	3.4% / 96.6%	14 / 199	6.6% / 93.4%	1.418 (<i>p</i> = .234) ^a
Age first tried alcohol	44	4.09 [1.03]	80	4.44 [.77]	-2.111 (122) (<i>p</i> = .037) ^b	112	4.53 [.90]	199	4.47 [.80]	.603 (309) (<i>p</i> = .547) ^b
Amount of days alcohol consumed (past 30 days)	43	1.84 [1.34]	78	2.49 [.99]	-3.034 (119) (<i>p</i> = .003) ^b	112	1.82 [1.10]	199	1.86 [1.01]	-.348 (309) (<i>p</i> = .728) ^b
Episodic heavy drinking (past 30 days)	42	1.21 [1.57]	80	2.20 [1.47]	-3.437 (120) (<i>p</i> = .001) ^b	111	.65 [.93]	199	1.00 [1.24]	-2.816 (282.454) (<i>p</i> < .01) ^b
Ever tried marihuana (No/Yes)	20 / 25	44.4% / 55.6%	37 / 49	43.0% / 57.0%	.024 (<i>p</i> = .876) ^a	85 / 31	73.3% / 26.7%	135 / 78	63.4% / 36.6%	3.319 (<i>p</i> = .068) ^a
Amount of times marihuana use (past 30 days)	26	1.69 [1.59]	49	1.59 [1.79]	.24 (73) (<i>p</i> = .811) ^b	33	.97 [1.40]	78	1.14 [1.58]	-.538 (109) (<i>p</i> = .592) ^b

Ever tried a cigarette (No/Yes)	15 / 29	34.1% / 65.9%	28 / 58	32.6% / 67.4%	.031 (<i>p</i> = .86) ^a	47 / 68	40.9% / 59.1%	70 / 142	33.0% / 67.0%	2.000 (<i>p</i> = .157) ^a
Amount of cigarettes (past 30 days)	29	2.38 [2.32]	58	2.45 [2.28]	-.132 (85) (<i>p</i> = .895) ^b	68	1.69 [2.38]	143	1.74 [2.28]	-.147 (209) (<i>p</i> = .883) ^b
<i>Sexual Behaviors and Sexual Risk Behaviors</i>										
Ever had sexual contact (No/Yes)	4 / 40	9.1% / 90.9%	7 / 79	8.1% / 91.9%	<i>p</i> = .546 ^c	14 / 100	12.3% / 87.7%	12 / 198	5.7% / 94.3%	4.317 (<i>p</i> = .038) ^a
Age of first sexual contact	40	5.15 [1.31]	79	5.33 [1.08]	-.793 (117) (<i>p</i> = .429) ^b	102	5.69 [1.21]	200	5.38 [1.07]	2.289 (300) (<i>p</i> = .023) ^b
Amount of sexual partners	40	2.00 [1.57]	78	2.62 [1.68]	-1.928 (116) (<i>p</i> = .056) ^b	102	1.77 [1.15]	200	2.30 [1.53]	-3.344 (258.534) (<i>p</i> = .001) ^b
Alcohol/drug use before sex (No/Yes)	32 / 6	84.2% / 15.8%	71 / 8	89.9% / 10.1%	<i>p</i> = .275 ^c	100 / 1	99.0% / 1.0%	188 / 9	95.4% / 4.6%	<i>p</i> = .094 ^c
Had unsafe sex (No/Yes)	30 / 9	76.9% / 23.1%	55 / 24	69.6% / 30.4%	.691 (<i>p</i> = .406) ^a	79 / 21	79.0% / 21.0%	131 / 68	65.8% / 34.2%	5.523 (<i>p</i> = .019) ^a

Table 2

Differences in Substance Use, Sexual Behaviors and Sexual Risk Behaviors, Between Youth Who Did Not Experience Cyber Dating Abuse Victimization And Youth Who Did Experience Cyber Dating Abuse Victimization, stratified by gender.

^a chi-square value; ^b *t*-value;