

Covariation in the Use of Physical and Sexual Intimate Partner Aggression Among Adolescent and College-Age Men A Longitudinal Analysis

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Abstract:

A longitudinal examination of male perpetration of physical aggression toward a romantic partner and its covariation with sexual aggression reveals a decline from adolescence through 4 years of college. Witnessing domestic violence and experiencing parental physical punishment increased the likelihood of physical aggression in adolescence, but not thereafter. Prior perpetration best predicted subsequent perpetration. Although adolescence was the time of greatest risk, the 2nd year in college was an additional time of increased risk. Furthermore, physical and sexual aggression covaried with each other in the sample at rates significantly greater than chance, indicating that covariation may be a unique form of perpetration. Witnessing domestic violence and experiencing parental physical punishment were associated with an increased likelihood of men committing both forms of intimate partner aggression in adolescence.

Article:

In a recent review of the literature on gendered aggression, J. W. White (2006) noted that adolescence is a time of significant transition for young women and men and a time that establishes patterns of behavior in intimate relationships. During this time, young men and women experience pressure to conform to traditional gender roles, and at least some young men may begin to believe that control and aggression in intimate relationships are necessary parts of establishing a masculine identity. Research supports White's conclusion that it would be unusual to find a high school or college female who had not been involved in some form of verbal aggression and a substantial number who had not experienced physical or sexual aggression in intimate relationships. Humphrey and White (2000) found high levels of sexual victimization during adolescence: Of the women, 14% reported being the target of unwanted contact, 15% verbal coercion, and 20% rape or attempted rape. Similarly, Smith, White, and Holland (2003) found that almost 50% of the women surveyed reported at least one experience of physical aggression in intimate relationships during adolescence, with being pushed, grabbed, and shoved being the most frequent forms of aggression experienced. They furthermore reported that by the end of the 4th year of college approximately 80% of the women had experienced at least one incident of sexual or physical aggression.

The patterns established in adolescent relationships may continue in adulthood. The greatest threat of violence to adult women is from their intimate partners. A comprehensive survey of

more than 3,000 college women found that more than half (53.7%) had experienced some form of sexual victimization (Koss, Gidycz, & Wisniewski, 1987). More recently, Humphrey and White (2000), in a sample of college students, and Tjaden and Thoennes (1998), in a probability sample of 8,000 women in the United States, confirmed this high percentage. Furthermore, as previously noted, Smith et al. (2003) found that by the 4th year of college more than 80% of their sample of women had had at least one experience with sexual or physical victimization, and approximately 64% had experienced at least one incident of each. They labeled this phenomenon covictimization.

Numerous studies have documented the use of physical and sexual aggression toward intimate partners among adolescent and adult males (Hannen & Burkhart, 1993; Hines & Saudino, 2003; Katz, Carino, & Hilton, 2002; Kuffel & Katz, 2002; Lane & Gwartney-Gibbs, 1985; Malamuth, Linz, Heavey, Barnes, & Acker, 1995; Murphy, Meyer, & O'Leary, 1994; Ryan, 1998; Ryan & Kanjorski, 1998; Sigelman, Berry, & Wiles, 1984; Spencer & Bryant, 2000). Aggression by male adolescents has been associated with domestic violence in subsequent adult relationships (Murphy et al., 1994; O'Leary, Malone, & Tyree, 1994). Hence, a better understanding of male aggression in teen and young adult dating relationships could lead to interventions that reduce aggression toward women in both adolescence and adulthood, which would improve women's health. However, no studies have examined the covariation, or coperpetration, of physical and sexual aggression from a developmental perspective. Coperpetration is defined here as the same male committing both sexual and physical aggression during the same time period, although not necessarily during the same assaultive episode or with the same partner. The present study uses a longitudinal design to examine men's use of physical and sexual aggression from adolescence through 4 years of college, the time period during which young women are most vulnerable to assault by an intimate partner (Humphrey & White, 2000).

Physical aggression may include behaviors that range from hitting, pushing, or shoving to more severe forms such as using a weapon. Sexual aggression may range from verbally coerced sexual intercourse to various forms of forced sexual contact, including forced sexual intercourse. Studies indicate that male aggression against dating partners in the teen and young adult years is pervasive. Based on research conducted during the past two decades, it is estimated that 30% to 40% of men studied have self-reported physical aggression toward dating partners (Hall, 2002; O'Keeffe, Brockopp, & Chew, 1986; J. W. White & Koss, 1991). This physical aggression is evident across various geographic regions (Spencer & Bryant, 2000), types of institutions of higher learning (Clark, Beckett, Wells, & Dungee-Anderson, 1994; J. W. White & Koss, 1991), and ethnic groups (Agbayani-Siewert & Flanagan, 2001; Baldassano-Matthews, 2001; Chen & True, 1994; Coker et al., 2000).

National data on sexual assault indicate that prevalence of perpetration has remained constant during the past three decades. Koss et al. (1987) found that 4.4% of the college men surveyed admitted to behaviors meeting the legal definition of rape, 3.3% to attempted rape, 7.2% to sexual coercion, and 10.2% to forced or coerced sexual contact, indicating that 25.1% of the college men admitted to some form of sexual aggression. Similar rates have been reported more recently in college samples (Abbey, McAuslan, Zawacki, Clinton, & Buck, 2001; Calhoun, Bernat, Clum, & Frame, 1997; J. W. White & Smith, 2004) and in a community college sample (Lowdermilk, Holland, Cameron, & White, 1998). J. W. White and Smith (2004), in a

longitudinal study, found that of the 34.5% of men who had committed at least one form of sexual assault by the end of the 4th year of college (13.8% were attempted or completed rapes), 22.0% had committed their first assault while in high school (6.3% were attempted or completed rapes). In this sample, there were no differences related to ethnicity.

With the notable exception of the study by J. W. White and Smith (2004), which examined sexual perpetration longitudinally, most studies of dating violence have been cross-sectional (for an exception, see O'Leary & Slep, 2003). In addition, most cross-sectional studies investigate *only* sexual perpetration or *only* physical perpetration, but not both. Little is known about perpetration of physical aggression longitudinally or about its relationship to sexual aggression.

Several studies have suggested that the best predictor of aggression is past aggression (Huesmann & Eron, 1992; Moffitt & Caspi, 1999; Olweus, 1993). Boys tend to show stability in aggressive behavior over time, although for many youth the frequency of more serious aggressive behaviors declines across time (Zumkley, 1994). O'Leary and Slep (2003) found stability in physical aggression toward a dating partner across a 3-month span. Longitudinal studies of longer duration (i.e., a 3-year period) using adult samples have also suggested stability in violence across time for a subset of men; for this subset, childhood victimization is the most stable risk marker (Aldarondo & Sugarman, 1996).

Adopting a social learning perspective, several researchers have argued that early childhood experience with family violence is a strong predictor of later relationship violence. Experiences within the family, most notably witnessing domestic violence, experiencing parental physical punishment, and childhood sexual abuse, contribute to patterns of behavior that men are likely to carry into adolescent and adult intimate relationships (Hamberger & Lohr, 1989). Witnessing or experiencing family violence as a child has been associated with various forms of violence toward women (Edleson, 1999; Fagot, Loeber, & Reid, 1988; Friedrich, Beilke, & Urquiza, 1988; Gwartney-Gibbs, Stockard, & Bohmer, 1987; Koss & Dinero, 1988; Malamuth et al., 1995; Riggs & O'Leary, 1989). Roughly one third of individuals who witness or experience violence as children become violent as adults (Kaufman & Zigler, 1987). H. R. White and Chen (2002) found that witnessing parental fighting and experiencing parental physical punishment had small but significant relationships with physical dating violence. Numerous studies have suggested that abuse, whether physical or sexual, in the family of origin disrupts the development of healthy relationships during the teen years and increases the risk for relationship violence (Carlson, 1990; Follette & Alexander, 1992; Murphy et al., 1994; O'Leary et al., 1994; Wolfe & McGee, 1994). Malamuth and colleagues (1995; Malamuth, Sockloskie, Koss, & Tanaka, 1991) have shown that men who experienced family violence (a measure that combined witnessing domestic violence and experiencing parental physical punishment) and/or child abuse are more likely to be sexually and physically coercive toward women.

PRESENT STUDY

The purpose of the present study is threefold. The first purpose is to examine the time course of physical aggression from high school through 4 years of college. We hypothesized that there would be an overall decline in the incidence of physical aggression across time. The second purpose of the present study is to examine the time course of physically aggressive behaviors in dating relationships as a function of childhood experiences of sexual abuse, parental physical

punishment, and witnessing domestic violence. We hypothesized that men with a history of childhood victimization would be more likely to continue to perpetrate physical aggression against their dating partners. Furthermore, we were interested in the extent to which the type of childhood victimization—parental physical punishment, sexual abuse, or witnessing domestic violence—would have a differential impact on physical offending in adolescence and during the collegiate years. Based on previous findings, we hypothesized that each would be related to an increased likelihood of aggression toward an intimate partner.

The final purpose of the present study is to examine coperpetration, that is, the co-occurrence of sexual and physical partner violence, across time. Few studies have examined both sexual and physical aggression. Malamuth et al. (1995) assessed both, but they did not examine differences between men who used only one or both types of aggression. Although Hannen and Burkhart (1993) reported that approximately 17% of their sample of college men admitted to engaging in high levels of sexual and physical aggression, they provided no further comparisons; also, the 17% included only men who committed “high” levels of either form of aggression. Finally, Ryan (1998), when limiting responses to one’s current or most recent relationship in the past year, found that 5% of the sample reported both sexual and physical aggression. Based on past findings, we hypothesized that the coperpetration of sexual and physical aggression would occur at rates that exceed those expected by chance alone. That is, men who commit one form of aggression against women are likely to commit the other. Furthermore, we expected co-occurrence to be higher among men with a history of childhood victimization than among those without a history.

METHOD

Participants

We used a longitudinal design, replicated over three cohorts of men entering college. All men aged 18 to 19 and entering college for the first time were asked to complete a series of five surveys over a 4-year span. According to the Carnegie Foundation for the Advancement of Teaching (1987), the university at which data collection took place is representative of state colleges, the type that approximately 80% of all U.S. college students attend. Of the total number of incoming men, 65% completed the first survey ($N = 851$). The profile of men in the study matched demographically that of those at the university; most were in-state residents. Yearly retention averaged 71%. Of the original sample, approximately 69.0% were White, 26.0% were Black, and 5.8% belonged to other ethnic groups; less than 2.0% were international students. Of the original sample, 22.0% completed all five phases of the study; of the final sample, 89.0% were White, 10.0% were Black, and 5.6% belonged to other ethnic groups.

Survey Measures

Childhood victimization. Respondents reported on three types of childhood victimization during the first survey: sexual abuse, parental physical abuse, and witnessing domestic violence before the age of 14 (all items taken from Malamuth et al. [1991], who found them to be significant predictors of male sexual aggression; their operational definition of childhood sexual abuse was taken from Finkelhor, 1986). For childhood sexual abuse, respondents reported on the frequency of four acts: exposure to someone’s sex organs or exposing theirs, fondling of sexual organs or being asked to fondle someone else, attempted intercourse, or completed intercourse. Respondents provided additional information on the most significant experience. They indicated

who the other person was (adult stranger, older family member, older other, or a similarly aged other). Respondents also indicated the reason for the contact (because it felt good, curiosity, made respondent feel loved or secure, use of authority or bribery, or threatened or actual physical force). A respondent was categorized as a *childhood sexual abuse* victim if he experienced any kind of sexual act, contact or noncontact (Wyatt, 1985), perpetrated by an adult, regardless of the inducement strategy used or if a similarly aged peer used a coercive tactic. A coercive tactic was defined as threatening to hurt or punish or the actual use of physical force. Respondents were classified as a victim of *parental physical abuse* if they responded that, in an average month, their parent or guardian used “physical blows,” such as hitting or kicking or throwing them down, against them at least once. A respondent was classified as having *witnessed domestic violence* if they responded that at least once, during an average month, their parents or guardians delivered physical blows to one another. For the purposes of some analyses, the three measures of childhood victimization were combined to identify a respondent as having experienced none or any childhood victimization.

Adolescent and collegiate physical aggression perpetration. Physical aggression during adolescence and college was assessed using a modified version of the Violence subscale of the Conflict Tactics Scale (CTS), the most frequently used measure of aggression in intimate relationships (Straus, 1979; for most recent reliability and validity data, see Straus, 2004). Respondents indicated how frequently they had done each of the following: threatening to hit or throw something at the target; throwing something; pushing, grabbing, or shoving; hitting or attempting to hit, but not with anything; hitting or attempting to hit with something hard. A 5-point scale was used with 1 = *never*, 2 = *once*, 3 = *2 to 5 times*, 4 = *6 to 10 times*, 5 = *more than 10 times*. Coefficient alpha for this 5-item scale ranged from .78 to .92 across the five waves of data collection. Our measure did not include the item “beaten up,” which is generally part of the CTS; this item was deleted after pilot testing showed that it was not endorsed. Thus, our measure of physical assault was likely to capture less potentially physically injurious and visible acts of physical aggression (e.g., less severe) than some other studies using the CTS. The timeframe for the first administration was adolescence; the past school year was the timeframe for all subsequent administrations. For some analyses, at each time period respondents were categorized as never or ever committing an act of physical aggression. To obtain an estimate of the average number of times acts of physical aggression were committed, responses were recoded and summed, such that 1 = 0, 2 = 1, 3 = 3.5, 4 = 8, and 5 = 12.

Adolescent and collegiate sexual aggression perpetration. Respondents were asked at Time 1 to indicate how many times since the age of 14 they had committed each of the several sexual behaviors described on the Sexual Experiences Survey (SES; Koss et al., 1987). For each subsequent administration of the survey, respondents were asked how often each had been committed during the past school year. The SES asks about the frequency of several sexual behaviors, including consensual sexual intercourse, forced sexual contact, verbally coerced sexual intercourse, attempted and completed sexual intercourse, and other sexual acts involving force or threat of force. Koss et al. (1987) reported an internal consistency of .89 for men. For analyses at each time point, respondents were categorized as never or ever committing an act of sexual aggression. J. W. White and Smith (2004) reported the results related to sexual aggression in the current sample.

Coperpetration. We defined coperpetration as having perpetrated both physical and sexual aggression during the same time period (i.e., adolescence, each year of college) but not necessarily during a single assaultive episode or even with the same partner. Hence, coperpetration in adolescence specifically means having perpetrated both physical and sexual aggression against a female partner during high school and coperpetration during college means having perpetrated both physical and sexual aggression against a female partner in any given year.

Relationship status and number of dating and sexual partners. At Time 1, men were asked to indicate how many different women they dated in high school, with how many different women they had had sexual intercourse, and their current relationship status (single, dating someone exclusively, engaged, married, or divorced). On each subsequent administration, the same questions were asked for the past year only. Men also provided contextual information about the last item on the SES that they endorsed. Among those items was one that asked men to identify the woman involved in the sexual interaction about which they were reporting as a girlfriend, friend, casual acquaintance, family member, or stranger. Because items on the SES were ordered from least severe to most severe (i.e., consensual sexual intercourse, forced sexual contact, verbally coerced sexual intercourse, attempted and completed sexual intercourse, and other sexual acts involving force or threat of force), we were able to gather contextual information about only the most serious sexually coercive behavior committed. Men who reported only consensual sexual intercourse answered questions about the most recent event.

Procedure

Students responded to the survey instrument in mixed-sex groups monitored by trained female and male undergraduate students. Students who did not attend a group session received telephone calls reminding them about the study. A packet containing all the survey instruments was then mailed to them. Data on childhood and adolescent experiences were collected retrospectively, whereas data on college experiences were collected prospectively. For the collegiate years, a fixed reference point that limited the recall interval to the previous year was provided. We obtained a federal Certificate of Confidentiality from the National Institute of Mental Health along with approval from the university's institutional review board. Participants received \$15 for each completed follow-up survey. Randomly determined code numbers assigned to each student at the beginning of the project allowed for the maintenance of confidentiality while still permitting the matching of cases across time. A log matching names to code numbers was kept in a locked safe and was accessible only to the principal investigators and project manager.

RESULTS

Attrition

The pattern of perpetration was similar for the men who participated in the entire study and those who dropped out at sometime during the project. Thus, we do not think those men who did or did not complete the project biased the patterns reported in this study. Comparisons of men who completed the project with those who did not on variables used in the present study revealed no statistically significant differences for cohort, race, adolescent relationship status, childhood sexual experiences, childhood experiences with parental physical punishment, witnessing domestic violence, or dating history (number of dating and sexual partners). However, men who withdrew from the study at the end of the 1st year of college had significantly higher levels of

self-reported adolescent delinquency and drank significantly more during the 1st year of college; none of these variables showed a significant perpetration by time in study interaction.

Childhood Victimization

Chi-square analyses indicated that there were no significant differences between the percentage of men who did and did not complete the study as a function of any form of childhood abuse; also, there were no significant differences as a function of cohort or race. Therefore, for all analyses data were collapsed across the three cohorts and across race. J. W. White and Smith (2004), working with the same data set, found that 9.5% ($n = 60$) of the men reported experiences that met the definition of childhood sexual abuse: In all, 1.1% ($n = 7$) reported that the most severe form of coercive sexual experience involved a similarly aged relative or peer, with 0.5% ($n = 3$) involving exposure and/or fondling and 0.6% ($n = 4$) involving attempted and/or completed sexual intercourse. An additional 8.4% ($n = 53$) experienced some form of sexual interaction with an adult; 5.4% ($n = 34$) experienced only exposure and/or fondling by an adult and 3.0% ($n = 19$) experienced attempted and/or completed sexual intercourse by an adult. Finally, 5.5% ($n = 45$) of the men both witnessed domestic violence and experienced parental physical punishment, whereas 2.2% ($n = 18$) reported only witnessing domestic violence and 23.0% ($n = 187$) reported experiencing parental physical punishment but not witnessing domestic violence. Overall, 30.7% ($n = 250$) of the men reported either experiencing parental physical punishment or witnessing domestic violence in a typical month growing up.

Time Course of Physical Aggression Perpetration

Across all years, the proportion of men reporting any physical aggression toward an intimate partner was 26.5% ($n = 206$; see Table 1). Categorizing each respondent according to the year in which he first offended we found that most first perpetrated in adolescence. There was a significant drop in the proportion of first time offenders as a proportion of all offenders from adolescence through the 4th year of college: 18.6% ($n = 155$), 7.3% ($n = 47$), 5.3% ($n = 24$), 1.5% ($n = 4$), and 0.2% ($n = 3$), respectively; $\chi^2(5) = 402.9, p < .0001$.

Table 1 also displays the percentage of men committing each form of physical aggression assessed at each time point. Of those who were physically aggressive during adolescence, 17.2% ($n = 143$) verbally threatened to harm and 4.1% ($n = 34$) hit (or attempted to) with something hard. By the end of the 4th year of college, these numbers had risen to 30.3% ($n = 235$) and 10.8% ($n = 84$), respectively. Across the five waves of data collection, the average total number of physically aggressive acts reported was 1.87 ($n = 822$), 0.98 ($n = 638$), 1.94 ($n = 446$), 1.14 ($n = 293$), and 1.08 ($n = 143$), respectively. A repeated measures analysis of variance (ANOVA) using data for only those men who completed all five surveys revealed a significant effect for time, $F(4, 532) = 3.44, p = .015$. Contrast analyses revealed that the reported frequency of aggressive behaviors was higher in adolescence and Year 2 than in Year 1; Years 3 and 4, which although not different from each other, were lower than Year 2.¹

Chi-square and relative risk (RR) analyses showed significant relationships between physical perpetration during one year and physical perpetration during the subsequent year. RR is an estimate of an event occurring in one time period given the occurrence of an event in a previous time period. Respective RRs = 4.2, 2.7, 4.8, and 16.5. The associated attributable risks (i.e., the percentage of cases that could be eliminated if the risk factor were removed) were 37.2%, 15.2%,

38.1%, and 65.4%, respectively. That is, although the incidence, as well as frequency, of physical perpetration declined across time, a small number of men persisted, with the likelihood of reoffending increasing across time for these men.

Table 1. *Percentage of Men Reporting Dating Violence Perpetration by Type From High School Through College*

Type	Incidence					Lifetime Prevalence	
	High School	1 st Year College	2 nd Year College	3 rd Year College	4 th Year College	From High School to Time of Attrition ^a	
Sample size	833	639	446	295	143	777	145
None	68.1	79.0	74.9	80.0	85.3	56.0	50.9
Physical or sexual	31.9	21.0	23.1	20.0	14.7	44.0	49.1
Any physical	18.6	11.9	16.8	11.9	9.1	26.5	31.9
Threatened to hit or throw something	17.2	10.3	20.4	10.2	8.4	30.3	44.1
Throw something at her	28.2	16.5	31.4	15.3	11.3	15.8	22.7
Pushed, grabbed, or shoved	21.3	14.7	14.1	14.9	11.2	34.1	37.9
Hit or attempted hit but not with anything	6.5	5.0	7.0	5.4	5.6	17.7	19.3
Hit or attempted hit with something hard	4.1	3.3	9.0	2.4	2.8	10.8	18.6
Only physical	9.4	7.4	12.8	7.5	7.0	15.6	25.0
Any Sexual	22.5	13.6	12.3	12.3	7.7	28.4	24.1
Only sexual	13.3	9.1	8.3	8.1	5.6	17.5	17.2
Both physical and sexual (coperpetration)	9.2	4.5	4.0	4.4	2.1	10.9	6.9

a. The first number includes all cases to time of attrition. The second number includes only those who completed all time points.

The Relationship Between Childhood Victimization and Physical Aggression Perpetration Across Time

A 2×3 mixed design ANOVA, with childhood victimization (none vs. any) as the between-subjects factor and time as the within factor with three levels, was conducted. The last two time periods were not included because of small per cell sample sizes. The analysis revealed significant effects for childhood victimization, $F(1,406) = 7.38, p = .007$, with childhood victims reporting more physical aggression perpetration ($M = 2.05$) than nonvictims ($M = 1.06$). Using contrast analyses, we found that the significant effect for time, $F(2, 812) = 6.41, p = .002$, was quadratic in form. There was a significant decline in number of physically aggressive acts from adolescence ($M = 2.9$) to Year 1 ($M = 0.97$), which was followed by a significant increase to Year 2 ($M = 2.4$); this increase was seen in both childhood victims and nonvictims, although the increase approached being significantly greater for men with a history of childhood victimization than for those without such a history (from 0.67 to 1.5 for nonvictims, from 1.2 to 2.5 for victims; the quadratic component of the victimization \times time interaction was significant at $p = .08$).

Although the ANOVAs revealed the effects of childhood victimization on the *frequency* of aggressive acts, chi-square and RR analyses determined the relationship between the various childhood victimization experiences assessed and the likelihood of *any* physical aggression perpetration. Results revealed significant relationships between adolescent physical aggression perpetration and witnessing domestic violence (RR = 2.2), and experiencing parental physical punishment (RR = 1.95) but not childhood sexual assault. The RR for any type of childhood

victimization was 2.0. With regard to physical aggression during adolescence, the attributable risk for witnessing domestic violence was 7.4% and 21.0% for parental physical punishment. When we collapsed across all forms of childhood victimization, the attributable risk was 29.1%.

Logistic regression analyses assessed whether the effects of childhood victimization on physical aggression perpetration persisted across time, after controlling for previous perpetration. The first analysis confirmed that when each of the three forms of childhood victimization was considered, only experiencing parental physical punishment significantly predicted adolescent perpetration ($p = .002$). However, after controlling for adolescent perpetration, we found that witnessing domestic violence significantly predicted perpetration in the 1st year of college ($p = .01$). For subsequent years, any form of childhood victimization ceased to be a significant predictor; rather, the prior year's perpetration was the best predictor of the next year's perpetration.

Coperpetration

Coperpetration was defined as the commission of at least one sexually coercive behavior and one physically aggressive behavior in the same time period, regardless of whether the victim was the same or different. Chi-square analyses showed a significant relationship between physical and sexual assault in adolescence as well as in each year of college ($p < .001$, with respective phi coefficients of .31, .26, .16, .27, and .18 for adolescence through the 4th year of college). Chi-square analyses further revealed significant relationships between coperpetration in one year and coperpetration in the subsequent year: for adolescence to Year 1, the RR was 7.3 (confidence interval [CI] = 3.7–14.2, $p < .001$); for Year 1 to Year 2, RR = 23.6 (CI = 10.4–50.9, $p < .001$); Year 2 to Year 3, RR = 9.37 (CI = 2.97–23.0, $p = .005$); and Year 3 to Year 4, RR = 13.6 (CI = 1.8–90.35, $p = .10$).

As seen in Table 2, the percentage of men coperpetrating was low across the five periods of data collection for men with no history of childhood victimization: 5.1% ($n = 28$), 2.3% ($n = 10$), 3.6% ($n = 11$), 4.4% ($n = 9$), and 0.0%, respectively. Rates declined across time for men with a history of childhood victimization and were higher than for men without a history of childhood victimization but only through the 2nd year of college: 18.4% ($n = 45$), 7.1% ($n = 13$), 4.9% ($n = 6$), 2.5% ($n = 2$), and 7.5% ($n = 3$), respectively. In adolescence, the RR for coperpetration given childhood victimization was 3.8 compared to men who committed no form of partner violence; the RR was 3.6 if compared to all other men, including those who committed only sexual assault or only physical aggression. In Years 1 and 2, the respective RRs were 5.2 and 2.0; the RRs were 3.1 and 1.7 if compared to all other men, including those who committed only sexual assault or only physical aggression. Small cell sizes precluded similar analyses for Years 3 and 4. A logistic regression revealed that experiencing parental physical punishment ($p < .001$) and witnessing domestic violence ($p = .027$), but not childhood sexual victimization, predicted coperpetration in adolescence. However, additional logistic regression analyses indicated that after controlling for prior year's coperpetration, no form of childhood victimization contributed to the prediction of coperpetration during the collegiate years.

Table 2. Proportion of Men Who Perpetrated Only Physical, Only Sexual, or Both Physical and Sexual Aggression by Exposure to Domestic Violence (DV) and/or Experienced Parental Physical Punishment

Prior Victimization	Perpetration Outcome	Adol. (n=797)		Year 1 (n=612)		Year 2 (n=428)		Year 3 (n=283)		Year 4 (n=136)	
		%	n	%	n	%	n	%	n	%	n
Within neither witnessed DV nor experienced parental physical punishment											
	Only physical	9.4	52	5.8	25	10.8	33	6.4	13	8.3	8
	Only sexual	12.5	69	9.1	39	7.5	23	7.4	15	4.2	4
	Coperpetration	5.1	28	2.3	10	3.6	11	4.4	9	0.0	0
	Total	27.0	149	17.3	74	21.9	67	18.2	37	12.5	12
Within any form of childhood victimization											
	Only physical	9.8	24	11.4	21	15.6	19	7.5	6	5.0	2
	Only sexual	15.5	38	9.2	17	11.5	14	8.8	7	10.0	4
	Coperpetration	18.4	45	7.1	13	4.9	6	2.5	2	7.5	3
	Total	30.7	107	27.7	51	32.0	39	18.8	15	22.5	9
Within witnessed DV only											
	Only physical	5.6	1	18.8	3	11.1	1	0.0	0	0.0	0
	Only sexual	22.2	4	6.3	1	22.2	2	0.0	0	0.0	0
	Coperpetration	16.7	3	6.3	1	0.0	0	0.0	0	0.0	0
	Total	27.0	8	31.2	5	33.3	3	0.0	0	0.0	0
Within experienced parental physical punishment only											
	Only physical	11.5	21	10.1	14	14.9	14	8.2	5	3.3	1
	Only sexual	14.2	26	10.9	15	10.6	10	6.6	4	6.7	2
	Coperpetration	14.2	26	5.1	7	5.3	5	3.3	2	10.0	3
	Total	39.9	73	26.1	36	30.9	29	18.0	11	20.0	6
Within both witnessed DV and experienced parental physical punishment											
	Only physical	4.5	2	13.3	4	21.1	4	8.3	1	14.3	1
	Only sexual	18.2	8	3.3	1	10.5	2	25.0	3	28.6	2
	Coperpetration	36.4	16	16.7	5	5.3	1	0.0	0	0.0	0
	Total	59.1	26	33.3	10	36.8	7	23.3	4	42.9	3

Relationship Status and Perpetration

A final set of analyses examined whether relationship status (exclusive or not), number of women dated, and number of sex partners were related to perpetration of physical aggression. By definition, all of the victims of physical aggression were intimate partners. Men reported an average of 4.4 ($SD = 4.9$) dating partners and 2.6 ($SD = 2.8$) sexual partners in high school. Across the 4 years of college, the number of dating partners decreased from Year 1 ($M = 2.3$, $SD = 2.9$) to Year 2 ($M = 1.3$, $SD = 1.8$), then increased in Year 3 ($M = 3.9$, $SD = 4.0$) and remained high in Year 4 ($M = 3.8$, $SD = 3.5$), $F(3, 429) = 27.7$, $p < .001$. By contrast, the average number of sexual partners did not change significantly across time, respective means = 1.7 (2.1), 1.8 (2.3), 1.8 (2.3), and 1.9 (2.5). The percentage of men reporting that they were currently in an exclusive relationship (including engaged) at the beginning of college was 44.9% ($n = 374$). Across the 4 years of college, these percentages were 36.8% ($n = 235$), 34.2% ($n = 153$), 47.0% ($n = 139$), and 49.7% ($n = 71$); only 14.6% ($n = 21$) of the men reported being in an exclusive relationship during all 4 years of college (although we do not know if these relationships were with the same or different women). A series of t tests revealed no systematic relationships between engaging in physical aggression toward a dating partner (treated as a categorical variable) and number of sex partners nor number of women dated, in either the same year or the following year. However, significant relationships were found between frequency of physical aggression toward an intimate partner and relationship status (exclusive or not). First, men who reported currently being in an exclusive relationship at the first follow-up survey (i.e., at the end of the 1st year of college) had significantly higher physical aggression scores for the 1st year of college, $t(1) = 2.1$, $p = .03$ ($M = 1.44$ vs. 0.59). Similarly, these men also had higher physical

aggression scores at the end of the 2nd year of college, $t(1) = 3.47, p = .001 (M = 3.15 \text{ vs. } 1.24)$. No other significant relationships between relationship status and physical aggression were found for other periods.

DISCUSSION

This article provides unique longitudinal data on the time course of male perpetration of physical aggression and its co-occurrence with sexual aggression in adolescence and across 4 years of college. Overall, physical and sexual dating violence is a common experience, with 49.0% of the men reporting at least one incident of physical or sexual aggression between adolescence and their 4th year of college and 10.9% reporting at least one incident of sexual aggression and one incident of physical aggression.

As hypothesized, there was an overall decline in the percentage of men committing partner violence across time. However, the frequency had two peaks, one in adolescence and one in the 2nd year of college. The higher mean for adolescence is not surprising given that men were reporting on behavior during a 4-year period. In contrast, the peak in Year 2 is worthy of further discussion. Seiffge-Krenke (2003) found that from age 13 to age 21 there is an increase in the average duration of intimate relationships from 3.9 months to 21.3 months. With age, youth move from dating because it is the social thing to do as a form of recreation (Collins & Sroufe, 1999) to more serious involvement based on emotional attraction to the partner (Miller & Benson, 1999). Other research has indicated that physical aggression toward an intimate partner is much more likely in more established than less established relationships (Miller & Benson, 1999). Thus, the increased risk for partner violence found in the present study during the 2nd year of college may be because of young men remaining in relationships longer. Consistent with this explanation, in the present study there was a significant decrease in the reported number of women dated from Year 1 to Year 2, accompanied by an increase in the number of men reporting being in an exclusive relationship. Additional support for this is provided by the finding that men reporting being in an exclusive relationship were more aggressive toward their partners in Years 1 and 2. However, this argument would suggest that levels of physical assault perpetration should either remain high or even increase in Years 3 and 4, a pattern not supported by the data. This may be the case because men in the present study actually reported a significant increase in the number of women dated in Years 3 and 4, whereas there was also an increase in the number of men reporting being in exclusive relationships. Further research is necessary to examine more closely the time course of relationship development, continuation, and termination during the collegiate years. It is not readily apparent why men began to report dating more women in the last 2 years of college while still reporting being in exclusive relationships. These patterns may be a result of men “cheating” on women they consider to be an exclusive partner or simply a result of our methods, namely, the timing of entering or terminating relationships and when the follow-up surveys were administered. Nevertheless, the present results suggest the merits of a further examination of age-related developmental changes in the meaning and type of relationships young men enter and how the expression of partner violence changes accordingly.

Also as hypothesized, we found a main effect for history of childhood victimization on partner violence and an interaction with time that approached significance, primarily because of the trend for men with a history of childhood victimization to show a sharper increase in partner violence in Year 2, providing partial support for the hypothesis that the time course of partner

violence would be different for men with and without a history of childhood victimization. Furthermore, we were interested in the extent to which the type of childhood victimization would have a differential impact on physical offending in adolescence and during the collegiate years. Results indicate that witnessing domestic violence and experiencing parental physical punishment, but not childhood sexual abuse, increased the likelihood of physical aggression toward one's dating partners in adolescence, consistent with other findings (Aldarondo & Sugarman, 1996). With one important exception (witnessing domestic violence as a predictor of male perpetration of physical aggression in the 1st year of college), childhood victimization effects dissipated after adolescence. It appears that prior year's perpetration best predicted subsequent perpetration. Furthermore, witnessing domestic violence and experiencing parental physical punishment, but not childhood sexual abuse, also increased the likelihood of coperpetration in adolescence.

The intergenerational transmission of violence is the most common explanation for the relationship between childhood maltreatment and subsequent relationship violence. Some have argued that abused youth learn a propensity toward violence and an aversive interactional style (Aber, Allen, Carlson, & Cicchetti, 1989). It may be that maltreatment in childhood results in a disruption of normal developmental pathways (Wolfe & Wekerle, 1997). As Gwartney-Gibbs et al. (1987) suggested, distal effects (i.e., childhood experiences) weaken across time and proximal factors take over. Our attributable risk analyses suggest that the effects of childhood maltreatment are greatest during adolescence and that its legacy is an elevated risk of adolescent aggression toward intimate partners. This aggression, in turn, not childhood maltreatment per se, is what subsequently predicts aggression in college. Furthermore, the attributable risk analyses indicate that a reduction in childhood victimization could result in a substantial decrease in the number of young men initiating dating violence during the high school years.

The final purpose of the present study was to examine the co-occurrence of sexual and physical aggression toward intimate partners across time. It is important that our data indicate that coperpetration is a unique form of perpetration, given that its prevalence exceeded rates expected statistically in light of the base rates of physical and sexual perpetration. Furthermore, coperpetration in one year predicted coperpetration the next year. The percentage of men with a history of childhood victimization who coperpetrated was higher than for men without a history, at least through the 2nd year of college. In particular, experiencing parental physical punishment and witnessing domestic violence, but not childhood sexual victimization, best predicted coperpetration in adolescence. Although in the RR analyses there was evidence of a continuing relationship between childhood victimization and coperpetration during the collegiate years, the effect became nonsignificant when we controlled for prior year's coperpetration. Thus, it appears that the effect of childhood victimization may be strongest during adolescence, setting in motion a pattern of behavior that persists across time.

In the present study we do not know if the victims of physical and sexual aggression were the same or different women. Thus, future research should explicitly examine differences in patterns of coperpetration for the same versus different women. Further research should determine what factors might predict which men will both sexually and physically assault the same or different partners and which men will perpetrate one form of assault or the other. Sexual assault can occur in a range of relationships from strangers to intimate partners, whereas physical partner

aggression is most likely only in more established relationships, suggesting that personal attributes of the perpetrator as well as features of the relationship need further investigation.

Limitations

Much of our data are prospective, with short recall timeframes. This, combined with our use of behaviorally specific measures of victimization and perpetration, meant that the men did not have to identify and/or label their own experiences as assaultive. Nevertheless, a number of study limitations reduce generalizability. Limitations include our sampling of only college men, reliance on self-report data, physical aggression assessed via five items from the CTS, and retrospective assessment of victimization in childhood. In addition, our prospective analysis is limited by the fact that many students withdrew from college and, hence, from our study. However, we have confidence in the accuracy of our findings for several reasons. Nearly two thirds (73%) of the initial sample provided usable data through the sophomore year, and analyses indicated few differences between those who did and did not remain in the study. In addition, given the pattern of number of dating partners and sexual partners across the duration of the study, it is most likely that the reported incidents of physical and sexual perpetration occurred in different relationships rather than the same one. It is likely that the pattern of perpetration and coperpetration across time is not specific to one particular relationship but describes men's experiences with intimate partners more generally. It is also possible that men change relationships because of a partner's exiting a relationship because of the violence. Evidence from other studies suggests that women in violent relationships are more likely to break up with their partners (Testa & Leonard, 2001). Thus, research similar to that by Capaldi, Shortt, and Crosby (2003) might focus on examining the number of relationships men experience in the context of patterns of perpetration among couples that stay together versus new relationships.

Implications for Practice and Prevention

Our findings suggest that if we are able to prevent dating violence perpetration during adolescence, we may also be able to prevent much college dating violence and possibly adult domestic violence as well. Because young men who physically and/or sexually perpetrate in high school are at elevated risk for perpetration in college, early intervention and treatment for adolescent perpetrators are critical. We need more interventions targeting these high-risk populations that address coperpetration and perpetration. This suggests that there may be value in having educational curricula and other interventions that address the multiple forms of violence against women along with their common roots and consequences (Kuffel & Katz, 2002; J. W. White & Kowalski, 1998). In addition, boys known to have been abused and boys known to have witnessed domestic violence are appropriate target populations for early intervention.

However, we also found that many perpetrators come from low-risk populations. More than one fourth of men not victimized in childhood still perpetrated sexually and/or physically during adolescence. Furthermore, among the men who completed all phases of the study, 37.9% of those who did not perpetrate in adolescence initiated perpetration in college. The normative nature of dating violence indicates the need for researchers to identify factors in the broader social ecology that place men at risk for perpetration and that condone dating violence. Further research is also needed on coperpetration within the context of a single relationship as well as across multiple victims. The present results cannot address the question of whether there are etiological differences between men who commit multiple forms of partner violence and those

who do not. It may be simply that men who are the most extreme on a number of risk factors for partner violence have a broad repertoire of aggressive behaviors that they are willing to use. Further research is necessary to determine if coperpetration is quantitatively or qualitatively different from single forms of perpetration. In either case, there is value in having both forms of violence against women addressed in educational programs. We also recommend that measures of multiple types of relationship aggression be included in the same study, including battering (Smith, Smith, & Earp, 1999) and psychological abuse in addition to the more commonly measured physical and sexual aggression. Finally, we need more knowledge of the factors that mediate the relationships between different types of childhood experiences and subsequent perpetration in adolescence and those that mediate the relationship between men's experiences with adolescent perpetration and re-perpetration in college.

NOTE

1. Because the sample size decreased across time, these analyses were repeated for those who completed only two, three, or four surveys. The same pattern occurred in each case. Means for adolescence were significantly higher than Year 1 means. Year 2 means were significantly higher than were Year 1 or Year 3 means.

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