

Partner Violence Among Adolescents in Opposite-Sex Romantic Relationships: Findings From the National Longitudinal Study of Adolescent Health

Carolyn Tucker Halpern, PhD, Selene G. Oslak, MPH, Mary L. Young, MS, Sandra L. Martin, PhD, and Lawrence L. Kupper, PhD

Violence between intimate partners is a significant public health problem and is thought to be most prevalent in early adulthood. Most national studies of partner violence have focused on married or cohabiting individuals, however, with few studies including individuals in nonresidential dating relationships, the relationship type that is most common during early adulthood. The National Family Violence Surveys,¹ National Surveys of Families and Households,^{2,3} National Youth Survey,⁴ and recent national prevalence estimates by Schafer et al.⁵ have either excluded the dating population from their samples entirely or have not asked individuals in nonresidential relationships about partner violence. Estimates of the past-year prevalence of physical partner violence among married or cohabiting young adults range from 23% to 55%.^{4,6} Among married and cohabiting women in the National Surveys of Families and Households, higher rates of partner violence were found among those younger than 30 years.³ Similarly, in the longitudinal National Youth Survey, the past-year prevalence of physical violence decreased as the cohort aged, from a high of 55% when respondents were aged 18 to 24 years to a low of 32% when they were aged 27 to 33 years.⁴ Although there is a possibility of an “early-commitment” selection bias in the National Youth Survey figures, because only married or cohabiting individuals were included, others have found similar effects for age independent of relationship type.⁷

Given the higher prevalence of partner violence among young adults, adolescents are a crucial group for study and intervention. Patterns of conflict that precipitate domestic violence in the adult years may start in adolescent dating experiences.⁸ Alternatively, violent dating experiences may form part of a lifelong continuum, beginning with violence experienced as a child in the family of origin

Objectives. This report examines (1) the prevalence of psychological and minor physical violence victimization in a nationally representative sample of adolescents and (2) associations between sociodemographic factors and victimization.

Methods. Analyses are based on 7500 adolescents who reported exclusively heterosexual romantic relationships in the National Longitudinal Study of Adolescent Health. Items from the Conflict Tactics Scale were used to measure victimization. Associations between victimization patterns and sociodemographic characteristics were assessed with polytomous logistic regression.

Results. One third of adolescents reported some type of victimization, and 12% reported physical violence victimization. Although most sociodemographic characteristics were significantly associated with victimization, patterns varied by sex and type of victimization.

Conclusions. Psychological and minor physical violence victimization is common in opposite-sex romantic relationships during adolescence. The sex-specific associations between sociodemographic characteristics and patterns of partner violence victimization underscore the importance of pursuing longitudinal, theory-driven investigations of the characteristics and developmental histories of both partners in a couple to advance understanding of this public health problem. (*Am J Public Health.* 2001;91:1679-1685)

and continuing with violent adolescent dating experiences and violence in families formed in adulthood.⁹ Violence between dating partners is thought to affect a diverse population, yet much of the work in this area has been limited to college samples. Generalizations about the prevalence of partner violence among individuals younger than 18 years are particularly limited, because much of this work is based on small convenience samples. No nationally representative studies of dating violence have focused on adolescents younger than 18.

Available estimates of dating violence vary considerably; the proportion of high school students found to have ever experienced physical violence victimization ranges from 10% to 38%.^{8,10} Among those currently dating, estimates of *ever experiencing* physical violence victimization are as high as 59%; for psychological violence victimization, rates are as high as 96%.¹¹ Estimates of *past-year* prevalence of physical violence victimization among those who are dating, available for

those older than 18 years, are more consistent and generally fall between 30% and 40%.^{12,13}

Within both high school and college samples, the prevalence of partner violence has been found to increase with age,^{10,14} suggesting that, over time, dating individuals are likely to encounter a violent partner. Demographic factors identified as potential risk markers for partner violence victimization within high school and college age groups include biological sex, low socioeconomic status, and low academic achievement.^{6,13,15} Males generally report physical victimization levels similar to, or higher than, those reported by females.^{11,13,16} Available data indicate that physical partner violence is predominantly reciprocal in nature; that is, within violent couples, both partners are likely to be perpetrators. However, data also indicate that female victims are more likely to be seriously injured than male victims.^{4,6,10,17} Furthermore, the overwhelming majority of victims of sexual violence are female.¹⁸

Other demographic factors suggested as risk markers for partner violence during adolescence include family structure, race, ethnicity, and the importance of religion in the adolescent's life. Parental divorce and the presence of a stepparent have been positively associated with dating violence.^{10,19} Findings concerning race, ethnicity, and importance of religion have been equivocal; there are indications that associations between these factors and partner violence may vary by sex.^{6,10,16,20} The effects of individual-level demographic factors may also be mediated by exposure to violence in the family and the community.¹⁰ The prevalence of violence in a community has been linked with population changes and overcrowding.²¹ For adolescents, one of the most significant community aspects is the school they attend. School size or urban vs rural location may influence exposure to violence. Because of sampling limitations in the earlier studies of adolescents, the generalizability of these potential risk markers for dating violence is unknown.

This study examines reports of psychological and minor physical violence victimization in a nationally representative sample of adolescents in heterosexual romantic relationships (that may or may not include sexual involvement). We had 2 objectives: (1) to describe the prevalence of psychological and physical violence victimization, both specific behaviors and any experience of victimization, among 12- to 21-year-old adolescents, and (2) to examine the associations between violence victimization and sociodemographic factors previously identified as risk markers for dating violence.

METHODS

The National Longitudinal Study of Adolescent Health (Add Health) was designed to examine the determinants of health and health-related behaviors of adolescents in grades 7 through 12 during the 1994–1995 school year.²² Add Health began with a stratified, random sample that represents all high schools in the United States. More than 90 000 adolescents completed questionnaires. A representative self-weighted sample and several special samples were selected for in-home interviews. About 20 000 wave I in-home interviews were completed in 1995 (79% of those eligible). Almost 15 000 re-

spondents were reinterviewed in 1996 (88% of those eligible at wave II). Questionnaires were administered via laptop computer; audio computer-assisted self-interview technology was used for sensitive questionnaire content, such as dating violence.

Respondents reported up to 3 romantic relationships that occurred in the 18 months before the interviews. For each relationship identified at wave II, respondents reported psychological or minor physical violence within the relationship. Present analyses are based on respondents who reported 1 to 3 opposite-sex romantic relationships; those who reported both opposite- and same-sex relationships were excluded. To take the study's design effects into account, analyses are limited to respondents for whom sampling weights are available. Of these 7493 respondents, 5129 (68%) reported 1 opposite-sex relationship and 2364 (32%) reported 2 or more. In logistic regression models, sample size is 6897 because of missing data across multiple predictor variables.

Measures

Violence. The wave II interview included 5 items selected from the Conflict Tactics Scales—Form R.¹ Some wording of items was modified. For each relationship, respondents were asked whether during the relationship their partner had ever (1) called them names, insulted them, or treated them disrespectfully in front of others; (2) sworn at them; (3) threatened them with violence; (4) thrown something at them that could hurt them; or (5) pushed or shoved them. Items 1 through 3 were included as indicators of psychological violence and items 4 and 5 as indicators of physical violence. Perpetration was not assessed. For prevalence estimates, we examined these 5 behaviors individually and as part of the following composite dichotomous summary variables: *psychological violence* (at least 1 yes response to question 1, 2, or 3), *physical violence* (at least 1 yes to question 4 or 5), and *any violence* (at least 1 yes to any of the 5 questions). These summary variables indicate whether *any* of the acts included in that category occurred in the context of *any* of the opposite-sex romantic relationships reported by the respondent.

To examine sociodemographic correlates, and to provide information about the preva-

lence of violence patterns, we categorized adolescents according to the pattern of victimization. The categories were (a) no violence victimization in any of the relationships, (b) only psychological victimization (i.e., at least 1 act of psychological but no physical victimization), and (c) only physical or both physical and psychological victimization (i.e., at least 1 act of physical but no psychological victimization or at least 1 act of both psychological and physical victimization). Category C (physical or both types of victimization) was constructed as a composite, because only 4% of respondents had experienced physical violence without having also experienced psychological violence.

Sociodemographic factors. We examined 9 sociodemographic characteristics: biological sex, age, ethnicity, race, highest educational level achieved by a parent figure, family structure, importance of religion, size of school attended, and grade point average. Parental education is a proxy for socioeconomic status. Because the number of romantic relationships varied, we included this variable in analyses.

Biological sex is self-reported. **Age** is the date of birth subtracted from the interview date, rounded to 2 decimal places. **Ethnicity** is dichotomous, based on the respondent's report of being or not being of Hispanic/Latino origin.

Race reflected 5 categories based on self-reports: American Indian/Alaskan native, Asian/Pacific Islander, Black/African American, White, and Other. Respondents could indicate more than 1 race; the "Other" category includes respondents who reported mixed racial heritage (e.g., both Black and White). In regression analyses, adolescents who reported that they were American Indians/Alaskan natives were included in the "Other" category because there were too few in the dating sample to yield reliable parameter estimates. Using separate race and ethnicity variables captures more complete information; an adolescent might be White of Hispanic origin, White of non-Hispanic origin, Black of Hispanic origin, etc.

Highest family education is the highest education achieved by the respondent's resident father or mother figure, whichever is greater. If there is only 1 parent figure, that parent's education level is used. For **family structure**,

household roster information was used. For the *religious importance* variable, respondents were asked about the importance of religion in their lives.

For the *school size* variable, schools were classified as small (1–400 students), medium (401–1000), or large (1001–4000) on the basis of school administrator reports collected in separate school administrator questionnaires. For *grade point average*, respondents reported their grades in 4 subject areas for the most recent grading period; scores in the 4 areas were averaged to obtain a single score.

For *number of romantic relationships reported*, respondents could report up to 3 romantic relationships occurring in the previous 18 months. Only respondents reporting at least 1 opposite-sex relationship, and no same-sex relationships, were included in analyses.

Analysis

We first report descriptive statistics for the sociodemographic characteristics of our sample, followed by the prevalence of each violent act and the violence summary variables. We conclude with polytomous logistic regression models, conducted separately for males and females, to determine associations between the sociodemographic variables and the patterns of violence victimization. A nominal response variable with more than 2 levels can be modeled by fitting multinomial logit models via the use of generalized estimating equations.²³ In these analyses, a logit was formed as the ratio of the probability of being in a particular violence category to the probability of being in the “no violence” category. An intercept and coefficients for explanatory variables are estimated for each of the 2 logits being modeled. Sampling weights have been applied in all analyses, and study design effects have been incorporated in the calculation of variance estimates using the MULTLOG procedure in SUDAAN survey software.²⁴

RESULTS

Table 1 shows the sociodemographic characteristics of wave II respondents who reported only opposite-sex romantic relationships. Table 2 displays the prevalence of each act of partner violence victimization for males

TABLE 1—Sociodemographic Characteristics of Respondents Reporting Opposite-Sex Romantic Relationships: The National Longitudinal Study of Adolescent Health

Characteristic	Sample (n = 7493) ^a	
	n	% ^b
Sex		
Male	3405	46.8
Female	4088	53.2
Age, y		
12–14	899	16.0
15–17	4452	59.4
18–21	2140	24.5
Hispanic/Latino		
No	6201	88.3
Yes	1274	11.4
Race		
White	4698	73.6
Black	1404	13.7
American Indian/Alaskan native	84	1.0
Asian/Pacific Islander	402	2.4
Other	905	9.3
Highest family education		
Less than high school	885	11.3
High school graduate	2078	29.5
Some education beyond high school	1560	22.0
College graduate or higher	2602	32.3
Missing	368	4.8
Family structure		
2 biological parents	3822	51.8
Other 2 parents	1395	18.3
No father figure	1602	20.9
No mother figure	239	3.4
Other	435	5.6
Religion		
Very important	2856	35.8
Fairly important	2673	35.9
Fairly unimportant/not important	953	28.1
Missing	11	0.1
School size		
Small	1072	16.5
Medium	2732	43.8
Large	3683	39.6
Missing	6	
No. of relationships reported		
1	5129	67.3
2	1553	21.5
3	811	11.2
Grade point average		
Mean		2.77
Standard error of mean		0.02
n	7267	

^aSample size varies across variables owing to missing data.

^bAll percentages are adjusted for sampling probability; listed sample sizes are unweighted.

TABLE 2—Partner Violence Victimization, by Sex of Victim and Type of Violent Act: The National Longitudinal Study of Adolescent Health

	Total (n = 7493)		Males (n = 3405)		Females (n = 4088)	
	n	% ^a	n	% ^a	n	% ^a
Psychological						
Sworn at	1727	23	807	23	920	23
Insulted	1194	16	515	14	679	19
Threatened	348	4	121	3	227	5
Any	2149	29	1013	28	1136	29
Physical						
Pushed	748	10	333	9	415	10
Had something thrown at him/her	247	3	112	3	135	3
Any	919	12	422	12	497	12
Any violence	2369	32	1130	32	1239	31
Patterns of violence						
None	5124	69	2275	68	2849	69
Psychological only	1450	20	708	20	742	19
Physical only or both	919	12	422	12	497	12
Mean no. of different violent acts ^b		0.49		0.49		0.49
SD		0.94		0.88		0.98
Mean no. of different violent acts ^c		0.57		0.55		0.58
SD		1.03		0.95		1.08

^aAll percentages are adjusted for sampling probability; listed sample sizes are unweighted.

^bBased only on first relationship reported.

^cBased on all romantic relationships reported. The same act, experienced across different relationships, is counted only once.

and females, and sex-specific prevalence figures for the summary variables *psychological*, *physical*, and *any violence*; sex-specific prevalence figures for patterns of victimization are listed next, followed by the mean and standard deviation of the number of different violent acts reported. Overall, 32% of respondents reported experiencing *any violence* in a heterosexual romantic relationship occurring in the 18 months before the interview. Most violent behaviors were psychological, with swearing being most common. Twelve percent reported being the victim of physical violence. Approximately 10% of respondents reported having been pushed and 3% reported that something was thrown at them. The patterns of victimization indicate that about 1 in 5 adolescents reported only psychological violence and about 1 in 10 reported physical violence, usually accompanied by psychological violence. For most measures, victimization

prevalence figures were virtually identical for males and females; the exception is being insulted or treated disrespectfully in front of friends, which was more frequently reported by females.

The results of the polytomous logistic regression analyses modeling patterns of partner violence victimization are presented in Table 3. Sociodemographic variables were entered into the regression equations simultaneously; separate models were fitted for males and females. In all models, membership in the group “no violence” is the referent response category. Only 2 predictors showed similar patterns of associations for males and females: the number of relationships reported and age. For both sexes, having more than 1 partner during the 18-month reference period was associated with higher odds of experiencing psychological violence only (vs no violence) and with higher odds of experiencing

physical or both types of violence (vs no violence). For males, the odds of victimization for a given number of relationships are similar for psychological violence and for physical or both types of violence. For females, however, the odds for a given number of relationships are higher for physical or both types of violence than for psychological violence only (compared with no violence).

When the number of relationships in the past 18 months was controlled for, the odds of victimization were higher among older adolescents, both males and females. However, for females, only 1 of the ratios reached statistical significance: 18- to 21-year-old females were more likely to have experienced psychological violence only than were 12- to 14-year-olds.

The remaining variables yielded sex-specific patterns of associations. The odds of physical or both types of victimization (vs no victimization) were about twice as high for Black and Asian/Pacific Islander males than for White males. Nontraditional family structures and large school size were also associated with elevated odds of male victimization. Compared with boys living with 2 biological parents, boys who had no father figure were more likely to experience only psychological victimization. Living in other types of nontraditional family structures was associated with elevated odds of physical or both types of victimization. School size was also associated with victimization; the odds of psychological violence were approximately 1.5 times higher for males who attended large schools than for those who attended small schools. Finally, boys with at least 1 college-graduate parent had lower odds of physical or both types of victimization (vs no victimization) than boys whose parent(s) had less than a high school education.

Except for number of romantic relationships and grade point average, all of the variables associated with victimization among females predicted only psychological violence (vs no violence). The odds of psychological victimization for females who had a high school–graduate parent, who lived in a household without a mother figure, or who felt that religion was unimportant were about 1.5 to 2 times greater than for females whose parent had less than a high

TABLE 3—Odds Ratios and 95% Confidence Intervals for Sociodemographic Characteristics Predicting Patterns of Violence Victimization in Polytomous Logistic Regression Models: The National Longitudinal Study of Adolescent Health

Characteristic	Males (n = 3132)				Females (n = 3765)			
	Only Psychological vs None		Physical/Both vs None		Only Psychological vs None		Physical/Both vs None	
	OR	95% CI	OR	95% CI	OR	95% CI	OR	95% CI
Age, y								
12-14	(reference)		(reference)		(reference)		(reference)	
15-17	1.43	0.91, 2.24	1.95	1.16, 3.30*	1.41	0.97, 2.06	1.28	0.85, 1.94
18-21	2.28	1.46, 3.57**	2.45	1.38, 4.36**	1.58	1.04, 2.38*	1.11	0.70, 1.77
Hispanic/Latino								
No	(reference)		(reference)		(reference)		(reference)	
Yes	1.10	0.70, 1.72	1.42	0.82, 2.46	1.11	0.72, 1.71	0.88	0.58, 1.32
Race								
White	(reference)		(reference)		(reference)		(reference)	
Black	1.17	0.87, 1.58	2.19	1.48, 3.23**	0.73	0.51, 1.04	1.28	0.89, 1.85
Asian/Pacific Islander	1.02	0.55, 1.91	2.19	1.21, 3.94**	0.57	0.30, 1.09	1.42	0.62, 3.24
Other	0.89	0.57, 1.39	1.29	0.68, 2.47	0.89	0.59, 1.34	1.08	0.66, 1.78
Highest family education								
Less than high school	(reference)		(reference)		(reference)		(reference)	
High school graduate	0.99	0.65, 1.52	0.63	0.38, 1.05	1.82	1.17, 2.82*	1.24	0.80, 1.92
Some education beyond high school	1.15	0.71, 1.87	0.60	0.35, 1.03	1.54	0.97, 2.45	0.83	0.50, 1.37
College graduate or higher	1.10	0.70, 1.75	0.59	0.36, 0.98*	1.46	0.94, 2.27	0.67	0.41, 1.09
Family structure								
2 biological parents	(reference)		(reference)		(reference)		(reference)	
Other 2 parents	1.09	0.78, 1.52	1.06	0.67, 1.68	0.90	0.69, 1.19	0.72	0.50, 1.04
No father figure	1.60	1.10, 2.32*	0.98	0.64, 1.52	0.96	0.69, 1.35	1.05	0.73, 1.52
No mother figure	1.13	0.61, 2.09	1.38	0.68, 2.80	2.11	1.17, 3.82*	1.59	0.78, 3.23
Other	1.27	0.58, 2.79	2.37	1.19, 4.64*	1.01	0.59, 1.73	1.19	0.63, 2.25
Religion								
Very important	(reference)		(reference)		(reference)		(reference)	
Fairly important	1.23	0.90, 1.68	1.19	0.81, 1.75	1.33	1.02, 1.73*	1.00	0.72, 1.40
Fairly unimportant/not important	1.26	0.87, 1.83	1.28	0.79, 2.07	1.56	1.15, 2.12**	1.28	0.89, 1.77
School size								
Small	(reference)		(reference)		(reference)		(reference)	
Medium	1.20	0.85, 1.71	0.91	0.56, 1.47	0.77	0.55, 1.06	0.80	0.55, 1.17
Large	1.69	1.18, 2.41**	1.11	0.68, 1.82	0.97	0.70, 1.35	0.86	0.57, 1.29
No. of relationships reported								
1	(reference)		(reference)		(reference)		(reference)	
2	1.58	1.24, 2.01**	1.62	1.11, 2.38*	1.82	1.35, 2.44**	2.68	1.92, 3.75**
3	2.44	1.71, 3.47**	2.88	1.80, 4.62**	2.05	1.45, 2.92**	3.37	2.24, 5.07**
Grade point average	0.97	0.80, 1.17	0.90	0.72, 1.12	0.89	0.76, 1.04	0.75	0.62, 0.90**

Note. OR = odds ratio; CI = confidence interval.

* $P \leq .05$; ** $P \leq .01$.

school education, who lived with both parents, or who felt religion was very important, respectively. Grade point average was also important for females; the odds of physical or both types of victimization de-

creased by a factor of 0.75 for every 1-point increase in grade point average. Modifying the unit of change of the coefficient from 1 to 4 indicates that the odds of physical or both types of victimization (vs no vic-

timization) for a female with a grade point average of 4 (straight A's) would be less than a third (0.31) of the odds of victimization for a female with a grade point average of 1 (all D's and F's).

DISCUSSION

To our knowledge, these analyses provide the first estimates, based on a nationally representative sample, of the prevalence of psychological and minor physical violence victimization in adolescent romantic relationships. Our results show that psychological and physical violence in such relationships is common; almost 3 of every 10 adolescents aged 12 to 21 who were involved in heterosexual romantic relationships in an 18-month period experienced some type of violence victimization within those relationships. One in 10 was the victim of minor physical violence.

These estimates are somewhat lower than those previously reported for convenience and community samples of adolescents and national samples of adults. Our lower prevalence figures may be partly a function of not including the full range of psychological and physical violence items included in the Conflict Tactics Scales—Form R. However, underestimation due to instrument truncation should be minimal, given that the partner violence items included in Add Health tap the most commonly reported components of violence seen in other adolescent and adult samples (insulting and pushing or shoving).^{8,13,20}

Comparisons of specific behaviors across studies suggest that differences in prevalence estimates are more likely to be attributable to age and sampling differences than to instrument truncation. Three studies reporting past-year prevalence for respondents of college age and older reported a “push/shove” prevalence of 18% to 28% (vs 10% in Add Health), a “throw object” prevalence of 7% to 20% (3% in Add Health), an “insults” prevalence of approximately 55% (16% in Add Health), and a “threaten with violence” prevalence of approximately 15% (4% in Add Health).^{6,12,13} Although the time frames are not identical, these figures suggest that the prevalence of partner violence victimization may increase by a factor of 2 to 5 between adolescence and young adulthood, depending on the behavior examined. The higher prevalence of victimization among older Add Health respondents and among older respondents in smaller samples of adolescents is consistent with such an interpretation.^{10,14}

Given the importance of the number of relationships a respondent has had within a limited time period, the higher prevalence of victimization in older age groups may be partly a function of the greater dating experience that generally accumulates with age. In previous studies, the total number of partners has been positively associated with victimization among females, and greater relationship duration and commitment levels have been associated with victimization for both sexes.^{14,15,25–27} In Add Health data, having more partners was associated with higher odds of both psychological violence only and of physical or both types of victimization for both males and females. The odds of physical victimization are particularly elevated for females with increasing numbers of relationships. These findings underscore the importance of examining the correlates of partner violence during the transition from adolescence to young adulthood, when both the number and seriousness of relationships tend to increase, thus increasing the potential for violence.

Among Add Health respondents, the prevalence of psychological and physical victimization is similar for males and females. Although there are exceptions,^{28,29} prevalence figures for psychological, minor physical, and severe physical violence victimization for males are often found to be slightly higher than for females.^{11,13,16,30–32} However, many of the studies showing a greater likelihood of male victimization are based on community samples or reflect national data from older individuals. Although the physical violence questions in Add Health are limited to less severe behaviors, they should provide reliable estimates of the prevalence of such experiences for the US adolescent population. Unfortunately, because questions about perpetration were not included in the Add Health questionnaire, comparisons of perpetration and victimization experiences within and across the sexes are not possible. Further, information about sexual violence in dating relationships or about the situational context in which psychological or physical violence occurred was not collected, thus limiting the interpretation of similarities by sex in our findings.

Although the prevalence of victimization is similar for males and females in these data, most of the sociodemographic correlates of victimization differed. The patterns of associations are generally consistent with those of the available literature, but the reasons underlying sex differences in some associations are not clear. Analyses of other data sets have also yielded sex-specific patterns for these and additional correlates. Malik et al. noted that associations between sociodemographic characteristics and partner violence might be accounted for by other mediating factors.¹⁰ In addition to variation between the sexes, the correlates of patterns of victimization varied within each sex. For females, significant correlates related primarily to experiencing only psychological victimization. However, lower grades and more relationships were significant predictors of physical or both types of victimization, suggesting that females who are doing less well in school or have multiple relationships may be especially vulnerable to physical victimization.

Despite the significance of the problem of partner violence and increasing interest in explicating its causes and solutions, there have been relatively few attempts to collect longitudinal data and apply developmental models and methods to its study. Partner violence may be one facet of a more generalized cluster of antisocial behavior. Individual characteristics and family contexts associated with behaviors such as generalized aggression, or early or heavy substance use, may also be evident in the histories of adolescents who are the perpetrators or victims of partner violence. Exposure to violence in the family of origin, coupled with other dimensions of ineffective parenting such as low levels of monitoring, rule-setting, and emotional closeness, probably set the stage for limited problem-solving skills and troubled interpersonal relations.³³

Whether these factors ultimately lead to partner violence may depend partly on the combined characteristics of the 2 individuals who compose a couple. When 2 individuals who are each characterized by 1 or more risk factors for violence form a couple, the likelihood of violence as a conflict resolution tactic may increase significantly. On the other hand, involvement with a partner who has no or

few risk characteristics may provide opportunities for at-risk individuals to learn constructive interpersonal processes and thereby avoid violence in their present and future relationships. Theory-driven examination of the characteristics of both partners in a couple, and how the qualities and developmental histories of each person combine to produce violent behavior, will be necessary to advance our understanding of this important public health problem. ■

About the Authors

Carolyn Tucker Halpern, Selene G. Oslak, and Sandra L. Martin are with the Department of Maternal and Child Health and Mary L. Young and Lawrence L. Kupper are with the Department of Biostatistics, School of Public Health, University of North Carolina at Chapel Hill.

Requests for reprints should be sent to Carolyn Tucker Halpern, PhD, Department of Maternal and Child Health, CB# 7400, 427 Rosenau Hall, University of North Carolina at Chapel Hill, Chapel Hill, NC 27599-7400 (e-mail: carolyn_halpern@unc.edu).

This article was accepted October 27, 2000.

Contributors

C. T. Halpern conceptualized the research aims, planned the analyses, guided the literature review, and wrote sections of the paper. S. G. Oslak conducted the literature review and wrote sections of the paper. M. L. Young contributed to the analysis plan and conducted all data analyses. S. L. Martin conceptualized the research aims, coplanned the analyses, and contributed to the writing of the paper. L. L. Kupper reviewed, supervised, and guided data analytic decisions and implementation.

Acknowledgments

This research is based on data from the Add Health project, a program designed by J. Richard Udry (principal investigator) and Peter Bearman and funded by grant P01HD31921 from the National Institute of Child Health and Human Development to the Carolina Population Center, University of North Carolina at Chapel Hill, with cooperative funding participation by the National Cancer Institute; the National Institute of Alcohol Abuse and Alcoholism; the National Institute on Deafness and Other Communication Disorders; the National Institute on Drug Abuse; the National Institute of General Medical Sciences; the National Institute of Mental Health; the National Institute of Nursing Research; the Office of AIDS Research, National Institutes of Health (NIH); the Office of Behavior and Social Science Research, NIH; the Office of the Director, NIH; the Office of Research on Women's Health, NIH; the Office of Population Affairs, Department of Health and Human Services (DHHS); the National Center for Health Statistics, Centers for Disease Control and Prevention, DHHS; the Office of Minority Health, Centers for Disease Control and Prevention, DHHS; the Office of Minority Health, Office of Public Health and Science, DHHS; the Office of the Assistant Secretary for Planning and Evaluation, DHHS; and the National Science Foundation.

Work on this project by S. G. Oslak and M. L. Young was supported by merit assistantships sponsored by the University of North Carolina Graduate School Merit Assistantship Program and the departments of maternal and child health (S. G. O.) and biostatistics (M. L. Y.).

All informed consent forms, questionnaires, and procedures used in the National Longitudinal Study of Adolescent Health were reviewed and approved by the Institutional Review Board for the Protection of Human Subjects at the School of Public Health at the University of North Carolina at Chapel Hill.

References

1. Straus MA, Gelles RJ. Societal change and change in family violence from 1975 to 1985 as revealed by two national surveys. *J Marriage Fam.* 1986;48:465-479.
2. Umberson D, Anderson K, Glick J, Shapiro A. Domestic violence, personal control, and gender. *J Marriage Fam.* 1998;60:442-452.
3. Sorenson SB, Upchurch DM, Shen H. Violence and injury in marital arguments: risk patterns and gender differences. *Am J Public Health.* 1996;86:35-40.
4. Morse BJ. Beyond the CTS: assessing gender differences in partner violence. *Violence Vict.* 1995;10:251-272.
5. Schafer J, Caetano R, Clark CL. Rates of intimate partner violence in the United States. *Am J Public Health.* 1998;88:1702-1704.
6. Magdol L, Moffitt TE, Caspi A, Newman DL, Fagan L, Silva PA. Gender differences in partner violence in a birth cohort of 21-year-olds: bridging the gap between clinical and epidemiological approaches. *J Consult Clin Psychol.* 1997;65:68-78.
7. Stets JE, Straus MA. The marriage license as hitting license: a comparison of assaults in dating, cohabiting and married couples. In: Pirog-Good MA, Stets JE, eds. *Violence in Dating Relationships: Emerging Social Issues.* New York, NY: Praeger; 1989:33-52.
8. Henton J, Cate R, Koval J, Lloyd S, Christopher S. Romance and violence in dating relationships. *J Fam Issues.* 1983;4:467-482.
9. Makepeace JM. Courtship violence among college students. *Fam Relations.* 1981;30:97-102.
10. Malik S, Sorenson SB, Aneshensel CS. Community and dating violence among adolescents: perpetration and victimization. *J Adolesc Health.* 1997;21:291-302.
11. Jezl DR, Molidor CE, Wright TL. Physical, sexual and psychological abuse in high school dating relationships: prevalence rates and self-esteem issues. *Child Adolesc Soc Work J.* 1996;13:69-87.
12. White JW, Koss MP. Courtship violence: incidence in a national sample of higher education students. *Violence Vict.* 1991;6:247-256.
13. Stets JE, Henderson DA. Contextual factors surrounding conflict resolution while dating: results from a national study. *Fam Relations.* 1991;40:29-36.
14. Thompson EH Jr. The maleness of violence in dating relationships: an appraisal of stereotypes. *Sex Roles.* 1991;24:261-278.
15. Bergman L. Dating violence among high school students. *Soc Work.* 1992;37:21-27.
16. O'Keefe M. Predictors of dating violence among high school students. *J Interpersonal Viol.* 1997;12:546-568.
17. Gray HM, Foshee V. Adolescent dating violence. *J Interpersonal Viol.* 1997;12:126-141.
18. *Violence by Intimates: Analysis of Data on Crimes by Current or Former Spouses, Boyfriends, and Girlfriends.* Washington, DC: US Dept of Justice; March 1998. Publication NCJ-167237.
19. Tontodonato P, Crew BK. Dating violence, social learning theory, and gender: a multivariate analysis. *Violence Vict.* 1992;7:3-14.
20. O'Keefe NK, Brockopp K, Chew E. Teen dating violence. *Soc Work.* 1986;31:465-468.
21. Wallace D, Wallace R. Scales of geography, time, and population: the study of violence as a public health problem. *Am J Public Health.* 1998;88:1853-1858.
22. Resnick MD, Bearman PS, Blum RW, et al. Protecting adolescents from harm. Findings from the National Longitudinal Study on Adolescent Health. *JAMA.* 1997;278:823-832.
23. Zeger S, Liang K. Longitudinal data analysis for discrete and continuous outcomes. *Biometrics.* 1986;42:121-130.
24. Shah BV, Barnwell BG, Bieler GS. *SUDAAN User's Manual: Release 6.4.* Research Triangle Park, NC: Research Triangle Institute; 1995.
25. Magdol L, Moffitt TE, Silva PA. Hitting without a license: testing explanations for differences in partner abuse between young adult daters and cohabitators. *J Marriage Fam.* 1998;60:41-55.
26. Pedersen P, Thomas CD. Prevalence and correlates of dating violence in a Canadian university sample. *Can J Behav Sci.* 1992;24:490-501.
27. Hanley MJ, O'Neill P. Violence and commitment: a study of dating couples. *J Interpersonal Viol.* 1997;12:685-703.
28. Roscoe B, Callahan JE. Adolescents' self-report of violence in families and dating relations. *Adolescence.* 1985;20:545-553.
29. Riggs DS. Relationship problems and dating aggression: a potential treatment target. *J Interpersonal Viol.* 1993;8:18-35.
30. Arias I, Samios M, O'Leary KD. Prevalence and correlates of physical aggression during courtship. *J Interpersonal Viol.* 1987;2:82-90.
31. Foshee VA. Gender differences in adolescent dating abuse prevalence, types and injuries. *Health Educ Res.* 1996;11:275-286.
32. Kasian M, Painter SL. Frequency and severity of psychological abuse in a dating population. *J Interpersonal Viol.* 1992;7:350-364.
33. Capaldi D, Clark S. Prospective family predictors of aggression toward female partners for at-risk young men. *Dev Psychol.* 1998;34:1175-1188.