JOURNAL OF WOMEN'S HEALTH
Volume 19, Number 5, 2010

DOI: 10.1089/jwh.2009.1583

Physical Dating Violence Victimization in College Women in Chile

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Abstract

Objectives: There are no published studies on physical dating violence in college students in Chile, and campuses across the country currently lack systematized programs to prevent or respond to this public health problem. This is the first study to examine prevalence and predictors of physical dating violence victimization with a sample of female college students in Chile.
Methods: A closed-ended questionnaire was administered to students enrolled in general education courses at a major public university. The prevalence of women's physical dating violence victimization was calculated, and generalized ordered logit models were used to estimate risk factors for such victimization ($n = 441$). Ancillary analyses examined associations of dating violence victimization with experiences of unwanted sexual contact and forced condom nonuse.
Results: Approximately 21% of subjects reported one or more incidents of physical dating violence not involving physical injury since age 14, and another 5% reported at least one incident resulting in physical injury during this time period. Risk factors identified in five sequential models were sexual abuse and witnessing of domestic violence in childhood, low parental education, residence away from the parental home, urban residence, and having had sexual intercourse. Maternal employment and religious participation had protective effects. Dating violence victimization was found to be significantly associated with experiences of unwanted sexual contact and forced condom nonuse.
Conclusions: The study findings show a high prevalence of physical dating violence, strong associations between several sociodemographic factors and dating violence, and links between dating violence and sexual/reproductive risk. Our results indicate a need to expand attention to this public health problem in Chile as well as other developing countries, where research and prevention/response initiatives have generally been similarly limited. The findings also have important implications for the content of dating violence, HIV/sexually transmitted infection (STI), and pregnancy prevention programs for adolescents and young adults.

Introduction

Several studies have identified high levels of intimate partner violence (IPV) in Chile.[1–4] Socioeconomic, political, and legal factors that foster such violence have also received considerable attention.[5–8] The focus in the existing research has been on violence in cohabiting and marital unions, yet dating violence in adolescence and young adulthood is also an important public health concern. Studies in the United States have linked it with a wide range of mental, sexual, and reproductive health problems, including sexual risk behaviors, earlier sexual debut, substance use, adolescent pregnancy, unhealthy weight control behaviors, and suicidality.[9–11] In addition, dating violence can be a precursor to continued and more severe violence in subsequent contexts of cohabitation and marriage.[12,13] To date, no published studies have examined dating violence in Chilean youth. Commissioned by SERNAM (the Chilean national women's bureau), a review of the few available unpublished reports concludes that high levels of dating violence likely exist, with patterns similar to those documented for other countries.[14]

The present study sought to address this gap in research. It was guided by an extensive literature from industrialized countries (primarily the United States) that examines prevalence and predictors of dating violence victimization in high school and college students, with the goal of informing prevention strategies.[15,16] Several studies have found associations between sexual or physical abuse during childhood and

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subsequent dating violence victimization.[17–19] A meta-analysis of the relationship between witnessing domestic violence in the family of origin and subsequent victimization by a spouse found small to moderate effect sizes[20]; an analysis of dating violence victimization found a similar result.[21] A recent longitudinal study found that violence in the childhood environment (physical victimization by a parent or guardian, sexual victimization by an adult or similarly aged peer, or witnessing domestic violence) was associated with an increased probability of subsequent physical dating violence victimization.[22]

Although research findings have been mixed, several studies have found that youth raised in socioeconomically disadvantaged homes are more likely to witness intrafamilial aggression.[2,13,23] There is also some evidence linking low socioeconomic status (SES) with a higher likelihood of sexual abuse during childhood, although this association may partly reflect easier detection of abuse that takes place in lower SES homes.[24] Low SES, therefore, may be indirectly associated with risk of subsequent victimization through its link to early experiences with aggression.

Some involvement in religious activities has been associated with beneficial outcomes for youth in a range of health domains, including delayed sexual debut, less substance use, and a tendency not to have close friends who use alcohol or other drugs.[25–27] These patterns may help explain links found between religious participation and reduced dating violence victimization risk in 12–17-year-olds[28] and in high school students.[29]

Physical violence has been found to be more likely to occur in adolescent romantic relationships that include sexual intercourse.[30] In studies of dating violence with college student samples, students' living arrangements have received little attention; it seems likely that those who live outside the parental home have greater exposure to victimization risk than their counterparts who remain within it. It is unclear on theoretical grounds in which direction rural vs. urban location would affect exposure, and dating violence studies with high school samples have reported conflicting evidence: one analysis found urban residence to be associated with a higher risk of physical violence victimization,[31] and more recent work has reported the opposite.[32]

Finally, maternal employment has been found to be associated with daughters' less traditional gender role attitudes.[33] It has also been linked with both positive and negative developmental outcomes for youth, including behavioral difficulties.[34] This factor may thus be indirectly associated with victimization risk; the direction of the effect is ambiguous on theoretical grounds.

Building on the literature, we report findings from a broader project on gender-based violence in Chilean college students. Our first study examined prevalence and predictors of sexual victimization in women,[35] and the second described male-female differences in sexual victimization prevalence and contexts.[36] This study examines prevalence and predictors of physical dating violence victimization in women, with a focus on two main domains of subjects' lives: experiences with violence before age 14 and socioeconomic and demographic characteristics. In addition, building on a growing U.S. literature that links physical dating violence victimization with other forms of victimization,[22,37–39] we examine associations of dating violence with experiences of unwanted sexual contact and forced condom nonuse. We discuss the implications of our findings for public health research and practice in Chile and, more broadly, other developing countries in Latin America and beyond.

Materials and Methods

Study design

The study participants were male and female students enrolled at a major public university in Santiago during the winter 2005 term. We surveyed all general education courses except one, which had a session cancellation. Total enrollment in these 24 classes was 2451, with some students (the exact number is unknown) enrolled in more than one course. At the time of survey administration, 1193 students were present in the 24 classes, consistent with the typical attendance rate in general education courses. Completed surveys were returned by 970 students, reflecting an 81% response rate. Students were instructed not to respond to the survey again if they had completed it in another class, accounting for some of the nonresponse. Entitled "2005 Survey of Student Well-Being," the closed-ended questionnaire included items on physical, psychological, and sexual victimization. Additional description of the study design and survey is provided elsewhere.[35,36]

The present study used the female sample ($n = 484$) and focused on physical dating violence. Subjects were included in analyses if they reported ever having had a date or romantic relationship since age 14; 36 subjects who did not meet this criterion were dropped. Seven subjects with missing data on physical dating violence outcomes were also dropped, yielding a final sample of 441 subjects.

Dependent variable

Physical victimization. Survey items on physical dating violence were adapted from a scale used by Foshee[40]; items regarding injury were drawn from the Revised Conflict Tactics Scales (CTS2)[41] (Fig. 1). Subjects were asked to respond to these items if they had ever had a date or a romantic relationship since age 14. Physical violence victimization was operationalized as a trichotomous variable; the mutually exclusive categories indicate report of (1) no incident of physical violence, (2) at least one incident of physical violence but no physical injury, and (3) at least one incident resulting in physical injury. The survey instructed respondents to exclude incidents in which their partner was acting in self-defense.[15] Specifically, it stated: "If it ever happened that your partner did something in self-defense in response to something you initiated, exclude those cases."

Covariates

Sexual abuse before age 14 = 1 if the subject responded affirmatively to at least one of the following items: "Before age 14, did someone ever make you have sex against your will? Before age 14, did you ever have any other form of unwanted sexual experience, such as forced kisses or grabbing?" Survey instructions defined sex as referring to vaginal, oral, or anal sex.

Witnessed domestic violence before age 14 = 1 if the subject reported having ever witnessed violence, before age 14, between her parents or other adults who raised her.

A: Incidents of Physical Violence

How many times has any person with whom you have had a romantic relationship or gone out on a date done some of the things mentioned below?

(Never; 1–2 times; 3–5 times; 6 times or more)

Scratched or slapped me
Pushed, grabbed, or shoved me
Slammed me or held me against a wall
Kicked or bit me
Hit me with a fist
Hit me with something hard
Hit me repeatedly
Tried to choke me
Burned me
Assaulted me with a knife or gun

B: Physical Injury

Have any of the following things happened to you due to a fight with your partner or somebody whom you have dated?

(Yes/No)

I had a sprain, bruise, or small cut because of a fight with a partner
I passed out from being hit on the head by my partner in a fight
I went to a doctor for an injury from a fight with my partner
I needed to see a doctor for an injury from a fight with my partner, but didn't go

FIG. 1. Survey items regarding physical violence and injury (past 12 months and since age 14).

Low parental education = 1 if the highest educational level attained by the subject's parents or other adults who raised her was 12 years of regular schooling or less or incomplete advanced technical schooling or less.

Attendance at religious services at age 14 = 1 if the subject reported at least some attendance at religious services at age 14.

Residence away from parents during college years = 1 if the subject had primarily resided outside the parental home since enrolling in the university.

Ever had sexual intercourse = 1 if the subject reported having ever had voluntary vaginal or anal sex.

Control variables

Large city at age 14 = 1 if the subject resided in Santiago or another large urban area at age 14.

Maternal employment at age 14 = 1 if the subject's mother worked outside the home when the subject was 14.

Age ≥ 21 = 1 if the subject was ≥21 years of age at the time of survey administration. This variable adjusts for length of exposure to victimization risk.

For our analyses of associations between physical dating violence victimization and sexual victimization, we used the following variables.

Unwanted sexual contact since age 14. This was a trichotomous variable indicating the most severe form of unwanted sexual contact experienced since age 14: (1) attempted rape or rape, (2) other forms of unwanted sexual contact, such as touching or forced kisses, and (3) no incidents of unwanted sexual contact. (The text of the questionnaire items is available elsewhere.[35,36])

Forced condom nonuse since age 14. This dichotomous variable was based on the following question: "Since age 14, has it ever happened that your boyfriend/girlfriend or dating partner made you have sex without a condom when you wanted to use a condom?"

Statistical analysis

Means for the independent variables and cross-tabulations were generated first. To minimize loss of information, we imputed the modal category for a small number of cases with missing data for independent variables (Table 1, note a). Descriptive statistics were then generated for victimization prevalence. Generalized ordered logit models were estimated to examine factors associated with victimization since age 14, using GOLOGIT2 in Stata version 9.2 (Stata Corp., College Station, TX).[42] This procedure uses information about the order of the three categories (i.e., the greater severity of an incident involving injury compared with one not involving injury) and allows the proportional odds assumption to be relaxed for variables that fail to meet it. Sequential models were constructed: the control and family background variables were included first, followed by the variables regarding place of residence while attending college and initiation of sexual activity. The variables regarding early experiences with violence were added last. Preliminary runs included a nonintact family variable; it was insignificant in all models and dropped from further analyses. Predicted probabilities of physical dating violence victimization evaluated at selected values of the independent variables were calculated with the same software program.

Finally, we generated cross-tabulations between having ever experienced physical dating violence since age 14 and (1) having ever experienced unwanted sexual contact since age 14 and (2) having ever been forced by a partner to have sex without a condom since age 14.

Table 1. Descriptive Statistics for Independent Variables

(n=*441*)	%
Covariates	
Low parental education	30.2
Attendance at religious services at age 14	76.0
Residence away from parents during college years	21.5
Ever had sexual intercourse	64.9
Sexual abuse before age 14	20.9
Witnessed domestic violence before age 14	36.3
Controls	
Large city at age 14	77.6
Maternal employment at age 14	60.5
Age ≥ 21	37.4

As noted in the text, the modal category was imputed for cases with missing values. Fewer than 13 cases were imputed for each variable, with the exception of the sexual debut variable, which had 29 observations with missing data.

Table 2. Percentage of Subjects Reporting Physical Violence Victimization

	Since Age 14 (n=*441*)	*Past 12 months* (n=*412*)[a]
Violence with physical injury	5.0	2.4
Violence with no physical injury	20.6	12.9
No incidents of dating violence	74.4	84.7
Total	100	100

[a]29 observations with missing data on past 12-month victimization were dropped.

Results

Sample descriptive statistics

Descriptive statistics for the independent variables are presented in Table 1. The age range was 18–30 years; almost two thirds of subjects were <age 21, reflecting students' tendency to take general education courses early in their studies. Low SES, measured by low parental education, characterized 30.2% of the sample.

Chilean youth typically live in the parental home during the college years; exceptions tend to be students raised in other parts of the country or those who belong to households in the top of the income distribution. Consistent with this, 78.5% of the subjects had primarily resided with their parents since enrolling in the university. Subjects who lived away from their parents were disproportionately raised in nonmetropolitan areas ($p < 0.01$) and higher SES homes ($p = 0.05$). Fewer than 2% indicated primary residence with a partner or spouse. Subjects who reported some religious service attendance at age 14 were less likely to report that they had ever had voluntary sexual intercourse ($p < 0.01$).

Approximately 36% of subjects reported having ever witnessed domestic violence before age 14, and 20.9% reported sexual abuse before age 14. Subjects who reported witnessing domestic violence also more commonly reported experiencing sexual abuse, by a margin of 9.1 percentage points ($p < 0.01$). Witnessing domestic violence and experiencing sexual abuse were each more common, by margins of 17.0 and 11.0 percentage points, respectively, when parental education was low ($p < 0.01$ in each case).

Physical dating violence victimization

Approximately 21% ($n = 91$) of subjects reported one or more incidents of physical victimization not involving injury since age 14, and another 5.0% ($n = 22$) reported at least one incident resulting in injury during this period (Table 2). The corresponding past-year estimates were 12.9% ($n = 53$) and 2.4% ($n = 10$), respectively. More than one incident was reported by 44.3% ($n = 50$) of subjects who had ever been victimized since age 14 and by 72.7% ($n = 16$) of those who experienced an injury during this period.

Generalized ordered logit analyses

The generalized ordered logit estimates for victimization since age 14 are shown in Table 3. Brant tests in preliminary runs indicated that age and maternal employment violated the proportional odds assumption in all models; the corresponding odds ratios (ORs) were, therefore, allowed to vary across categories. As indicated by the Wald tests, there were no violations of this assumption in the final models.

Model 1 indicates that for older subjects (aged ≥ 21 years), the odds of being in category 3 (victimization with injury) as opposed to categories 1 and 2 were 4.87 times the odds of younger subjects. Maternal employment was associated with a substantially lower risk of victimization with injury (adjusted OR [AOR] 0.28, $p = 0.01$). Subjects who indicated at least some attendance at religious services at age 14 had 0.62 times the odds of reporting victimization compared with those who indicated no religious service attendance ($p = 0.05$).

Model 2 shows that living outside the parental home while attending college was associated with higher odds of victimization (AOR 2.10, $p = 0.03$), as was ever having had sexual intercourse (AOR 1.81, $p = 0.02$). When these two variables were added, the effects of low parental education and urban parental home increased in magnitude and became significant (AOR 1.67, $p = 0.03$ and AOR 2.26, $p = 0.03$, respectively), and religiosity lost significance. Model 1 may have concealed that being raised in an urban setting and in a low-SES household were each associated with higher odds of victimization partly because subjects with these characteristics also disproportionately lived with their parents while attending college, which had a large protective effect. The loss of significance of religiosity in Model 2 suggests that youth who grow up with at least some religious service attendance may be less vulnerable to victimization partly in relation to their tendency to initiate sexual intercourse later.

Experiencing sexual abuse and witnessing domestic violence before age 14 were associated with elevated odds of victimization in Models 3 and 4, respectively (AOR 1.95, $p = 0.01$; AOR 1.58, $p = 0.05$). These measures of childhood violence were correlated, and Model 5, which includes both variables, shows weaker effects. In going from Model 2 to Model 5, the effect of low parental education decreased in magnitude and lost significance, suggesting that sexual abuse and witnessing of domestic violence in childhood act as mediators of the effect of low SES in the family of origin.

Table 4 presents predicted probabilities of physical dating violence victimization, using Models 1 and 5 to illustrate the absolute magnitudes of the effects. These estimates were calculated by first setting all the independent variables in the generalized ordered logit equations at the modal values, then allowing one characteristic to vary at a time. For example, Model 5 shows that for a subject who did not report sexual abuse before age 14 and had typical characteristics for the other independent variables, the probability of reporting no incidents of victimization since age 14 was 0.83; for her counterpart who reported sexual abuse before age 14, the probability was 11 percentage points lower.

Physical dating violence and sexual coercion

Table 5A provides information on joint experience of physical dating violence and unwanted sexual contact since age 14 (not necessarily by the same perpetrator or in the same incident). Of 403 cases in the sample remaining after deletion of 38 cases with missing data on unwanted sexual contact,

Table 3. Generalized Ordered Logit Estimates: Physical Victimization ($N = 441$)

	Model 1 Socioeconomic and demographic variables only	*Model 2 Adding residence and sexual intercourse*	*Model 3 Adding sexual abuse before age 14*	*Model 4 Adding witnessing domestic violence before age 14*	*Model 5 Adding both measures of violence before age 14*
Covariates					
Low parental education	1.51, 0.08 (0.95-2.38)	1.67, 0.03* (1.05-2.67)	1.59, 0.06 (0.99-2.54)	1.52, 0.09 (0.94-2.44)	1.45, 0.13 (0.90-2.35)
Attendance at religious services at age 14	0.62, 0.05* (0.38-1.00)	0.68, 0.13 (0.42-1.12)	0.68, 0.14 (0.42-1.13)	0.68, 0.14 (0.42-1.13)	0.68, 0.13 (0.41-1.12)
Residence away from parents during college years	—	2.10, 0.03* (1.07-4.10)	2.11, 0.03* (1.08-4.13)	1.86, 0.07 (0.94-3.67)	1.89, 0.07 (0.96-3.74)
Ever had sexual intercourse	—	1.81, 0.02* (1.09-3.02)	1.76, 0.03* (1.05-2.95)	1.75, 0.03* (1.05-2.92)	1.70, 0.04* (1.01-2.84)
Sexual abuse before age 14	—	—	1.95, 0.01** (1.18-3.21)	—	1.89, 0.01** (1.14-3.12)
Witnessed domestic violence before age 14	—	—	—	1.58, 0.05* (1.00-2.50)	1.52, 0.08 (0.95-2.41)
Controls					
Large city at age 14	1.47, 0.18 (0.84-2.56)	2.26, 0.03* (1.10-4.63)	2.32, 0.02* (1.14-4.73)	2.05, 0.05* (1.00-4.21)	2.13, 0.04* (1.04-4.37)
Maternal employment at age 14					
1 vs. 2 and 3	0.75, 0.21 (0.48-1.17)	0.71, 0.14 (0.45-1.11)	0.72, 0.16 (0.45-1.14)	0.66, 0.08 (0.42-1.06)	0.68, 0.11 (0.43-1.09)
1 and 2 vs. 3	0.28, 0.01** (0.11-0.70)	0.27, 0.01** (0.11-0.67)	0.27, 0.01** (0.11-0.67)	0.25, < 0.01** (0.10-0.63)	0.25, < 0.01** (0.10-0.64)
Age					
1 vs. 2 and 3	1.32, 0.21 (0.85-2.06)	1.07, 0.79 (0.67-1.70)	1.02, 0.95 (0.63-1.63)	1.08, 0.76 (0.67-1.72)	1.03, 0.91 (0.64-1.65)
1 and 2 vs. 3	4.87, < 0.01** (1.88-12.65)	3.89, 0.01** (1.48-10.25)	3.76, 0.01** (1.42-9.92)	3.97, 0.01** (1.51-10.49)	3.86, 0.01** (1.46-10.23)
log L	−291.79	−286.58	−283.29	−284.71	−281.75
Chi-square	29.76**	40.17**	46.76**	43.91**	49.84**
p value, df	<0.01, 7	<0.01, 9	<0.01, 10	<0.01, 10	<0.01, 11
Wald-test	3.96	4.69	4.50	4.67	4.56
p value, df	0.27, 3	0.46, 5	0.61, 6	0.59, 6	0.71, 7

Dependent variable is trichotomous: it equals 1 (no victimization), 2 (victimization with no injury), or 3 (victimization with injury). Given as odds ratios, p value, (confidence interval).
**$p < 0.01$; *$p < 0.05$.

13.65% of subjects ($n = 55$) reported incidents of both forms of abuse. Among those who reported any experience of physical dating violence ($n = 105$), 52.38% of subjects ($n = 55$) reported unwanted sexual contact. Rape or attempted rape was indicated by 63.16% of subjects who reported dating violence with injury, 24.42% of subjects who reported dating violence with no injury, and 11.41% of those who reported no dating violence. The association between experiences of physical dating violence and unwanted sexual contact was statistically significant ($p < 0.01$).

Table 5B, based on the subsample of 249 subjects who indicated ever having had voluntary sexual intercourse, shows that 8.03% of subjects ($n = 20$) reported both forced condom nonuse and physical victimization. Among those who reported any experience of physical dating violence ($n = 79$), 25.32% ($n = 20$) reported forced condom nonuse. This form of sexual coercion was reported by 52.63% of subjects who reported dating violence with injury, 16.67% of subjects who reported dating violence with no injury, and 11.18% of those who reported no dating violence. The association between physical victimization and forced condom nonuse was statistically significant ($p < 0.01$).

Discussion

This study provides the first quantitative data regarding prevalence and predictors of physical dating violence victimization with a sample of Chilean college women. Approximately one quarter of female respondents at a public university reported physical dating violence victimization since age 14, and about 15% reported victimization in the past 12 months, suggesting that dating violence in Chilean college students is a problem warranting further public health attention. These results are consistent with findings for the United States, including a parallel sentinel U.S. study that found that approximately one fifth of male and female respondents at a public university reported physical dating violence victimization[12]; this initial finding led to numerous

Table 4. Predicted Probabilities of Dating Violence Victimization for Selected Values of Independent Variables

	Model 1			*Model 5*		
	p_1	p_2	p_3	p_1	p_2	p_3
Reference subject[a]	0.81	0.18	0.01	0.83	0.16	0.01
Low parental education	0.74	0.24	0.01	0.77	0.22	0.01
No attendance at religious services	0.73	0.26	0.01	0.77	0.22	0.01
Residence away from parents	—	—	—	0.72	0.27	0.01
Never had sexual intercourse	—	—	—	0.89	0.10	0.01
Experienced sexual abuse before age 14	—	—	—	0.72	0.27	0.01
Witnessed domestic violence before age 14	—	—	—	0.76	0.23	0.01
Small city/rural area	0.86	0.13	0.01	0.91	0.08	0.01
Mother not employed	0.77	0.20	0.03	0.77	0.20	0.03
Age $\geq$ 21	0.77	0.19	0.04	0.82	0.15	0.03

p_1, p_2, and p_3 represent the probabilities of no victimization, victimization with no injury, and victimization with injury, respectively.
[a]The probabilities reported in this first row are for a reference subject who has the modal characteristics: high parental education, at least some religious service attendance at age 14, residence with parents since college enrollment, had initiated sexual activity, no report of sexual abuse or witnessing domestic violence before age 14, lived in large city at age 14, mother worked outside home at age 14, current age under 21. The probabilities shown in the other rows correspond to subjects who differ from the reference subject in only one trait, as noted in the stub.

subsequent efforts to estimate prevalence rates in U.S. high school and college populations, identify risk factors, and develop and evaluate prevention programs.[21,43,44] Recent U.S. studies of physical dating violence generally report prevalence rates ranging from 21% to 45%; results vary widely, reflecting different methodologies and time frames.[15]

With regard to types of physical violence, approximately 21% of study subjects reported at least one incident of physical violence but no injury since age 14; another 5% reported at least one incident resulting in injury. This pattern, with a high level of violence and assaults not causing injuries predominating, is consistent with that found in a recent international study of university students in 31 institutions across 16 countries.[45] The high prevalence of physical dating violence found in this and other studies is a concern, both *per se* and because violence tends to grow more severe after transition to cohabitation and marriage.[13]

Studies examining IPV in Chilean marital and cohabiting unions have commented on Chile's conservative social context, where adherence to traditional gender norms and permissive attitudes about violence against women are widespread, where men's violence against female partners is often considered to be a demonstration of love, and where pervasive alcoholism in men has also been noted to exacerbate men's violence against women. In addition, the legal landscape has been viewed as reflective and supportive of this sociocultural environment; for example, divorce was legalized in 2004, making Chile the last Western country to do so, and abortion remains illegal under all circumstances.[5,6,8]

Table 5. Associations Between Physical Victimization Since Age 14 and Sexual Victimization Since Age 14

A: Unwanted sexual contact	*Rape or attempted rape*	*Other forms of unwanted sexual contact (e.g., forced kisses, grabbing)*	*None*	
Physical victimization				
At least one incident resulting in injury	12 (63.16%)	2 (10.53%)	5 (26.32%)	$n = 19$ (100%)
At least one incident, no injury	21 (24.42%)	20 (23.26%)	45 (52.33%)	$n = 86$ (100%)
None	34 (11.41%)	39 (13.09%)	225 (75.50%)	$n = 298$ (100%)
	Chi-square = 47.99 (4 df) $p < 0.01$			$n = 403$[a]
B: Forced condom nonuse	*Yes*	*No*		
Physical victimization				
At least one incident resulting in injury	10 (52.63%)	9 (47.37%)	$n = 19$ (100%)	
At least one incident, no injury	10 (16.67%)	50 (83.33%)	$n = 60$ (100%)	
None	19 (11.18%)	151 (88.82%)	$n = 170$ (100%)	
	Chi-square = 22.29 (2 df) $p < 0.01$		$n = 249$[b]	

[a]38 cases with missing data on sexual victimization were dropped.
[b]This cross-tabulation is based on the subsample of subjects who reported ever having had voluntary sexual intercourse.

It is likely that these social factors contribute to the high levels of dating violence documented in the present study, suggesting that dating violence prevention strategies in Chile should include efforts to address young people's attitudes and beliefs about gender role norms and the legitimacy of partner violence and to foster the development of skills for conflict resolution, supporting friends in violent relationships, and seeking formal help.[44,46,47] Initiatives along these lines developed for the United States could be adapted to Chilean contexts.

Risk and protective factors

In this study, several factors were found to be associated with Chilean college women's vulnerability to dating violence victimization. Consistent with U.S. study findings, early experiences of sexual abuse and witnessing domestic violence were each associated with increased odds of subsequent victimization.[17–19,21] Mechanisms for these associations are not well understood in the literature, and it is important to emphasize that although childhood sexual abuse and witnessing domestic violence may augment women's vulnerability to subsequent partner violence, such exposures do not directly translate into perpetrators' chosen behaviors. Further research is needed in this area, and in the meantime, the present results indicate a need for pragmatic efforts toward prevention of dating violence perpetration as well as risk reduction for potential victims.

Low parental education was associated with increased odds of dating violence victimization; further analyses indicated that childhood sexual abuse and witnessing domestic violence may mediate the association between low parental education and dating violence. Residence away from the parental home can increase a woman's physical as well as emotional isolation, increasing her vulnerability to initiation and maintenance of dating violence victimization; the present results identify living arrangements as an important factor meriting attention in Chilean prevention programs. Also consistent with findings from U.S. studies,[30,48] having initiated sexual intercourse was associated with higher odds of victimization, reflecting in part the association of violence with more intimate relationships where intercourse occurs. It is also possible that students who choose to live away from home or to become sexually active may have unobserved characteristics that augment vulnerability.

Regarding protective factors, subjects who reported at least some religious service attendance at age 14 had lower odds of subsequent victimization; additional analyses suggested that the beneficial effect of such participation was partly due to its association with delayed sexual debut. Maternal employment was also found to have a protective effect against incidents of violence involving injury. Further research should examine the extent to which young women raised by working mothers develop beliefs, attitudes, and skills that reduce their vulnerability.

International comparisons

This discussion highlights similarities in findings on dating violence victimization for Chile and the United States. However, two important caveats should be noted. First, the sample for this study was composed of students at one university in Santiago. Results on physical violence against ever partnered women from a multicountry World Health Organization (WHO) study found substantial differences in prevalence not only across but also within countries, by geographic location. For example, for the case of Chile's neighbor, Peru, the lifetime prevalence of IPV against women ranged from 18.6% (city) to 61.0% (province).[49] Second, recent research has emphasized the importance of considering sociocultural contexts in analyses of dating violence, including the availability of psychosocial support services.[37] The consequences of dating violence are likely to be especially severe in a country like Chile, where there is a dearth of support resources for adolescents and young adults, where social discourse on the subject is very limited, and where reluctance to disclose victimization is likely high.

Experiences of covictimization

The findings from our Chilean sample linking physical dating violence and experiences of unwanted sexual contact are consistent with results from recent U.S. studies.[22,37] We find that approximately 52% of subjects who report physical dating violence also report experience of unwanted sexual contact and that most severe sexual victimization (rape or attempted rape) is strongly associated with most severe physical victimization (violence with injury). Further research is needed to examine the extent to which covictimization reflects background factors (e.g., childhood experiences with violence) that independently affect the risk of each form of subsequent victimization and the extent to which experiencing one form of victimization in adolescence may increase vulnerability to the other. Additional research is also needed on the extent to which physical and sexual partner violence co-occur in abusive partnerships for youth and young adults, augmenting the risk of HIV/STI from physically violent partners.

Also consistent with results from a growing U.S. body of literature, we find that physical dating violence victimization is associated with forced condom nonuse, with approximately one quarter of subjects who report experience of physical dating violence also reporting this form of sexual coercion. A study of black adolescent women recruited at an adolescent medicine clinic, health department, and school health classes found that women with a history of physical dating violence victimization had half the odds of reporting consistent condom use compared with their counterparts without this history. These respondents were also significantly more likely to fear talking with their partners about pregnancy prevention and to fear potential consequences of negotiating condom use.[38] A study of young women attending family planning clinics in Texas found a negative association between IPV and condom use at last intercourse, as well as between IPV and hormonal contraceptive use at last intercourse.[39] In addition, a nationally representative study of students in grades 9–12 found that past-year dating violence in sexually experienced girls was associated with substantially increased odds of several sexual risk behaviors, including condom nonuse at last sex, and also with adolescent pregnancy.[50]

The present study findings underscore a need for additional investigation in Chile regarding links between partner violence and sexual/reproductive risk in youth and indicate that Chilean dating violence and sexual violence prevention programs for adolescents and young adults should include

skill-building regarding condom use negotiation, discussion of the importance of shared decision making about condom and other contraceptive use, and emphasis on the point that forced condom nonuse is an act of violence in itself. Along similar lines, programs aimed at preventing HIV/STI and unwanted pregnancy in Chilean youth should address dating violence and sexual violence prevention, as well as condom and other contraceptive negotiation within the context of abusive relationships. Given that these issues are intertwined, their prevention must be as well.

International perspectives

In the international arena, violence against women has come to be recognized as a violation of human rights as well as a public health and development concern. In 2000, the United Nations General Assembly adopted the Millennium Declaration, which resolves "to combat all forms of violence against women"; the Millennium Development Goals include the promotion of gender equality and empowerment of women.[51,52] The WHO has provided comparable data on violence against women by intimate partners for ten countries in varying stages of economic development, with a focus on women who have ever been in married or common-law relationships.[49] A variety of programs to prevent such violence have been developed in countries around the world, although few programs have been rigorously evaluated.[53] Consistent with our earlier[35,36] and present results in Chile, the far more limited international evidence based on studies with youth populations suggests generally high levels of sexual and physical dating violence.[45,54] The development and evaluation of efforts directed to reduce such violence will help ameliorate major obstacles to the health and well-being of young people; at the aggregate level, such efforts can be expected to make an important contribution to human capital investments and the realization of the Millennium Development Goals.

Limitations

Some limitations of our study should be noted. First, although the study sample included a wide range of students enrolled in the university, it was not a random sample, and the findings do not generalize to the entire student body. The victimization prevalence findings are likely to be underestimates because IPV is commonly underreported due to factors including denial, not interpreting violence as such, social desirability bias, and recall error.[15,55] Second, a substantial proportion of the eligible subjects were absent on the day of survey administration. Although IPV victimization is known to be associated with workplace absenteeism,[56,57] to our knowledge, the relationship between dating violence victimization and school absenteeism has not been studied. However, associations between school absenteeism and risk behaviors, including smoking and drug use,[58–60] and the association, in turn, between such behaviors and dating violence victimization,[9,61] suggest that the students who were absent probably included a disproportionate number of higher-risk individuals. Third, our analysis focused on one dimension of physical violence severity: whether an incident ever resulted in physical injury. Other aspects, including frequency of occurrence, also merit attention in future research. Finally, whereas causality cannot be inferred from our cross-sectional analyses, the sequential ordered logit models and age-specific variables suggest potential mechanisms linking various factors to victimization risk, which merit further investigation.

Conclusions

This study provides initial evidence on the prevalence of and risk factors for dating violence victimization in female college students in Chile and on links between physical dating violence and sexual/reproductive health risk in this population. The high prevalence of physical dating violence found in this study indicates a need to collect further quantitative and qualitative data about such violence in Chilean adolescents and young adults and to begin to develop and evaluate theory-based programs to prevent and respond to this public health problem in Chile. Recent contributions to the field indicate the importance of making a gendered approach a centerpiece of such efforts.[37,62,63] Dating violence research and prevention and response initiatives have been similarly limited in much of Latin America and other less developed regions, warranting parallel efforts. The significant associations found between physical dating violence and sexual victimization in this study are also noteworthy, with important implications for the content of dating violence, HIV/STI, and pregnancy prevention programs for youth.

Acknowledgments

Special thanks are due to Vaughn Rickert, PsyD, for valuable suggestions about survey development and study design and for helpful comments on an earlier draft of this article. We also received valuable comments from Shari L. Dworkin, Ph.D., Houston H. Stokes, Ph.D., and two anonymous referees.

This project was supported by award number T32MH019105 from the National Institute of Mental Health. The content of this article is solely the responsibility of the authors and does not necessarily represent the official views of the National Institute of Mental Health or the National Institutes of Health.

Disclosure Statement

The authors have no conflicts of interest to report.

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