

History of Family Violence, Childhood Behavior Problems, and Adolescent High-Risk Behaviors as Predictors of Girls' Repeated Patterns of Dating Victimization in Two Developmental Periods

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Abstract

This study aims to document the prevalence of repeated patterns of dating victimization and to examine, within the frameworks of an ecological model and lifestyle/routine activities theories, associations between such patterns and family, peer, and individual factors. Dating victimization in adolescence (age 15) and early adulthood (age 21) was evaluated in 443 female participants. Multinomial logistic regression analyses revealed that history of family violence, childhood behavior problems, and adolescent high-risk behaviors were associated with an increased risk for girls of being victimized (psychologically and/or physically/sexually) in their dating relationships, either in adolescence or early adulthood, or at both developmental periods.

Keywords

dating victimization, longitudinal study, young women

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Victimization in women's dating relationships is a disquieting public health problem experienced by a significant number of females from adolescence onward. In studies using nationally representative samples, approximately 10% of adolescent girls reported physical victimization, 7% reported sexual victimization, and 29% reported psychological victimization from a dating partner (Eaton, Davis, Barrios, Brener, & Noonan, 2007; Halpern, Oslak, Young, Martin, & Kupper, 2001; Howard & Wang, 2003; Raghavan, Bogart, Elliott, Vestal, & Schuster, 2004). Adolescent dating victimization is associated with serious negative outcomes, including illicit substance use, depressive symptoms, and suicidal attempts (Ackard, Eisenberg, & Neumark-Sztainer, 2007; Roberts, Klein, & Fisher, 2003). It is also related to an increased risk of revictimization in subsequent romantic relationships. In fact, data have shown that dating victimization in adolescence is a significant predictor of dating victimization in young adulthood (Lehrer, Buka, Gortmaker, & Shrier, 2006; Spriggs, Halpern, & Martin, 2009). However, very few studies have used a longitudinal design to examine patterns of dating victimization among girls from adolescence to early adulthood. This study aims to explore repeated patterns of victimization in adolescence and early adulthood and to investigate the potential contribution of family (history of family violence and parental monitoring), peer (affiliation with deviant peers), and individual factors (childhood behavior problems and high-risk behaviors in adolescence) as predictors of repeated patterns of girls' dating victimization.

One study focusing on longitudinal patterns of dating victimization from adolescence to young adulthood was conducted by Halpern, Spriggs, Martin, and Kupper (2009). Using a subset of the data available from the Add Health survey—a longitudinal, nationally representative sample of U.S. adolescents in Grades 7 to 12 recruited in the 1994–1995 school year—they found that 44% of girls ($n = 1,361$) reported dating victimization by young adulthood. Nine percent experienced dating victimization only in adolescence and 27.4% experienced victimization only in young adulthood, but 7.8% showed persistent victimization across both developmental periods. These results suggest that a subgroup of young females may experience continued victimization in the context of romantic relationships. While providing relevant data, one shortcoming of this study is that physical victimization was the only form of dating violence measured in adolescence, and only one item evaluating sexual victimization was added at the young adult survey. Another limitation of this study is that psychological dating victimization was not examined prospectively from adolescence to early adulthood. In fact, psychological violence appears to be particularly relevant to examine in first dating relationships and may be as detrimental to adolescent well-being as physical victimization (Jouriles, Garrido, Rosenfield, & McDonald, 2009). In addition, psychological victimization often co-occurs with other forms of victimization and can even predict their occurrence (O'Leary & Smith Slep, 2003; Sears, Byers, & Price, 2007). To address the limitations, this study explored the presence of psychological, physical and sexual victimization in a community-based sample of girls who were questioned about dating violence in adolescence and early adulthood.

Halpern et al. (2009) have examined associations between longitudinal patterns of dating victimization and selected sociodemographic, individual, experiential, and

partnership characteristics. Their results showed that multiple romantic partners and early sexual debut (before age 16) were the most consistent predictors of dating victimization, its timing of onset, and its persistence from adolescence to young adulthood. According to Jessor's (1991) problem behavior theory, early sexual initiation and multiple dating partners may be one facet of a larger generalized pattern of high-risk behavior. Jessor proposes the concept of "high-risk behavior" to refer to any behavior that can compromise the adolescent's physical and psychosocial health and successful development. Specifically, Jessor's model posits that adolescent high-risk behaviors (e.g., substance use, high-risk sexual practices, delinquency) tend to cluster together and thus should be addressed as a single behavioral syndrome. Empirical evidence supports the hypothesis of the co-occurrence of multiple high-risk behaviors among adolescents (Begle et al., 2011). However, Halpern et al. (2009) have not considered other forms of high-risk behaviors in association with longitudinal patterns of dating victimization.

Authors have proposed that dating violence may be multi-determined and best understood within an ecological framework (Vézina & Hébert, 2007; Windle & Mrug, 2009). Thus, several levels of predictors associated with dating violence, such as individual, family, and environmental factors, need to be documented to better identify which factors to target for change in prevention programs. In their review, Foshee and Reyes (2011) found that at the familial level, lack of parental warmth, family conflict, experiencing violence from parents as well as witnessing interparental violence were significant predictors for female dating victimization. Level of parental monitoring has also been significantly and negatively linked to dating victimization (Howard, Qiu, & Boekeloo, 2003). Among all family factors considered, a history of family violence has received much attention as a potential risk factor for dating victimization (Vézina & Hébert, 2007). According to social learning theory (Bandura, 1977), children exposed to family violence may come to learn that violence is a tolerable and acceptable way of dealing with interpersonal conflicts. Family violence exposure is also associated with a host of negative outcomes (e.g., emotion regulation difficulties; Evans & DiLillo, 2011) that may increase vulnerability to subsequent victimization experiences in the context of romantic relationships (Gomez, 2011). At the peer level, exposure to violence or disruptive behaviors in the peer group may also lead to norms of acceptance and/or tolerance of coercive style of interactions and may increase risk of dating victimization (Windle & Mrug, 2009).

Childhood Behavior Problems, High-Risk Behaviors, and Girls' Dating Victimization

At the individual level, in a review of 61 empirical studies examining risk factors for dating victimization among adolescent girls and young women, Vézina and Hébert (2007) reported significant associations between dating victimization and several high-risk behaviors such as antisocial and delinquent behaviors, substance use, and high-risk sexual practices. The majority of these studies used cross-sectional designs and examined high-risk behaviors and dating victimization in adolescence. However,

some longitudinal studies also showed that childhood and adolescent behavior problems may act as predictors of dating victimization in young adulthood. For example, Magdol, Moffitt, Caspi, and Silva (1998) found that behavior problems during childhood and adolescence (aggressive behaviors such as bullying, delinquency, and substance abuse) were the most consistent predictors of dating victimization among young women, after controlling for socioeconomic resources, family relations, and educational achievement. More recently, Chiodo et al. (2012) have shown that, for physical violence, delinquency in Grade 9 predicts mutual or reciprocal dating violence in Grade 11. Still, considering that most of the studies reviewed focused on factors associated with the onset of girls' dating victimization in adolescence or young adulthood, we know little about the relationship between adolescent high-risk behaviors or behavior problems during childhood and the repeated patterns of victimization in adolescence and early adulthood. Therefore, this study investigated the potential contribution of childhood behavior problems and adolescent high-risk behaviors as predictors of repeated patterns of dating victimization among girls in two developmental periods within the framework of lifestyle/routine activities theories (Cohen & Felson, 1979; Hindelang, Gottfredson, & Garofalo, 1978).

Lifestyle/Routine Activities Theories

Criminological research, using lifestyle/routine activities theories, has consistently found significant associations between high-risk behaviors and adolescent victimization (Chen, 2009). These theories suggest that victimization of any sort (e.g., robbery, assault, larceny) is more likely to occur when there is a convergence in time and space of motivated offenders, suitable targets, and low guardianship (e.g., low parental monitoring). Some lifestyle/activity patterns and certain social contexts may actually increase the vulnerability to victimization. For instance, as suggested by the studies reviewed by Chen (2009), high-risk behaviors, affiliation with deviant peers, and engaging in unsupervised activities directly increase the probability of victimization. Thus, youth who display high-risk behaviors may be more vulnerable to victimization as these at-risk behaviors may lead to greater exposure to potentially abusive situations (Danielson et al., 2006). A higher risk of repeated victimization from adolescence to adulthood has been empirically supported within this conceptual framework (Wittebrood & Nieuwebeerta, 2000). In one study, women who disclosed adolescent sexual victimization had higher levels of alcohol-related and high-risk sexual behaviors following high school graduation as well as in their first year in college, and these high-risk behaviors were associated, in turn, with heightened vulnerability to later sexual victimization (Testa, Hoffman, & Livingston, 2010). The link between victimization and high-risk behaviors has been documented but gender specificities are highlighted (Begle et al., 2011), underscoring the relevance of conducting gender-specific analyses. Exploring high-risk behaviors possibly associated with victimization should not be interpreted as placing the blame on victims, but rather as a mean of identifying factors related with greater exposure to potentially abusive situations and aggressors. Consideration of these high-risk behaviors as possible factors

linked to victimization patterns may offer relevant cues for the design of selected prevention efforts for highly vulnerable populations.

Vézina and her colleagues (2011) found empirical support for a model derived from lifestyle/routine activities theories to predict adolescent girls' dating victimization. Following Jessor's (1991) theory, in their analyses they used a construct of high-risk behaviors that combined risky sexual practices, problematic substance use, and delinquent behaviors. Their results showed that after controlling for behavior problems in childhood and parental monitoring in adolescence, high-risk behaviors partially mediated the relationship between deviant peer affiliation and dating victimization when psychological violence was the outcome, and completely mediated this relationship when the outcome was physical and/or sexual violence. Nonetheless, this study was limited by its cross-sectional data, so we do not know what the influence of these factors may be on the longitudinal course of dating victimization. What we do know, however, is that disruptive behaviors in childhood (Fontaine et al., 2008) and delinquent behaviors in adolescence (Pajer, 1998) are associated with violence in romantic relationships in adulthood. Another limitation of Vézina et al.'s study was that the possible impact of a history of family violence was not considered. Ehrensaft et al. (2003) showed that the strong association they found between adolescent behavior problems and victimization in adult romantic relationships did not remain significant after controlling for exposure to interparental violence during childhood. Future work on the relationship between behavior problems and dating victimization would thus benefit from including factors related to family violence.

Purpose of the Study

Given the paucity of findings available on dating victimization from adolescence to early adulthood, this study presented a prospective examination of dating victimization in adolescence and early adulthood among a sample of young women drawn from a larger representative community sample in Quebec, Canada. This study will contribute to the current literature on the longitudinal course of girls' dating victimization and will offer relevant implications for the design of risk-reduction and prevention programs.

The first objective of this study was to provide prevalence estimates of psychological, physical, and sexual dating victimization among girls in adolescence (at age 15) and early adulthood (at age 21), and to assess the continuity of these violent experiences across developmental periods. Considering these three forms of dating victimization represents a methodological strength over past studies that have only considered physical and/or sexual violence. The second objective was to investigate the potential influence of history of family violence, childhood behavior problems, and adolescent high-risk behaviors as predictors of repeated patterns of girls' dating victimization in adolescence and early adulthood. Following Jessor's (1991) theory, a construct of high-risk behaviors, combining high-risk sexual practices, drug and alcohol problems, and delinquent behaviors, was used. Parental monitoring and deviant peer affiliation in adolescence were also included because of their strong association with adolescent high-risk behaviors and significant relationship to dating violence.

Method

Participants

Participants were part of a longitudinal study initiated in 1986-1987 with a representative community sample, recruited using a multistage sampling procedure, of French-speaking kindergarten children in the province of Quebec (Canada). This sample was representative of urban and rural settings of all regions of Quebec. Only children whose parents were born in Canada and whose mother tongue was French were included. The vast majority of participants were middle-class and Caucasian. Detailed information on sample selection and description is presented in Zoccolillo, Vitaro, and Tremblay (1999). Of the original sample of 1,390 girls involved in the longitudinal study, 929 agreed to participate in the adolescent assessment (M age = 15.68, SD = .48) and 858 in the early adulthood assessment (M age = 21.23, SD = .73). In the present analysis, only girls who had been dating during at least 2 weeks in the past year completed the adolescent dating victimization questionnaire (n = 550). Finally, 443 of these 550 girls completed the young adult dating victimization measures. Based on the kindergarten assessment, there was no statistical difference between girls in the final sample and those who were not included in terms of mother-rated aggression-disruptiveness, $t(958) = -.50$, $p = .62$, parents' socioeconomic status—mothers: $t(452) = .04$, $p = .97$, fathers: $t(726) = -.33$, $p = .74$ —and mother's level of education, $t(870) = -.41$, $p = .68$.

Procedure

The data for this study were drawn from a larger project. Only procedures and measures used in the current study are detailed here. When girls were in kindergarten, a first contact with their family was established through a letter sent to parents to invite them to participate in the study. Questionnaires were then sent to the schools, and teachers were in charge of sending them to the parents. Written consent was required from the parent and the teacher. When girls reached ages 15 and 21, a letter describing the study procedures and aims was sent to their homes. Research assistants then called participants by phone and scheduled interviews with those who agreed to participate in the study. At each time of data collection, interviews occurred in the girls' home, and participants received monetary compensation. This study was approved by the ethics board of the University of Montreal, and informed consent was obtained from all girls and from parents at the adolescent assessment, while at age 21, informed consent was required only from the participant. Trained research assistants conducted the interviews.

Measures

History of family violence (age 21). Two indicators of family violence were used to create this composite score: (a) parent-to-child aggression and (b) exposure to interparental violence. First, psychological and physical violence inflicted by a mother or father figure was measured with a modified version of the *Parent-Child Conflict Tactics*

Scales (CTSPC-CA; Straus, Hamby, Finkelhor, Moore, & Runyan, 1998). Participants were asked to report on 16 items rated on a 4-point Likert-type scale (0 = *never*, 1 = *once or twice*, 2 = *3-10 times*, 3 = *11 or more times*). They were asked to indicate how often while growing up they experienced from their parents each of the listed behaviors of psychological violence (4 items) and physical violence (12 items). As psychological and physical violence by parents were strongly correlated ($r = .68$), these two variables were merged ($\alpha = .89$). Second, exposure to interparental violence was measured with items from the *Revised Conflict Tactics Scales* (CTS2; Straus, Hamby, Boney-McCoy, & Sugarman, 1996). Participants were asked to report using the same Likert-type scale how often while growing up they had witnessed their parents or caregivers engage in each of the listed behaviors of psychological violence (7 items) and physical violence (12 items) toward one another. Psychological and physical interparental violence were significantly correlated ($r = .53$) and the two variables were merged ($\alpha = .93$). Then a composite score of history of family violence was formed by summing and averaging scores from the two indicators measured (parent-to-child aggression and exposure to interparental violence). Correlation between these two indicators was high ($r = .60$) and internal consistency for this composite score was adequate ($\alpha = .72$).

Parental monitoring in adolescence (age 15). The parental monitoring scale included six items. Four items asked the participants how often their parents know where and with whom they are when they go out, at what time they usually come back home, and how they spend their time when they stay home. Participants also answered one item asking them how important it was for their parents to know about their activities and how many of their friends their parents had met. The items were standardized, and mean scores were used ($\alpha = .64$).

Affiliation with deviant peers in adolescence (age 15). We measured affiliation with deviant peers with nine (yes/no) items asking the participants whether their best female friend had ever run away from home, been expelled or suspended from school, and been arrested by the police. The other five items were about whether they had ever been part of a gang that committed deviant acts and the proportion of their friends who had ever been arrested, smoked cigarettes, and used drugs and alcohol (0 = *none*, 1 = *one or two*, 2 = *several of them*, 3 = *almost or all of them*). The items were standardized and the mean scores were used ($\alpha = .68$).

Childhood behavior problems (age 6). When girls were in kindergarten, their mother completed the *Social Behavior Questionnaire* (SBQ; Tremblay et al., 1991) for their child. For the purpose of the present study, we used the aggression-disruptiveness scale (13 items). Each item was rated on a 3-point Likert-type scale (0 = *did not apply*, 1 = *applied sometimes*, 2 = *applied often*). The psychometric properties of the SBQ have been well documented (Tremblay, Vitaro, Gagnon, Piché, & Royer, 1992), and internal consistency for the aggression-disruptiveness scale was high in the present study ($\alpha = .80$).

High-risk behaviors in adolescence (age 15). Three indicators were included in this composite score of high-risk behaviors: (a) high-risk sexual behaviors, (b) problematic substance use, and (c) delinquent behaviors. For high-risk sexual behaviors, participants were asked to report on their age at first sexual intercourse (0 = *never had sexual intercourse*, 1 = *had first sexual intercourse at 14 years old or later*, 2 = *had first sexual intercourse before the age of 14*), their lifetime number of sexual partners, the number of “one night stands” they had during the past 12 months (rated from 0 to 3 = *11 and more*) and the frequency at which they used a condom (0 = *never had sexual intercourse*, 1 = *always use condom*, 2 = *sometimes use condom*, 3 = *never use condom*). These four items were standardized and the mean scores were used ($\alpha = .72$).

For problematic substance use, we used a 12-item scale from Zoccolillo et al. (1999). Participants who had used alcohol or drugs more than 5 times in their life were asked to report the frequency of occurrence of problematic substance use on a 4-point Likert-type scale (ranging from 1 = *never* to 4 = *many times*). Each of the following problems was included in two questions (i.e., one pertaining to alcohol use, and the other to drug use): went to school intoxicated, got into fights while intoxicated, drove a motor vehicle while intoxicated, got into trouble with the police because of drugs or alcohol, engaged in sporting activities while intoxicated, and used drugs or alcohol before noon. Participants who had not used alcohol ($n = 120$) or drugs ($n = 258$) more than 5 times received a score of 0 on each alcohol or drug problem items. Mean scores were used ($\alpha = .93$).

For delinquent behaviors, we used 17 items from the Conduct Disorder Scale of the French version of the *Diagnostic Interview Schedule for Children–2.25* (DISC-2.25; Breton, Bergeron, Valla, Berthiaume, & St-Georges, 1998). Participants were asked to report whether they had engaged in a range of delinquent behaviors during the past 12 months. Mean scores were used ($\alpha = .74$). Last, the composite score for high-risk behaviors was formed by standardizing and averaging the three indicators ($\alpha = .74$).

Adolescent dating victimization (age 15). Participants who had been dating for at least 2 weeks during the past year completed a questionnaire on their experience of dating violence. The questionnaire covered psychological, physical, and sexual violence with items adapted from the *Psychological Maltreatment of Women Inventory* (PMWI; Kasian & Painter, 1992), the *Conflict Tactics Scale* (CTS; Straus, 1979), and the *Sexual Experience Survey* (SES; Koss & Gidycz, 1985). To assess victimization patterns across the two time points, only items that were similar to those included in the dating violence questionnaire completed by participants in early adulthood (at age 21) were considered in the present analyses and are described here. Participants who had more than one relationship in the past year were asked to refer to the most difficult one, and to indicate how often they had experienced each of the behaviors presented on a 4-point Likert-type scale (0 = *never*, 1 = *once or twice*, 2 = *3-10 times*, 3 = *11 or more times*). For the psychological dating violence scale (three items), girls were asked to report how often their boyfriend had prevented them from seeing and speaking to friends, humiliated them or put them down, and controlled their schedule and demanded a report on what they have been doing. For the physical dating violence scale (seven

items), they were asked to report how often their boyfriend had thrown an object at them, pushed or shoved them, slapped them, kicked them, hit them with an object, beaten them up, and threatened them with a knife. For the sexual dating violence scale (two items), girls were asked to report how often their boyfriend used arguments and pressure, used alcohol or drugs, or threatened them with or used some degree of physical force to incite them, first, to have sexual contacts (e.g., kissing, petting, or fondling) and second, to have a complete sexual intercourse. Internal consistency was satisfactory for the psychological violence scale ($\alpha = .64$). In contrast with our initial analytic plan, we could not examine repeated patterns of physical and sexual dating victimization separately because of the low frequency of sexually violent acts reported in early adulthood ($n = 9$; 2%). Consequently, we combined the physical and sexual violence scales. Internal consistency for this composite score was adequate ($\alpha = .76$).

Early adulthood dating victimization (age 21). Referring to their current romantic partner, or to their last partner if they were not currently involved in a romantic relationship, participants had to indicate how often their partner had engaged in each of the behaviors presented on a 4-point Likert-type scale (0 = *never*, 1 = *once or twice*, 2 = *3-10 times*, 3 = *11 or more times*). To assess psychological violence, we combined two items from the *Violence faite aux Filles dans les Fréquentations à l'Adolescence* questionnaire (VIFFA; Lavoie & Vézina, 2001) and two items from the CTS2 (Straus et al., 1996) into a single item to fit the number of items in the adolescent psychological dating violence scale ($\alpha = .67$). Seven items evaluating physical violence and two items referring to sexual violence from the CTS2 were combined ($\alpha = .84$).

Repeated patterns of dating victimization in two developmental periods (at ages 15 and 21). To derive our repeated patterns, we dichotomized our measures of dating victimization in adolescence and early adulthood. For adolescent psychological violence, all girls with a total score equal to or above the 75th percentile (score of 3) were assigned a value of 1, which meant that they reported sustaining multiple forms and/or repetitive acts of psychological violence; otherwise, a value of 0 was assigned. Using this criterion, 188 adolescent girls (42.4%) reported having experienced psychological violence. The same criterion was used to dichotomize the early adult psychological violence total score. One hundred seventy-eight young women (40.2%) reported having experienced psychological violence. For adolescent and early adult physical and sexual violence, girls who reported sustaining at least one act of violence from a romantic partner were assigned a value of 1; otherwise, a value of 0 was assigned. Seventy-five adolescent girls (16.9%) and 65 young women (14.7%) reported having experienced physical and/or sexual violence. Following Halpern and colleagues' (2009) procedure, four repeated patterns of dating victimization in two developmental periods were created. Women reporting no dating victimization both at 15 years old (adolescence) and at 21 years old (early adulthood) were classified as "not victimized"; those reporting victimization only at 15 years old were classified as "victimized in adolescence only"; those reporting victimization only at 21 years old were classified as "victimized in early adulthood only"; and those reporting victimization at both ages

were classified as “revictimized.” These patterns were created separately for psychological violence and for physical/sexual violence. Results reveal that 22.6% ($n = 100$) of young women experienced psychological violence in adolescence only, 20.3% ($n = 90$) in early adulthood only, 19.9% ($n = 88$) reported psychological victimization at both developmental periods. Prevalence rates of repeated victimization patterns in two developmental periods for physical/sexual violence show that 13.1% ($n = 58$) of young women report victimization at age 15 only, 10.8% ($n = 48$) at 21 years only, and 3.8% ($n = 17$) reported experiencing physical/sexual victimization at both ages.

Statistical Analysis

First, all variables were examined for normality following the guidelines provided by Tabachnick and Fidell (2001). To improve normality, square root transformations were performed on the following predictor variables: history of family violence, affiliation with deviant peers, and high-risk behaviors in adolescence. A reflection followed by square root transformation was also performed on parental monitoring and, as a result, higher scores need to be interpreted as indicating lower levels of parental monitoring in adolescence. Second, descriptive statistics were generated and correlations were conducted to assess associations among predictor variables. Third, univariate analyses of variance with post hoc Bonferroni tests were conducted for each predictor to evaluate potential differences among the four groups of young women (Group A = “not victimized,” Group B = “victimized in adolescence only,” Group C = “victimized in early adulthood only,” and Group D = “revictimized”). Analyses were performed separately for repeated patterns of psychological dating victimization and for repeated patterns of physical/sexual dating victimization. Fourth, multinomial logistic regression analyses were conducted to examine the associations between family (history of family violence, parental monitoring in adolescence), peer (affiliation with deviant peers in adolescence), and individual (childhood behavior problems and adolescent high-risk behaviors) predictors and repeated patterns of dating victimization (psychological and physical/sexual victimization were examined separately) while controlling for mother’s level of education.

Results

Correlations

Analyses revealed that only the two family factors (i.e., history of family violence and low parental monitoring in adolescence) were not significantly correlated with each other. However, these two factors were linked to peer and individual predictors. Specifically, history of family violence was moderately and positively correlated with affiliation with deviant peers ($r = .19$) and high-risk behaviors in adolescence ($r = .25$), as with childhood behaviors problems ($r = .18$). Perceiving a lower level of parental monitoring in adolescence was associated with higher levels of deviant peer affiliation ($r = .28$) and high-risk behaviors ($r = .27$). Childhood behavior problems was positively related to adolescent high-risk behaviors ($r = .15$), but also with low parental

monitoring ($r = .09$) and deviant peer affiliation in adolescence ($r = .15$). Adolescent deviant peer affiliation and adolescent high-risk behaviors were correlated ($r = .63$).

Analysis of Variance

A series of univariate ANOVA with Bonferroni post hoc tests were used to compare mean differences between the four groups of young women across family, peer, and individual predictors. Table 1 presents the results for repeated patterns of psychological dating victimization in two developmental periods. ANOVA results indicate that history of family violence, affiliation with deviant peers in adolescence, childhood behavior problems, and adolescent high-risk behaviors differ significantly across groups, and that the difference between groups was statistically marginal for low parental monitoring in adolescence ($p < .10$). Among the four groups, young women classified as “revictimized” had the highest scores of history of family violence, adolescent deviant peer affiliation, childhood behavior problems, and adolescent high-risk behaviors (significantly higher than girls in the “not victimized” group). Young women in the “victimized in adolescence only” group had higher scores for adolescent deviant peer affiliation and adolescent high-risk behaviors than girls in the “not victimized” group. In addition, those who were “victimized in early adulthood only” reported a higher level of family violence and showed more childhood behavior problems than girls who reported no dating victimization both at 15 and 21 years old. No difference emerged between young women who reported psychological dating victimization in adolescence or in early adulthood but not both, and between these two groups and the “revictimized” group.

The same analyses were conducted for physical/sexual dating victimization, and results (see Table 2) reveal similar patterns: The omnibus test revealed significant differences across groups for history of family violence, adolescent deviant peer affiliation, and adolescent high-risk behaviors. Low parental monitoring in adolescence and childhood behavior problems did not significantly differ across groups for physical/sexual dating victimization. Among the four groups, young women classified as “revictimized” had the highest scores of history of family violence (significantly higher than girls in the “not victimized” group), followed by girls in the “victimized in adolescence only” group, then by girls in the “victimized in early adulthood only” group. Similar to the results found for psychological dating victimization, girls who were physically and/or sexually “victimized in adolescence only” showed higher levels of deviant peer affiliation and high-risk behaviors in adolescence than girls who were “not victimized.” Again, no difference was found between the “victimized in adolescence only” and the “victimized in early adulthood only” groups, and between these two groups and the “revictimized” group.

Multinomial Logistic Regression

Predicting psychological dating victimization. Table 3 presents the results from a multinomial logistic regression model that examined the association between family,

Table 1. Means and Standard Deviations of Each Group for Repeated Patterns of Psychological Dating Victimization in Two Developmental Periods.

Predictor	(A) Not victimized	(B) Victimized adolescence	(C) Victimized early adult.	(D) Revictimized	Mean difference ^a ($p < .05$)							
	($n = 165$) 37.2%	($n = 100$) 22.6%	($n = 90$) 20.3%	($n = 88$) 19.9%	F	A - B	A - C	A - D	B - C	B - D	C - D	
Family factors												
History of family violence	3.31 (1.68)	3.90 (2.06)	4.00 (2.24)	4.58 (2.16)	8.27***	—	-0.69	-1.28	—	—	—	
Low parental monitoring in adolescence	3.47 (0.45)	3.60 (0.53)	3.60 (0.48)	3.59 (0.43)	2.51 ^m	—	—	—	—	—	—	
Peer factor												
Affiliation deviant peers in adolescence	2.44 (0.87)	2.79 (0.87)	2.74 (1.00)	2.84 (0.88)	5.25***	-0.34	—	-0.40	—	—	—	
Individual factors												
Childhood behavior problems	6.07 (3.85)	7.04 (3.79)	7.58 (3.41)	8.08 (4.57)	6.02**	—	-1.51	-2.01	—	—	—	
High-risk behaviors in adolescence	1.56 (0.60)	1.78 (0.67)	1.74 (0.66)	1.92 (0.59)	6.90***	-0.22	—	-0.36	—	—	—	

Note. m = marginal.

^aBonferroni post hoc tests were used.

^m $p < .10$. * $p < .05$. ** $p < .01$. *** $p < .001$.

Table 2. Means and Standard Deviations of Each Group for Repeated Patterns of Physical/Sexual Dating Victimization in Two Developmental Periods.

Predictor	(A) Not victimized (n = 320) 72.2% (n = 58)		(B) Victimized (C) Victimized (D) adolescence early adult. Revictimized		F	Mean difference ^a (p < .05)						
	3.50 (1.82)	4.74 (2.26)	4.46 (2.30)	5.37 (2.48)		A - B	A - C	A - D	B - C	B - D	C - D	
Family factors												
History of family violence	3.50 (1.82)	4.74 (2.26)	4.46 (2.30)	5.37 (2.48)	12.31***	-1.24	-0.96	-1.87	—	—	—	—
Low parental monitoring in adolescence	3.54 (0.47)	3.56 (0.49)	3.60 (0.50)	3.62 (0.37)	0.40	—	—	—	—	—	—	—
Peer factor												
Affiliation deviant peers in adolescence	2.59 (0.85)	3.02 (0.94)	2.66 (1.07)	2.78 (1.23)	3.71*	-0.43	—	—	—	—	—	—
Individual factors												
Childhood behavior problems	6.90 (4.00)	7.67 (4.20)	6.62 (3.64)	7.53 (3.68)	0.86	—	—	—	—	—	—	—
High-risk behaviors in adolescence	1.65 (0.62)	2.03 (0.65)	1.78 (0.65)	1.88 (0.64)	6.55***	-0.38	—	—	—	—	—	—

^aBonferroni post hoc tests were used.

*p < .05. ***p < .001.

Table 3. Multinomial Logistic Regression Analysis of Relationships Among Family, Peer, and Individual Factors, and Repeated Patterns of Psychological Dating Victimization in Two Developmental Periods.

Predictor	Victimized in adolescence only vs. not victimized OR (95% CI)	Victimized in early adulthood only vs. not victimized OR (95% CI)	Revictimized vs. not victimized OR (95% CI)
Family factors			
History of family violence	1.13 [0.98, 1.30] ^m	1.18 [1.03, 1.36]*	1.29 [1.12, 1.48]***
Low parental monitoring in adolescence	1.44 [0.80, 2.57]	1.45 [0.79, 2.64]	1.22 [0.66, 2.27]
Peer factor			
Affiliation with deviant peers in adolescence	1.35 [0.92, 1.96]	1.25 [0.85, 1.84]	1.12 [0.75, 1.66]
Individual factors			
Childhood behavior problems	1.03 [0.97, 1.11]	1.09 [1.01, 1.17]*	1.10 [1.03, 1.18]**
High-risk behaviors in adolescence	1.12 [0.65, 1.91]	1.06 [0.61, 1.84]	1.75 [0.99, 3.11]*

Note. Mother's level of education was controlled (results not shown). $\chi^2 (18, N = 435) = 53.19, p < .001$. The Nagelkerke R^2 was .12 for the full model. m = marginal; OR = odds ratio; CI = confidence interval. ^m $p < .10$. * $p < .05$. ** $p < .01$. *** $p < .001$.

peer, and individual predictor variables and the repeated patterns of psychological dating victimization in two developmental periods, using the “not victimized” group as the referent category and controlling for mother’s level of education. The findings indicate that low parental monitoring and deviant peer affiliation in adolescence were not significantly related to any pattern of psychological dating victimization. The three remaining predictors were significantly associated with one or more victimization patterns. Specifically, the more the girls have experienced family violence while growing up, the more they are likely to be classified in the “victimized in early adulthood only” group (odds ratio [OR] = 1.18, 95% confidence interval, CI = [1.03, 1.36]) and in the “revictimized” group (OR = 1.29, 95% CI = [1.12, 1.48]). In other words, a 1-point increase in history of family violence was associated with a 1.18 increase in the odds of being “victimized in early adulthood only” and with a 1.29 increase in the odds of being “revictimized.” History of family violence was also associated with an elevated risk for dating victimization “in adolescence only,” but the relation was statistically marginal ($p < .10$; OR = 1.13, 95% CI = [0.98, 1.30]). For both individual factors, childhood behavior problems and adolescent high-risk behaviors, higher scores were associated with an increased risk of being “revictimized” (respectively, OR = 1.10, 95% CI = [1.03, 1.18]; OR = 1.75, 95% CI = [0.99, 3.11]). A 1-point increase in childhood behavior problems was also associated with a 1.09 increase in the odds of being “victimized in early adulthood only.”

Table 4. Multinomial Logistic Regression Analysis of Relationships Between Family, Peer, and Individual Factors, and Repeated Patterns of Physical/Sexual Dating Victimization in Two Developmental Periods.

Predictor	Victimized in adolescence only vs. not victimized OR (95% CI)	Victimized in early adulthood only vs. not victimized OR (95% CI)	Revictimized vs. not victimized OR (95% CI)
Family factors			
History of family violence	1.25 [1.09, 1.45]**	1.29 [1.11, 1.51]**	1.47 [1.17, 1.86]**
Low parental monitoring in adolescence	0.74 [0.38, 1.42]	1.18 [0.60, 2.31]	1.25 [0.42, 3.75]
Peer factor			
Affiliation with deviant peers in adolescence	0.73 [0.38, 1.40]	0.93 [0.59, 1.46]	0.92 [0.45, 1.87]
Individual factors			
Childhood behavior problems	1.00 [0.93, 1.08]	0.95 [0.88, 1.04]	0.98 [0.86, 1.13]
High-risk behaviors in adolescence	1.79 [0.96, 3.32] ^m	1.21 [0.63, 2.33]	1.20 [0.41, 3.50]

Note. Mother's level of education was controlled (results not shown). $\chi^2(18, N = 435) = 43.79, p < .01$. The Nagelkerke R^2 was .12 for the full model. ^m = marginal; OR = odds ratio; CI = confidence interval. ^m $p < .10$. ** $p < .01$.

Predicting physical/sexual dating victimization. Table 4 presents the results from a multinomial logistic regression model that examined the association between family, peer, and individual predictor variables and the repeated patterns of physical/sexual dating victimization in two developmental periods, using the "not victimized" group as the referent category and controlling for mother's level of education. Again, results showed that history of family violence constitutes an important factor associated with all physical/sexual victimization patterns. Experiencing family violence while growing up is associated with increased odds of being "victimized in adolescence only" (OR = 1.25, 95% CI = [1.09, 1.45]), "victimized in early adulthood only" (OR = 1.29, 95% CI = [1.11, 1.51]), and of being classified in the "revictimized" group (OR = 1.47, 95% CI = [1.17, 1.86]). High-risk behaviors in adolescence was also associated with an elevated risk for dating victimization "in adolescence only," but the relation was statistically marginal ($p < .10$; OR = 1.79, 95% CI = [0.96, 3.32]).

Discussion

The current study is, to our knowledge, one of the few to prospectively examine girls' dating victimization in adolescence and early adulthood. Our aim was twofold: (a) to document the prevalence of repeated patterns of psychological and physical/sexual dating victimization in two developmental periods, and (b) to examine, within the frameworks of an ecological model and lifestyle/routine activities theories, the potential

contribution of family (history of family violence and low parental monitoring in adolescence), peer (deviant peer affiliation in adolescence), and individual factors (childhood behavior problems and adolescent high-risk behaviors) as predictors of repeated patterns of dating victimization. Given the detrimental effects associated with girls' dating victimization, research exploring potential factors associated with longitudinal patterns is important. A better understanding of these factors is likely to offer relevant clues for the elaboration of efficient preventive interventions for victimization in the context of dating relationships, as well as for reducing risks of revictimization. Although this study explored possible factors linked to victimization, it is important to mention that it by no means implies that women are in any way responsible for their victimization, as the responsibility for violence always rests on the perpetrator. This study, like others in the field (see, for instance, Franklin, Franklin, Nobles, & Kercher, 2012), attempts to further our knowledge, raise awareness, and prevent victimization by identifying possible factors that may enhance women's vulnerability in the hope of reducing this important social problem.

Prevalence of Repeated Patterns of Dating Victimization in Two Developmental Periods

Results show that psychological victimization in girls' dating relationships is relatively common; in fact, almost two thirds (63%) of girls have experienced such violent experiences by early adulthood. All the victimization patterns were comparable on their prevalence rate. Findings indicate a cumulative prevalence rate of 43% for psychological victimization in adolescence and 40% for early adult psychological dating victimization. Direct comparison of prevalence rates is hampered by the fact that few studies have documented psychological victimization in early teenage relationships. Nevertheless, our results are relatively comparable with the estimate of 29% provided in a large representative sample of U.S. adolescents (Halpern et al., 2001). Our cumulative prevalence rate of 40% for early adult victimization, however, is somewhat lower than that observed in other studies (e.g., Magdol et al., 1997). This estimate may have been lower mainly because, in contrast with other studies, we did not consider a young woman to be a victim of psychological violence whenever she reported having experienced any of the psychological violence behaviors on the scale. Rather, only girls who had been subjected to multiple forms and/or repetitive acts of psychological violence were considered victimized. In this context, our finding that about 2 of 10 girls have experienced psychological violence in both adolescence and early adulthood is alarming.

The prevalence rates of longitudinal patterns of physical/sexual victimization found in the current study are slightly different from those reported by Halpern et al. (2009). Our findings suggest that almost 30% of girls had experienced physical and/or sexual violence by early adulthood. The most common prevalence pattern was "victimized in adolescence only" (13% vs. 9% in Halpern et al., 2009), whereas the prevalence of "victimized in early adulthood only" was substantively lower (11%) than the percentage reported by Halpern et al. (27%, Halpern et al., 2009). As a result, the

revictimization pattern was lower in our study, with 4% of girls reporting physical/sexual victimization at the two developmental periods (vs. 8% in Halpern et al., 2009). One possible explanation for the differences between our results and those presented by Halpern et al. (2009) is that their measure included an item asking participants whether their partner “had threatened them with violence.” Because this item tends to be endorsed more frequently than those describing direct acts of physical violence (Magdol et al., 1997), the rate of physical/sexual prevalence in early adulthood would probably have been higher in this study if we had included this item. Also, the reference period used in dating victimization measures and therefore the possible number of relationships considered (current and/or including past relationships) differed across studies, making a direct comparison more difficult. Nonetheless, our cumulative adolescent estimate of physical/sexual dating victimization is consistent with previous research (Halpern et al., 2001; Silverman, Raj, & Mucci, & Hathaway, 2001), whereas our early adult cumulative prevalence rate is lower than that in other studies (Ehrensaft et al., 2003; Magdol et al., 1997).

Predictors of Repeated Patterns of Dating Victimization in Two Developmental Periods

For psychological dating violence, as predicted, results showed that a higher level of exposure to family violence in childhood, a higher level of behavior problems in childhood (i.e., aggression and disruptiveness at age 6), and a higher level of adolescent high-risk behaviors (i.e., high-risk sexual behaviors, problematic substance use, and delinquent behaviors at age 15) were all associated with an increased probability of experiencing victimization both at age 15 and age 21 (“revictimized” pattern). History of family violence and childhood behavior problems were also linked to the “victimized in early adulthood only” pattern, and the association between history of family violence and the “victimized in adolescence only” pattern was marginally significant. Contrary to the results found in univariate analyses, adolescent deviant peer affiliation, when included in a multivariate model, was no longer associated with any victimization patterns.

For physical/sexual dating violence, as anticipated, history of family violence emerged as a significant predictor for all the victimization patterns, including the group sustaining revictimization. Nevertheless, contrary to our expectations, childhood behavior problems and adolescent high-risk behaviors were not associated with any victimization patterns. Only adolescent high-risk behaviors were linked to the “victimized in adolescence only” pattern, but these associations were statistically marginal. The failure to find an association between these two individual factors and specifically the “revictimized” pattern of physical/sexual dating victimization may be due to a lack of statistical power (only 17 participants were classified as “revictimized”), rather than to the true absence of such a relationship.

Overall, the current longitudinal study contributes to the literature by identifying some factors that may place girls at increased risk not only to be victimized in adolescence but also to be revictimized 5 or 6 years later in the context of their romantic relationships in early adulthood. Our findings suggest that girls with a history of

family violence may be at greater risk of experiencing dating violence (psychological and physical/sexual) either in adolescence or early adulthood only, or at both developmental periods. Such results are not only consistent with past empirical reports linking violence in the family of origin and violence in the context of romantic relationships (Ehrensaft et al., 2003; Olsen, Parra, & Bennett, 2010) but also document an association with revictimization, which has been rarely explored in prior studies.

Moreover, our results indicate that girls with a history of childhood behavior problems or adolescent high-risk behaviors may also be at greater risk of being the victim of psychological violence in the context of their romantic relationships at both adolescence and early adulthood. Such results are consistent with past research linking childhood behavior problems (Magdol et al., 1998; Woodward, Fergusson, & Horwood, 2002), adolescent high-risk behaviors (Eaton et al., 2007; Gover, 2004; Howard & Wang, 2003), and dating victimization. Although it would be tempting to conclude that behavior problems in childhood and adolescent high-risk behaviors are both part of a single developmental chain that increases the risk of being victimized by a romantic partner in adolescence or young adulthood, our results do not fully support this hypothesis. In fact, in the present study the correlation between childhood behavior problems and adolescent high-risk behaviors was statistically weak ($r = .15$).

One possible explanation for this finding is provided by the taxonomic theory (Moffitt, 1993). This theory suggests that antisocial behaviors can follow two trajectories: (a) those behaviors can begin early in childhood and persist throughout life, or (b) they can be limited to adolescence. The childhood-onset trajectory differs from the adolescent-onset one because they have distinct etiologies and different outcomes across the adult life course, but young women in both trajectories appear to be at greater risk of being victimized in their romantic relationships. Woodward et al. (2002) found that the risk was highest for women with early onset problems, but those with late onset problems were still at higher risk than their counterparts who had no history of antisocial problems. In fact, although young women with childhood-onset and adolescent-onset antisocial behaviors have different childhood backgrounds, they may share similar experiences during adolescence, including deviant peer affiliation, time spent in unsupervised social settings, and manifestations of high-risk behaviors. According to lifestyle/routine activities theories, such experiences may increase the likelihood of victimization (Spano & Freilich, 2009) possibly by increasing exposure to potential aggressors.

Lifestyle/routine activities theories may be relevant to explaining dating revictimization among young women with childhood-onset problem behaviors. Although rare, some women continue to exhibit high-risk behaviors throughout adulthood (Moffitt & Caspi, 2001), and this may place them at greater risk for repeated victimization. However, these theories can hardly explain why young women with adolescent-limited antisocial behaviors may also be revictimized. Other models, such as state dependence theory (Ousey, Wilcox, & Brummel, 2008), should be explored. This theory proposes that revictimization is attributable to individual and/or social context changes resulting from prior victimization. For example, Roberts et al. (2003) found that

depressed mood, suicidal behavior, and high-risk behaviors were not only precursors of adolescent dating victimization but were also consequences of it. The mechanisms by which exposure to violence, whether in the family environment or in the first romantic relationship, influences later risk of revictimization need to be documented. A number of potential mediators can be explored as the sequelae associated with a history of family violence is likely to be associated to greater exposure to at-risk situations. The aftermath of family violence may translate into emotion regulation difficulties, posttraumatic stress symptoms, and avoidant coping which in turn may increase the vulnerability of youth to dating violence or revictimization (Ghimire & Follette, 2012). In turn, this heightened vulnerability may be perceived as an appealing target for men's violence. Avoidant coping may involve reliance on alcohol or drugs, or increased number of sexual partners, in an attempt to cope with or overcome the trauma experienced or as a strategy to avoid triggers of past traumatic experiences (Briere & Scott, 2006). Anxious-ambivalent attachment style often characterized the intimate relationships of maltreated youths (Wolfe, Wekerle, Reitzel-Jaffe, & Lefebvre, 1998), and a sense of helplessness may make it more difficult for survivors of past abuse to identify violent behavior and to break away from abusive relationships (Banyard, Arnold, & Smith, 2000).

Limitations

The use of longitudinal data and the assessment of multiple types of dating violence are notable strengths of this study, but some limitations also need to be acknowledged. Our sample was predominantly Caucasian and middle-class, which may limit the generalizability of the findings to a broader population of young women. Because this is the rare study to our knowledge to document prospectively the prevalence of psychological and physical/sexual dating victimization among girls in adolescence and early adulthood, it would be useful to replicate this study using a larger and more diverse sample, and thereby increase the generalizability of our findings. Finally, the reference period used in our dating victimization measures—referring to a limited period (1 year) and to one romantic partner—may be associated with an underestimation of the prevalence rates of victimization. The vast majority of studies have evaluated violence with scales that ask participants to indicate whether and how often they experienced specific behaviors (e.g., insults, threats, being pushed, forced to have sex). For many authors, these scales are not sufficient to capture the complexity of the situations as they do not assess the circumstances, motivations and intentions, nor the context or severity of the behaviors (Foshee & Reyes, 2011).

Clinical and Policy Implications

Despite the limitations of the present study, our findings have several implications for the prevention of dating violence. In fact, our findings indicate that girls with a history of family violence in particular may be at higher risk of being victimized in dating relationships as well as to be subsequently revictimized in early adulthood.

Thus, selective prevention efforts targeting girls under child protective services or vulnerable following exposure to family violence may represent an important avenue to pursue. The consequences associated with these traumatic experiences need to be addressed to end the cycle of victimization. As an example, the *Youth Relationships Project* was offered in community settings to 158 teenagers aged 14 to 16 with a history of child abuse (Wolfe et al., 2003). The program was shown efficient to reduce psychological and physical violence.

Moreover, our findings suggest that girls with a history of childhood behavior problems and/or adolescent high-risk behaviors deserve particular attention from practitioners who design awareness, risk-reduction, and preventive measures. One promising avenue in addressing this issue is the *Fourth R* project, a school-based prevention program recently developed and implemented in several Canadian provinces (Wolfe, 2006; Wolfe et al., 2009). This program is particularly innovative and relevant with regard to our findings because it aimed at reducing both adolescent violence (i.e., bullying, peer and dating violence) and related risky behaviors, such as substance use and risky sexual practices. This program targets youths in Grades 9 to 11 and promotes the development of healthy relationships and responsible choices within the social context of adolescence.

Another interesting avenue would be that applied research targeting youth violence prevention includes partner violence as a major outcome (Ehrensaft, 2008). Because antisocial, delinquent, and high-risk behaviors are more visible than dating victimization, girls who display high-risk behaviors would be easier to reach through intervention programs for youth presenting antisocial behavior than through traditional programs targeting dating violence specifically. Moreover, our results suggest that adolescent girls with a history of childhood behavior problems could benefit from preventive initiatives implemented earlier. Many prevention programs that target youth antisocial behavior start in childhood (e.g., *Fast Track Program*; The Conduct Problems Prevention Research Group, 2002). Future research should thus explore whether antisocial behavior prevention efforts have an impact on girls' dating victimization in adolescence and early adulthood, or at both developmental periods.

In sum, our analyses showed that history of family violence, childhood behavior problems, and adolescent high-risk behaviors are associated with several patterns of dating victimization, including revictimization by young adulthood, even after controlling for low parental monitoring and affiliation to deviant peers in adolescence. Consequently, the current data highlight the importance of early intervention with girls who have lived in violent families and those who may develop behavior problems to prevent developmental trajectories that could lead to adult victimization. Moreover, preventing and treating behavior problems, on one hand, and intervening in high-risk behaviors and dating violence concurrently on the other hand, may be key factors in the prevention of victimization in the context of romantic relationships.

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