

# Mental Health Correlates of the Victim-Perpetrator Relationship Among Interpersonally Victimized Adolescents

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This research examines mental health correlates of different victim-perpetrator relationships among adolescent victims of interpersonal violence. A large and nationally representative sample of adolescents ( $N = 4,023$ ) responded to structured telephone interviews concerning mental health functioning (post-traumatic stress disorder—PTSD, major depressive disorder, substance abuse/dependence, and delinquency). Those reporting histories of sexual ( $n = 321$ ) and/or physical ( $n = 688$ ) assault were queried about specific aspects of their assaults, including their relationship with the perpetrator. After controlling for demographic- and assault-related risk factors, the victim-perpetrator relationship remained a significant risk factor for mental health problems. Adolescents sexually assaulted by nonstrangers were at increased risk for PTSD; those sexually assaulted by acquaintances or people they did not know well were at increased risk for delinquency. Adolescents who were physically assaulted by a family member were at increased risk for PTSD. Explanations for the findings and the need for consistent assessment methods across related studies are discussed.

**Keywords:** *interpersonal violence; adolescents; victim-perpetrator relationship; psychopathology*

Epidemiological studies estimate that up to 20% of adolescents in the United States have experienced sexual and/or physical assault (Boney-McCoy & Finkelhor, 1995; Kilpatrick, Saunders, & Smith, 2003). Adolescents who experience sexual and/or physical assault are at increased risk for

various mental health and health-risk problems, including posttraumatic stress disorder (PTSD), depression, substance abuse, and delinquency (e.g., Flisher, Kramer, Hoven, & Greenwald, 1997; Kaplan et al., 1998; Kilpatrick, Ruggiero, et al., 2003; Malinosky-Rummell & Hansen, 1993). However, interpersonally victimized adolescents do not uniformly endorse significant mental health problems (see Kendall-Tackett, Williams, & Finkelhor, 1993), and research has revealed various sociodemographic and victimization-related factors that may directly or indirectly affect the relative risk of adolescent mental health problems following an assault (see Boney-McCoy & Finkelhor, 1995; Finkelhor, Hotaling, Lewis, & Smith, 1990; Kaplan et al. 1998).

One potentially important risk factor about which clinicians and researchers have speculated is the victim's relationship with the perpetrator. Generally speaking, clinical lore holds that victims who are assaulted by someone close to them are at greater risk for mental health problems than are those assaulted by strangers (e.g., Groth, 1978). However, empirical data on the issue are equivocal. Several studies report that children and adolescents sexually assaulted by family members show worse psychological functioning than do those assaulted by strangers (Sirles, Smith, & Kusama, 1988; Wozencraft, Wagner, & Pellegrin, 1991). More specifically, some researchers have reported that children and adolescents assaulted by fathers or father figures tended to experience more mental health difficulties than did those assaulted by non-father figures (e.g., Adams-Tucker, 1982; McLeer, Deblinger, Atkins, Foa, & Ralphe, 1988; Mennen & Meadow, 1995). However, a similar number of studies failed to detect meaningful differences in mental health functioning across victim-perpetrator categories among victimized adolescents (Calam, Horne, & Glasgow, 1998; Einbender & Friedrick, 1989; Kiser, Ackerman, Brown, Edwards, & Brussell, 1988; Mennen, 1993, 1995; Rimsza, Berg, & Locke, 1988), and at least two studies report that children assaulted by father figures experience fewer mental health difficulties than do children assaulted by nonfather perpetrators (Mennen & Meadow, 1994; Ruggiero, McLeer, & Dixon, 2000). Even less is known about mental

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health correlates of the victim-perpetrator relationship among physical assault victims. To our knowledge, only Boney-McCoy and Finkelhor's (1995) national survey of 10- to 16-year-olds has provided clear insight into this issue to date. With a subsample of 148 sexually assaulted adolescents, these authors reported significant relations between PTSD symptoms and having experienced physical assault by a family member (vs. non-family members).

An understanding of the relative risks associated with different victim-perpetrator relationships on mental health outcomes among interpersonally assaulted adolescents is hindered by several methodological problems in the extant literature. First, most researchers report data from demographically homogenous clinical or convenience samples, which places significant limitations on generalizability. Second, research on mental health correlates of the victim-perpetrator relationship, much like victimization research in general, typically has failed to account adequately for the range of other factors (e.g., multiple victimizations, chronicity of abuse) that may play a role in mental health problems (see Saunders, 2003). Third, empirical examination of mental health correlates of the victim-perpetrator relationship among child victims has focused almost exclusively on sexual abuse, despite findings that physical assault is more prevalent than sexual assault—and associated with similar mental health outcomes—in adolescent samples (Kilpatrick, Ruggiero, et al., 2003; Kilpatrick, Saunders, et al., 2003).

The purpose of this study was to examine mental health outcomes as a function of the victim-perpetrator relationship among interpersonally assaulted adolescents. This research addressed many of the methodological problems that have beset the adolescent traumatic stress literature to date. First, we report data from a national probability sample of demographically diverse adolescents, which reduces concerns about generalizability. Second, we applied statistical controls over variables that have empirically established associations with mental health outcomes (e.g., multiple victimizations) in an attempt to reduce the probability that the associations among relevant factors are spurious. Third, our analyses included both sexual and physical victimization among adolescents, which facilitates inferences concerning the mental health correlates of the victim-perpetrator relationship among these different forms of interpersonal violence.

## Method

Detailed descriptions of the methodology are provided elsewhere by Kilpatrick et al. (2000) and Kilpatrick, Ruggiero, et al. (2003). Therefore, this description will focus primarily on the measures and procedures that are germane to the goals of this research.

## Sampling Method

All participants were selected using a multistage, stratified, area-probability, random-digit-dialing procedure that was developed to produce a representative sample of the U.S. adolescent population. Interviews were conducted over the telephone using a structured format. A total of 4,023 adolescents completed the survey, including 862 drawn from an oversampling of households located in areas designated as central cities by the U.S. Bureau of the Census. Adolescents were interviewed in 75% of households eligible for participation. All interviews with adolescents were conducted with parental permission.

## Participants

Participants were adolescents between 12 and 17 years old who were recruited for the National Survey of Adolescents (NSA). Data were weighted on the basis of geographic stratum, age, race, and gender to bring the full sample in line with U.S. Bureau of the Census (1988) estimates of the 1995 adolescent population. Data for this study were limited to the subsample of NSA respondents who provided complete information about age and race. Within this sample, approximately equal numbers of boys ( $n = 2,002$ ) and girls ( $n = 1,904$ ) were interviewed. The majority of respondents were White, non-Hispanic ( $n = 2,820$ , 72%); 590 (15%) were African American, non-Hispanic; 46 (1%) were Asian, non-Hispanic; 311 (8%) were Hispanic; and 139 (4%) were Native American, non-Hispanic. All ages ranging from 12 to 17 years were roughly equally represented; the average age was 14.49 years ( $SD = 1.70$ ).

## Predictor Variables

*Sexual assault.* Adolescents were classified as having experienced sexual assault if they reported that any one of the following events occurred against their will at some time in their lives: (a) vaginal or anal penetration by an object, finger, or penis; (b) oral sex; (c) touching of the respondents' breasts or genitalia; or (d) respondents' touching of another person's genitalia.

*Physical assault.* Adolescents endorsing a lifetime history of any one of the following were classified as physical assault victims: (a) being attacked with a gun, knife, or other weapon; (b) being attacked without a weapon, but with intent to kill or seriously injure; or (c) being "beaten up" and hurt "pretty badly."

*Victim-perpetrator relationship.* Participants who responded affirmatively to questions about having been sexually or physically assaulted were asked up to three follow-up questions to determine the victim's relationship to the perpetrator for that incident: (a) "Had you ever seen (any of) the person(s) who did this to you before?"; (b) "Did you know the person(s) fairly well or not?"; and (c) "What was that person's (those persons') relationship to you?" Respondents who answered nonaffirmatively to the first question were classified as having been assaulted by a stranger. Respondents who answered affirmatively to the first question and nonaffirmatively to the second question were classified as having been assaulted by a recognized nonacquaintance. Respondents who answered affirmatively to both of the first two questions were then asked to specify the nature of the relationship. For those respondents, the victim-perpetrator relationship was categorized as family or acquaintance based on the adolescent's response to the third question. For participants who were sexually or physically assaulted on multiple occasions, data concerning the victim-perpetrator relationship corresponded to the first incident.

It should be noted that this victim-perpetrator classification scheme differs from that used in the original NSA report (Kilpatrick, Saunders, et al., 2003), where the victim-perpetrator relationship was categorized as stranger if respondents indicated that they "didn't know (the perpetrator) well" despite having seen the perpetrator before. Given the subjectivity of the phrase *didn't know well*, it seemed plausible that perpetrators who were not strangers (e.g., neighbors, teachers) could easily be classified as strangers using this scheme. This different approach was also prompted by an initial data analysis that suggested important empirical differences between the stranger and recognized nonacquaintance categories of perpetrators. For example, approximately twice as many stranger assaults as recognized nonacquaintance assaults involved penile penetration (43.1% vs. 20.5%, respectively), whereas nearly 3 times as many recognized nonacquaintance assaults occurred in the victims home by comparison with stranger assaults (32.4% vs. 11.1%, respectively). Given the conceptual and empirical differences and given our focus on the victim-perpetrator relationship for this study, we used greater definitional precision by separating out cases in which strangers were unfamiliar to victims from cases in which perpetrators were familiar but not well known.

*Witnessed violence.* This variable was included because of consistent associations between witnessing violence and mental health symptoms among children and adolescents (e.g., Kilpatrick, Ruggiero, et al., 2003;

Kitzmann, Gaylord, Holt, & Kenny, 2003). In this study, victim-perpetrator relationship was not assessed for events involving witnessed violence. Participants were classified as having a history of witnessed violence if they reported having witnessed someone else: (a) shoot someone with a gun; (b) threaten someone with a knife, gun, or other weapon; (c) being sexually assaulted or raped; (d) being mugged or robbed; (e) be beaten up, hit, punched, or kicked "such that they were hurt pretty badly."

## Criterion Variables

To assess associations between interpersonal violence and mental health status among adolescents in this sample, the interview inquired about participants' symptoms of PTSD, depression, substance use problems, and delinquency. These symptom patterns were assessed because they are among the most prevalent mental health and health-risk domains associated with interpersonal violence among both adolescents (as noted earlier) and adults (e.g., Kessler, Davis, & Kendler, 1997; Kessler, Sonnega, Bromet, Hughes, & Nelson, 1995; Kilpatrick, Acierno, Resnick, Saunders, & Best, 1997; Kilpatrick et al., 2000; Resnick, Kilpatrick, Dansky, Saunders, & Best, 1993).

*PTSD.* PTSD symptomatology was assessed using a modified version of the National Women's Study (NWS) PTSD Module (Kilpatrick et al., 1989), which assessed each criterion of the *Diagnostic and Statistical Manual of Mental Disorders* (4th edition; *DSM-IV*) with a yes-no response and a PTSD diagnosis for the previous 6 months (see Kilpatrick et al., 2000; Kilpatrick, Ruggiero, et al., 2003). PTSD status was categorized dichotomously (i.e., no, yes) according to whether the respondent reported symptoms consistent with diagnostic criteria.

*Depression.* Respondents' histories of major depressive episodes (MDEs) were assessed using the NWS Depression Module, a structured interview that targeted MDE criteria using a yes-no format for each *DSM-IV* symptom during the 6-month period prior to the interview. MDE status was categorized dichotomously according to whether the respondent met diagnostic criteria (i.e., no, yes).

*Substance use problems.* Past-year substance abuse/dependence (SA/D) was assessed across a range of substances using questions that followed *DSM-IV* criteria. The presence of either substance abuse or substance dependence was sufficient to be categorized as having current SA/D in this study.

*Delinquency.* Past-year delinquency was assessed with seven questions on illegal behavior, including stealing, breaking and entering, being involved in gang fights, robbery, sexual assault, and physical assault. Respondents who responded affirmatively to any of these items were classified as having a history of delinquent behavior.

## **Procedure**

The interviews were conducted over the telephone in English or Spanish, depending on respondent preference. Computer-assisted telephone interviewing technology guided the interview process, and supervisors conducted random checks of data entry accuracy and interviewers' adherence to assessment procedures. To increase the likelihood that respondents would answer openly, honestly, and with a reasonable degree of privacy, two steps were taken. First, interviewers asked if the adolescent was in a situation where he or she could be assured of privacy and could answer freely. If not, the interviewer offered to call back at another time when privacy was more likely. Second, adolescents first answered primarily closed-ended questions, enabling them to answer yes or no, which reduced the risk of someone overhearing and understanding the content of the information provided by the adolescent. Adolescents received a certificate of participation in the NSA and a check for \$5 (see Kilpatrick et al., 2000, for additional information on participant protection).

## **Results**

### **Data Analysis**

Results for sexual assault are presented first, followed by those for physical assault. For each, univariate (chi-square) statistics first assessed mental health outcomes as a function of victim-perpetrator relationship. When these analyses revealed a statistically significant association between victim-perpetrator relationship and mental health outcomes, multivariate hierarchical regression analyses were conducted, controlling for other factors that are known to be associated with mental health functioning, as discussed earlier. For multivariable regression analyses, the hierarchy consisted of three steps and was constructed as follows: (a) demographics (i.e., race/ethnicity, gender, age), (b) interpersonal violence factors (i.e., history of witnessed violence, history of sexual or physical assault other than index assault, age at index assault, life threat during index assault, injury during

index assault, multiple assaults, age at most recent sexual or physical assault), and (c) victim-perpetrator relationship (i.e., stranger, acquaintance, recognized nonacquaintance, family member). An alpha level of .05 was chosen a priori.

## Sexual Assault

Bivariate analyses suggested significant intercorrelations among all three of the predictor variables, ranging from .19 to .36 ( $p < .01$ ). Sexual assault was endorsed by 8.2% of the overall sample ( $n = 321$ ), including 13.2% of girls ( $n = 251$ ) and 3.5% of boys ( $n = 70$ ). Of the 321 adolescents reporting a history of sexual assault, 7 either refused to answer questions about the perpetrator or indicated that they did not know the answer to questions about the perpetrator. This yielded a final sample size of 314 for analyses examining sexual assault characteristics in relation to psychosocial outcomes. For these cases, perpetrator type was distributed as follows: 11.5% were assaulted by a stranger, 22.2% by a family member, 54.4% by an acquaintance, and 11.9% by a nonstranger whom the victim did not know well (i.e., recognized nonacquaintance).

### *Univariate Analyses: Outcomes as a Function of Victim-Perpetrator Relationship*

**MDE.** Criteria for past-6-months MDE were endorsed by 28.2% of the sexually assaulted youth ( $n = 88$ ). (For the NSA sample as a whole, by comparison, Kilpatrick, Ruggiero, et al., 2003, reported prevalences of past-6-months MDE of 13.9% for girls and 7.4% for boys.) Victim-perpetrator relationship was not significantly statistically associated with MDE;  $\chi^2(3, n = 312) = 6.3, ns$ . Participants meeting criteria for MDE were distributed as follows: 11.1% of stranger-assaulted adolescents, 32.4% of adolescents victimized by recognized nonacquaintances, 31.2% of acquaintance-assaulted adolescents, and 27.5% of victims of familial assault.

**PTSD.** Criteria for past-6-months PTSD were met for 20.3% of sexually assaulted youth ( $n = 64$ ). (For the NSA sample as a whole, Kilpatrick, Ruggiero, et al., 2003, reported past-6-months PTSD prevalences of 6.3% for girls and 3.7% for boys.) PTSD prevalence differed as a function of victim-perpetrator relationship;  $\chi^2(3, n = 312) = 14.4, p < .01$ . Specifically, 2.8% of stranger-assaulted adolescents met criteria for PTSD, as compared with 27.0% of those assaulted by recognized nonacquaintances, 25.9% of acquaintance-assaulted adolescents, and 11.6% of those assaulted by family members.

*Substance abuse and dependence.* Criteria for past-year SA/D were met for 23.2% of sexually assaulted youth ( $n = 73$ ). (For the NSA sample as a whole, Kilpatrick, Ruggiero, et al., 2003, reported prevalences of past-year SA/D of 6.2% for girls and 8.2% for boys.) Prevalence of SA/D did not differ as a function of perpetrator-victim relationship;  $\chi^2(3, n = 313) = 4.8, ns$ . One sixth (16.7%) of stranger-assaulted adolescents met criteria for SA/D, as compared with 27.0% of those assaulted by recognized nonacquaintances, 27.1% of acquaintance-assaulted adolescents, and 15.7% of adolescents assaulted by family members.

*Delinquent behavior.* Adolescents who reported having committed at least one delinquent offense in the past year composed 21.3% of the sexual assault subsample ( $n = 67$ ). (By comparison, Kilpatrick, Saunders, et al., 2003, reported lifetime delinquency prevalence of 12% in the full NSA sample.) Likelihood of committing a delinquent offense differed as a function of perpetrator-victim relationship;  $\chi^2(3, n = 314) = 11.8, p < .01$ . More than one fourth (27.8%) of stranger-assaulted adolescents committed at least one delinquent offense, as compared with 21.1% of those victimized by recognized nonacquaintances, 26.5% of acquaintance-assaulted adolescents, and 7.1% of adolescents victimized by family members.

### *Multivariate Regression Analyses*

*PTSD.* After controlling for demographic and victimization characteristics, adolescents who were sexually assaulted by an acquaintance (odds ratio, OR = 11.03 vs. stranger), a recognized nonacquaintance (OR = 19.43 vs. stranger), or by a family member (OR = 12.04) remained at increased risk for past-6-months PTSD relative to stranger-assaulted adolescents (see Table 1). In the final model, physical assault (OR = 2.72 vs. none), witnessed violence (OR = 2.73 vs. none), and shorter time since index assault (OR = 1.22 per year) also were associated with increased risk for past-6-months PTSD.

*Delinquent behavior.* Controlling for demographic and victimization variables, adolescents who were sexually assaulted by an acquaintance (OR = 3.68 vs. familial perpetrator) or by a recognized nonacquaintance (OR = 4.39 vs. familial perpetrator) were more likely than adolescents assaulted by a family member to have committed a delinquent offense in the past year (see Table 2). In the final model, male gender (OR = 0.33 vs. female), witnessed violence (OR = 11.07 vs. none), and physical assault (OR = 3.64 vs. none), also were significantly associated with past-year likelihood of committing a delinquent offense.

**Table 1**  
**Past-6-Months PTSD as a Function of Victim-Perpetrator**  
**Relationship Among Sexually Assaulted Youth**

Risk Factor	<i>B</i>	<i>SE</i>	W	OR (Step)	OR (Final)	CI (95%)
Step 1 (demographics)						
Age at interview	-0.18	0.14	1.55	1.06	0.84	0.64-1.11
Gender (1 = boys, 2 = girls)	-0.27	0.44	0.37	0.79	0.77	0.32-1.81
African American	-0.78	0.46	2.83	0.59	0.46	0.19-1.14
Hispanic	0.16	0.55	0.08	1.13	1.17	0.40-3.42
Native American	-0.75	0.82	0.84	0.36	0.47	0.09-2.36
Asian American <sup>a</sup>	—	—	—	—	—	—
Step 2 (assault variables)						
History of witnessed violence	1.00	0.48	4.47	2.77*	2.73*	1.08-6.93
History of physical assault	1.00	0.40	6.34	2.62*	2.72*	1.25-5.91
Age at index sexual assault (SA)	0.20	0.08	5.47	1.18*	1.22*	1.03-1.44
SA-related life threat	-0.29	0.43	0.46	0.61	0.75	0.32-1.74
SA-related injury	0.97	0.52	3.43	2.70*	2.63	0.95-7.32
Single SA (vs. multiple SA)	0.21	0.42	0.25	1.33	1.23	0.54-2.78
Age at most recent assault <sup>b</sup>	-0.05	0.11	0.18	1.05	1.05	0.84-1.31
Step 3 (perpetrator categories)						
Acquaintance	2.40	1.05	5.24	—	11.03*	1.41-86.15
Family member	2.49	1.16	4.60	—	12.04*	1.24-117.00
Recognized nonacquaintance	2.97	1.12	7.05	—	19.43**	2.18-173.55

Note:  $n = 284$ . PTSD = posttraumatic stress disorder; SE = standard error; W = Wald statistic; OR (Step) = odds ratio on the step at which the variable was entered; OR (Final) = odds ratio in the final multivariable model; CI = confidence interval.

a. Only 2 Asian American cases were included in this analysis, both of which were PTSD negative.

b. Age at the time of the most recent sexual or physical assault (but not necessarily the index assault).

\* $p < .05$ . \*\* $p < .01$ .

**Table 2**  
**Past-Year Delinquency as a Function of Victim-Perpetrator Relationship Among Sexually Assaulted Youth**

Risk Factor	<i>B</i>	<i>SE</i>	<i>W</i>	OR (Step)	OR (Final)	CI (95%)
Step 1 (demographics)						
Age at interview	-0.21	0.14	2.45	0.95	0.81	0.62-1.06
Gender (1 = boys, 2 = girls)	-1.11	0.41	7.14	0.29***	0.33**	0.15-0.75
African American	-0.21	0.45	0.23	1.06	0.81	0.34-1.93
Hispanic	0.62	0.56	1.24	1.98	1.86	0.63-5.57
Native American	0.96	0.69	1.92	2.77*	2.61	0.67-10.11
Asian American <sup>a</sup>	—	—	—	—	—	—
Step 2 (assault variables)						
History of witnessed violence	2.40	0.78	9.42	10.94**	11.07**	2.38-51.40
History of physical assault	1.29	0.42	9.62	3.34**	3.64**	1.61-8.23
Age at index sexual assault (SA)	0.03	0.07	0.21	1.07	1.03	0.90-1.18
SA-related life threat	-0.36	0.43	0.69	0.65	0.70	0.30-1.63
SA-related injury	0.46	0.56	0.67	1.35	1.58	0.53-4.74
Single SA (vs. multiple SA)	-0.58	0.40	2.05	0.66	0.56	0.26-1.24
Age at most recent assault <sup>b</sup>	-0.08	0.11	0.49	0.89	0.93	0.75-1.15
Step 3 (perpetrator categories)						
Acquaintance	1.30	0.64	4.11	—	3.68*	1.05-12.93
Recognized nonacquaintance	1.48	0.76	3.82	—	4.39*	1.00-19.30
Stranger	0.97	0.83	1.36	—	2.64	0.52-13.56

Note:  $n = 284$ . *SE* = standard error; *W* = Wald statistic; OR (Step) = odds ratio on the step at which the variable was entered; OR (Final) = odds ratio in the final multivariable model; CI = confidence interval.

a. Only 5 Asian American cases were included in this analysis, only 1 of which was delinquency positive.

b. Age at the time of the most recent sexual or physical assault.

\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

## Physical Assault

Physical assault was endorsed by 17.6% of the overall sample ( $n = 688$ ), including 21.6% of boys ( $n = 432$ ) and 13.4% of girls ( $n = 256$ ). Of these adolescents, 14 either refused to answer questions about the perpetrator or indicated that they did not know the answer to questions about the perpetrator. This yielded a final sample size of 674 for analyses, with perpetrator type distributed as follows: 12.1% were assaulted by a stranger, 28.4% by a family member, 39.5% by an acquaintance, and 20.1% by a recognized nonacquaintance.

### *Univariate Analyses: Outcomes as a Function of Victim-Perpetrator Relationship*

*MDE.* Past-6-months MDE was diagnosed for 22.9% of the physically assaulted youth ( $n = 153$ ). Victim-perpetrator relationship was statistically associated with MDE;  $\chi^2(3, n = 672) = 8.0, p < .05$ . MDE criteria were met among 19.0% of stranger-assaulted adolescents, 20.9% of adolescents assaulted by recognized nonacquaintances, 19.7% of acquaintance-assaulted adolescents, and 30.0% of family-assaulted adolescents.

*PTSD.* Criteria for past-6-months PTSD were met for 15.1% of physically assaulted youth ( $n = 99$ ). PTSD prevalence also differed as a function of victim-perpetrator relationship;  $\chi^2(3, n = 674) = 8.3, p < .05$ . Specifically, 9.8% of acquaintance-assaulted adolescents met criteria for PTSD, as compared with 18.7% of those assaulted by recognized nonacquaintances, 16.5% of stranger-assaulted adolescents, and 17.8% of those assaulted by family members.

*SA/D.* Criteria for past-year SA/D were met for 19.6% of physically assaulted youth ( $n = 131$ ), with prevalence not differing as a function of perpetrator-victim relationship;  $\chi^2(3, n = 674) = 0.4, ns$ . More than one sixth (17.6%) of stranger-assaulted adolescents met criteria for SA/D, as compared with 20.1% of those assaulted by recognized nonacquaintances, 20.4% of acquaintance-assaulted adolescents, and 18.9% of adolescents assaulted by family members.

*Delinquent behavior.* Adolescents who reported committing at least one delinquent offense in the past year composed 31.7% of the physical assault subsample ( $n = 212$ ). Likelihood of committing a delinquent offense did not differ as a function of perpetrator-victim relationship;  $\chi^2(3, n = 672) = 7.5,$

*ns.* More than one third (36.9%) of stranger-assaulted adolescents committed at least one delinquent offense, as compared with 34.3% of those victimized by recognized nonacquaintances, 34.8% of acquaintance-assaulted adolescents, and 24.2% of adolescents victimized by family members.

### *Multivariable Regression Analyses*

*MDE.* Controlling for demographic and victimization variables, adolescent risk for past-6-months MDE did not differ as a function of perpetrator type (see Table 3). Two variables were statistically associated with risk for MDE in the final model: Physically assaulted girls were at higher risk for MDE than were physically assaulted boys (OR = 2.06), and sexual assault history was associated with increased risk for MDE (OR = 2.00 vs. none).

*PTSD.* After controlling for demographic and victimization characteristics, adolescents who were physically assaulted by a family member (OR = 1.98) remained at increased risk for past-6-months PTSD relative to acquaintance-assaulted adolescents (see Table 4). In the final model, female gender (OR = 1.88 vs. males), sexual assault (OR = 2.10 vs. none), physical assault-related perceived life threat (OR = 1.76 vs. none), and time since most recent physical or sexual assault (OR = 0.80) were associated with increased risk for past-6-months PTSD.

## **Discussion**

Taken together, results of this research point to the victim-perpetrator relationship as a meaningful risk factor for mental health symptoms among interpersonally assaulted adolescents. Future survey research may benefit from considering the victim-perpetrator relationship among other risk factors for mental health problems following interpersonal victimization. The increased risk of PTSD among adolescents sexually assaulted by known individuals versus strangers is consistent with some previous reports but inconsistent with others, perhaps because of between-study differences in definitional boundaries across victim-perpetrator relationship categories. For example, some researchers may have reported negative findings because acquaintances and strangers were grouped together into the same nonfamily or extrafamilial category and compared with victims of familial perpetrators. The results of the present study suggest that different mental health outcomes are associated with sexual assault perpetrated by familiar

**Table 3**  
**Past-6-Months MDE as a Function of Victim-Perpetrator**  
**Relationship Among Physically Assaulted Youth**

Risk Factor	<i>B</i>	<i>SE</i>	<i>W</i>	OR (Step)	OR (Final)	CI (95%)
Step 1 (demographics)						
Age	-0.01	0.08	0.01	1.03	0.99	0.85-1.15
Gender (1 = boys, 2 = girls)	0.72	0.22	10.92	2.82***	2.06***	1.34-3.17
African American	-0.13	0.26	0.23	0.79	0.88	0.53-1.48
Hispanic	-0.43	0.38	1.29	0.61	0.65	0.31-1.36
Native American	-0.17	0.43	0.16	0.99	1.19	0.51-2.75
Asian American	—	—	—	—	—	—
Step 2 (assault variables)						
History of witnessed violence	-0.38	0.25	2.41	0.69	0.68	0.42-1.11
History of sexual assault	0.69	0.25	7.54	1.95**	2.00**	1.22-3.28
Age at index physical assault (PA)	0.02	0.05	0.20	1.02	1.02	0.93-1.13
PA-related life threat	0.25	0.21	1.33	1.32	1.28	0.84-1.94
PA-related injury	0.32	0.21	2.23	1.39	1.37	0.91-2.08
Single PA (vs. multiple PA)	-0.28	0.24	1.35	0.74	0.75	0.47-1.21
Age at most recent assault <sup>b</sup>	0.06	0.06	0.90	1.06	1.06	0.94-1.19
Step 3 (perpetrator categories)						
Acquaintance	-0.23	0.26	0.82	—	0.79	0.48-1.31
Recognized nonacquaintance	0.09	0.30	0.08	—	1.09	0.61-1.95
Stranger	-0.08	0.38	0.05	—	0.92	0.44-1.94

Note:  $n = 668$ . MDE = major depressive episode; SE = standard error;  $W$  = Wald statistic; OR (Step) = odds ratio on the step at which the variable was entered; OR (Final) = odds ratio in the final multivariable model; CI = confidence interval.

a. Only 3 Asian American cases were included in this analysis, all of which were MDE negative.

b. Age at the time of the most recent sexual or physical assault.

\* $p < .05$ . \*\*\* $p < .001$ .

**Table 4**  
**Past-6-Months PTSD as a Function of Victim-Perpetrator Relationship Among Physically Assaulted Youth**

Risk Factor	<i>B</i>	<i>SE</i>	W	OR (Step)	OR (Final)	CI (95%)
Step 1 (demographics)						
Age	-0.04	0.10	0.14	1.05	0.96	0.80-1.17
Gender (1 = boys, 2 = girls)	0.63	0.28	5.08	2.74***	1.88*	1.09-3.24
African American	0.30	0.30	0.98	1.43	1.35	0.75-2.45
Hispanic	-0.33	0.45	0.57	0.91	0.72	0.30-1.71
Native American	-0.67	0.69	0.96	0.52	0.51	0.13-1.96
Asian American <sup>a</sup>	—	—	—	—	—	—
Step 2 (assault variables)						
History of witnessed violence	0.47	0.36	1.76	1.61	1.60	0.80-3.22
History of sexual assault	0.74	0.30	6.07	1.97*	2.10*	1.16-3.80
Age at index physical assault (PA)	0.03	0.06	0.19	1.01	1.03	0.91-1.16
PA-related life threat	0.57	0.27	4.30	1.93*	1.76*	1.03-3.02
PA-related injury	0.24	0.27	0.77	1.29	1.27	0.75-2.17
Single PA (vs. multiple PA)	-0.02	0.32	0.00	0.91	0.98	0.53-1.82
Age at most recent assault <sup>b</sup>	-0.23	0.09	6.19	0.82*	0.80*	0.67-0.95
Step 3 (perpetrator categories)						
Recognized nonacquaintance	0.60	0.36	2.84	—	1.82	0.91-3.65
Stranger	0.62	0.44	2.02	—	1.86	0.79-4.36
Family member	0.68	0.33	4.22	—	1.98*	1.03-3.80

Note:  $n = 670$ . PTSD = posttraumatic stress disorder; SE = standard error; W = Wald statistic; OR (Step) = odds ratio on the step at which the variable was entered; OR (Final) = odds ratio in the final multivariable model; CI = confidence interval.

a. Only 3 Asian American cases were included in this analysis, all of which were PTSD negative.

b. Age at the time of the most recent sexual or physical assault.

\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

individuals versus strangers. It is unclear whether prior studies would have yielded similar results had they made distinctions between acquaintance and stranger perpetrators in their sexual assault samples as we did here. Our finding that adolescents physically assaulted by a family member were at increased risk for PTSD relative to those assaulted by non-family members is consistent with other findings (Boney-McCoy & Finkelhor, 1995) that have addressed the association between victim-perpetrator relationship and PTSD among physically assaulted adolescents.

A comprehensive analysis of the mechanisms by which the victim-perpetrator relationship is associated with risk of PTSD is beyond the scope of this study, but we call attention to some possible reasons why adolescents interpersonally assaulted by known individuals may be at greater risk for PTSD than those assaulted by strangers. First, Resick and Schnicke (1993) have argued that assaults perpetrated by known individuals may affect a victim's mental health functioning by disrupting beliefs about trust and intimacy that are not implicit in assaults perpetrated by strangers. Second, it is also possible that adolescents assaulted by nonstrangers are at greater risk for PTSD because of other environmental factors that are not directly associated with the index assault (e.g., living in a chronically abusive environment). A third plausible explanation is that adolescents victimized by a family member or someone else known to them may also have increased risk of PTSD because they are less likely to report the incident than those victimized by a stranger and are therefore less likely to receive mental health services. Indeed, several studies (e.g., Hanson, Resnick, Saunders, Kilpatrick, & Best, 1999; also see Paine & Hansen, 2002) indicate that children are less likely to report sexual abuse if the perpetrator is someone "close" to them (e.g., family member) than if the perpetrator is a stranger. Similar data concerning physical assault are not available, but the observations presented here may generalize to physically assaulted adolescents as well, and it will be important for future studies to address this. These data support some arguments about the importance of the closeness of the victim-perpetrator relationship (Conte & Schuerman, 1987; Friedrich, Urquiza, & Beilke, 1986) in interpersonal violence. The relation between sexual assault perpetrated by acquaintances and increased risk of delinquent behavior is similar to that reported by Fagan (2003; cf. Boney-McCoy & Finkelhor, 1995) and raises the possibility that delinquent adolescents are at increased risk for sexual assault by acquaintances. Cross-sectional research designs do not allow causal statements regarding sexual assault and mental health functioning. Therefore, these findings cannot estimate the extent to which sexual victimization precedes delinquent behavior or vice versa. Future

research with longitudinal designs should aim to tease apart temporal associations between sexual assault and delinquent behavior.

This study represents an attempt to narrow a critical gap in the study of mental health correlates of physically versus sexually assaulted adolescents (see Saunders, 2003). The findings presented here suggest that, when other risk factors (e.g., physical injury, witnessing violence) are held constant, the victim-perpetrator relationship is inconsistently associated with mental health problems among interpersonally assaulted adolescents. Differences in the mental health correlates of the victim-perpetrator relationship among sexually versus physically assaulted adolescents may suggest different mechanisms by which the victim-perpetrator relationship possibly increases risk. Victim-focused psychoeducational efforts and clinical decision making may benefit from consideration of the victim-perpetrator relationship in addition to more established demographic and event-related risk factors for mental health problems among sexually and physically assaulted adolescents.

Conclusions drawn from this research should be balanced with its limitations. One limitation is the relative ambiguity regarding exactly what group or groups of perpetrators the recognized nonacquaintance category represents. Based on the interview structure, these perpetrators could include strangers (e.g., neighborhood persons whom the victim has seen but does not know well), acquaintances (e.g., coworkers), or even family members (e.g., an uncle the victim has met only a few times). This measurement limitation may have decreased the power to detect otherwise meaningful differences among the other victim-perpetrator categories. However, maintaining the distinction of this category is justified because (a) we cannot classify these participants with confidence in any of the other three categories of victim-perpetrator relationship and (b) analyses suggested that youth victimized by recognized nonacquaintances differed meaningfully across certain criterion variables *vis-à-vis* other victim-perpetrator categories. Also, we may have drawn different conclusions had we focused attention on the assault that adolescents endorsed as the “worst” assault instead of using the first or only assault as the index assault. However, most participants reported only one of either type of assault, thereby reducing the merit of introducing a subjective label of the severity of the abuse, which may itself introduce other confounds. In addition, the authors acknowledge that the assessment protocol used here represents a proxy for mental health problems rather than psychological diagnoses *per se*. It is possible that different results would be found had a more comprehensive diagnostic assessment (e.g., one that rules out alternative diagnoses and considers functional impairment) been used.

Despite inconsistent patterns in the data reported here, our findings suggest that the victim-perpetrator relationship is meaningfully associated with certain mental health outcomes but that these associations differ regarding physical versus sexual assault histories. These data also highlight the potential benefit of consistent survey methodology across related survey studies. One of the significant limitations of existing studies to date is the low base rate of victimization across different victim-perpetrator relationships. For example, in the present sample of more than 4,000 adolescents, only 36 (0.9%) reported having been sexually assaulted by a stranger at some time in their life, suggesting that it is difficult to assess the differential impact of distinct victim-perpetrator relationships without a very large sample size. Another limitation is the inconsistent use of different victim-perpetrator relationship categories. As stated already, many researchers have chosen to compare victim-perpetrator relationship categories (e.g., family vs. non-family) that may obscure otherwise meaningful categories (e.g., strangers vs. acquaintances). The development and use of consistent and consensus definitions of victim-perpetrator relationship across studies would enable researchers to combine data from multiple studies to investigate these research questions with larger subsamples of victims.

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