

# Differences in Frequency of Violence and Reported Injury Between Relationships With Reciprocal and Nonreciprocal Intimate Partner Violence

Daniel J. Whitaker, PhD, Tadesse Haileyesus, MS, Monica Swahn, PhD, and Linda S. Saltzman, PhD

Prevention of violence between intimate partners is an important public health goal. National estimates indicate that approximately 25% of women report being victims of a partner's physical or sexual violence at some point in their life, and approximately 1.5 million women and 835 000 men are physically assaulted or raped by intimate partners in the United States annually.<sup>1</sup> Intimate partner violence (IPV) is associated with a number of negative psychological and physical health consequences including posttraumatic stress disorder, depression, physical injury, reproductive health problems, irritable bowel syndrome, and chronic pain.<sup>2-4</sup> IPV costs approximately \$5.8 billion per year, which includes only direct medical and mental health costs and work productivity losses to victims.<sup>5</sup>

The women's movement brought initial attention to the problem of partner violence directed at women and to the need for funding to address that problem.<sup>6</sup> Much of the initial research on IPV was conducted with severely abused women and supported the assumption that IPV is primarily perpetrated by men against women. Data is mounting, however, that suggests that IPV is often perpetrated by both men and women against their partner.<sup>7,8,9</sup> It is also becoming recognized that perpetration of IPV by both partners within a relationship is fairly common. This phenomenon has been described with terms such as *mutual violence*, *symmetrical violence*, or *reciprocal violence*. Here we use the terms *reciprocal* and *nonreciprocal* to indicate IPV that is perpetrated by both partners (reciprocal) or 1 partner only (nonreciprocal) in a given relationship. Reciprocity of IPV does not necessarily mean that the frequency or the severity of the violence is equal or similar between partners.

Several studies have found that much of partner violence is reciprocal. For example, in their national studies of family violence, Straus

**Objectives.** We sought to examine the prevalence of reciprocal (i.e., perpetrated by both partners) and nonreciprocal intimate partner violence and to determine whether reciprocity is related to violence frequency and injury.

**Methods.** We analyzed data on young US adults aged 18 to 28 years from the 2001 National Longitudinal Study of Adolescent Health, which contained information about partner violence and injury reported by 11 370 respondents on 18 761 heterosexual relationships.

**Results.** Almost 24% of all relationships had some violence, and half (49.7%) of those were reciprocally violent. In nonreciprocally violent relationships, women were the perpetrators in more than 70% of the cases. Reciprocity was associated with more frequent violence among women (adjusted odds ratio [AOR]=2.3; 95% confidence interval [CI]=1.9, 2.8), but not men (AOR=1.26; 95% CI=0.9, 1.7). Regarding injury, men were more likely to inflict injury than were women (AOR=1.3; 95% CI=1.1, 1.5), and reciprocal intimate partner violence was associated with greater injury than was nonreciprocal intimate partner violence regardless of the gender of the perpetrator (AOR=4.4; 95% CI=3.6, 5.5).

**Conclusions.** The context of the violence (reciprocal vs nonreciprocal) is a strong predictor of reported injury. Prevention approaches that address the escalation of partner violence may be needed to address reciprocal violence. (*Am J Public Health*. 2007;97:941-947. doi:10.2105/AJPH.2005.079020)

et al. found that in about half of the cases, violence was reciprocal.<sup>10</sup> Similar results were found in the National Survey of Families and Households.<sup>8</sup> Studies reviewed by Gray and Foshee<sup>11</sup> found that among violent adolescent relationships, the percentage of relationships in which there was reciprocal partner violence ranged from 45% to 72%. A recent meta-analysis found that a woman's perpetration of violence was the strongest predictor of her being a victim of partner violence.<sup>12</sup>

Reciprocal partner violence does not appear to be only comprised of self-defensive acts of violence. Several studies have found that men and women initiate violence against an intimate partner at approximately the same rate. For example, Gray and Foshee<sup>11</sup> specifically asked adolescents about their initiation of violence and found that among the violent relationships studied, 66% were characterized by both partners initiating violence at least once. In the National Family Violence Survey, both men and women reported that violence

was initiated by each partner at least 40% of the time.<sup>10</sup> Additionally, studies of community samples found that a relatively low percentage of women endorsed self-defense as a primary motive for violence.<sup>13,14</sup> These data suggest that self-defense cannot fully explain the reciprocal violence phenomenon.

Little is known about reciprocal violence with regard to its context or severity. We sought to examine the prevalence of reciprocal and nonreciprocal IPV in a large, nationally representative sample of young adults. We also sought to examine the seriousness of IPV in relationships with reciprocal versus nonreciprocal IPV using 2 indices: violence frequency and injury occurrence. Family conflict theory,<sup>15</sup> which asserts that IPV occurs as a result of escalating conflicts, would predict that reciprocal IPV should be more serious than nonreciprocal IPV because reciprocal IPV would indicate that both partners are engaging in the escalation of conflict. We also examined gender as a predictor of the

seriousness of the violence. Gender is at the forefront of feminist theories of partner violence<sup>16</sup> and it has been consistently found that male perpetrators are more likely to inflict injury than female perpetrators.<sup>7</sup> Thus, we examined the gender main effect on the seriousness of violence and the interaction between reciprocity and gender to understand whether the reciprocity effect differed for men and women.

## METHODS

### Participants

All participants were part of the National Longitudinal Study of Adolescent Health (Add Health), and participated in the third wave of data collection during 2001. Add Health used a multistage stratified cluster design to identify a nationally representative sample of adolescents (complete details regarding Add Health are found elsewhere<sup>17</sup>). In 1995, 18 924 adolescents in middle and high school (aged 12 to 21 years) participated in Wave I of Add Health's in-home interview. Six years later, 14 322 participants, 77.4% of those who completed the Wave I survey (aged 18 to 28 years at Wave III), completed the in-home survey of Wave III of the Add Health study. In other analyses, the Add Health study team determined that participant nonresponse for Wave III had minimal impact on the sample's representativeness.<sup>18</sup>

Our analyses involve only the Wave III data and focus on the questions on intimate relationships. In 1 section of the Wave III interview, participants were asked to report an "inventory" of all their sexual or romantic relationships during the past 5 years (sexual and romantic relationships were not further defined). Participants were asked a short series of questions about each relationship (e.g., partner age and gender, relationship length, marital status, sexual contact), and then specific types of relationships (primarily important ones) were selected and more detailed questions were developed to gather more information. In all, the 14 322 participants with sample weights for Wave III reported 38 894 relationships. We analyzed the subset of these relationships that were heterosexual relationships and that had data on violence toward and from the partner.

**TABLE 1—Weighted Estimates of Sample Characteristics of Individuals and Relationships: Young Adults Aged 18–28 Years, National Longitudinal Study of Adolescent Health, United States, 2001**

Variable	Total N = 11 370	Men n = 5 219	Women n = 6 151
<b>Sample Characteristics N = 11 370</b>			
Mean age, years (SD)	22.0 (1.7)	22.1 (1.7)	21.9 (1.7)
Race/ethnicity, <sup>a</sup> no. (%)			
White	6 370 (69.9)	2 924 (69.6)	3 446 (70.1)
Black	2 283 (15.1)	971 (15.0)	1 312 (15.3)
Hispanic	1 653 (10.7)	805 (11.0)	848 (10.3)
Other	889 (4.3)	433 (4.4)	456 (4.3)
Education, <sup>a</sup> no. (%)			
Less than high school	1 377 (14.4)	714 (16.1)	663 (12.8)
High-school graduate	3 649 (32.3)	1 781 (34.4)	1 868 (30.2)
Some college	4 513 (38.8)	2 011 (37.0)	2 502 (40.5)
College graduate	1 825 (14.5)	708 (12.4)	1 117 (16.5)
Mean number of relationships in past 5 years (SD)	3.08 (2.7)	3.05 (2.7)	3.10 (2.6)
Ever victimized by IPV, no. (%)	3 046 (26.8)	1 269 (24.8)	1 777 (28.8)
Ever perpetrated IPV, no. (%)	3 121 (26.5)	884 (17.3)	2 237 (35.5)
<b>Relationship Characteristics N = 18 761</b>			
Relationship lasted ≥ 3 months in duration, <sup>a</sup> no. (%)	16 608 (89.3)	7 233 (85.9)	9 375 (92.5)
Sex in relationship, <sup>a</sup> no. (%)	16 755 (89.8)	7 522 (88.9)	9 233 (90.6)
Cohabitation type, <sup>a</sup> no. (%)			
Never married or living together	11 630 (62.7)	5 535 (65.8)	6 095 (59.7)
Lived together but not married	4 317 (24.5)	1 874 (23.7)	2 443 (25.4)
Married	2 392 (12.8)	912 (10.5)	1 480 (14.9)

Notes. SD = standard deviation; IPV = intimate partner violence. Percentages reflect weighted estimates of the distribution of the variables for the US young adult population.

<sup>a</sup>Because of small amounts of missing data, the numbers do not sum to the full sample size.

Among the 14 322 participants, 2 952 were excluded either because they reported no relationships (n = 2 584) or only same-sex relationships (n = 368), which left a subset of 11 370 participants. These 11 370 reported on 18 761 relationships that included partner violence data (4 085 participants reported 1 relationship, 7 182 reported 2, and 103 reported 3 or more). In most cases (all but 97) violence questions were asked of "important" relationships, with importance defined by a preset algorithm that considered factors such as marital status, recency, and duration of relationship. (Additional and detailed information on the relationship selection can be obtained from the Add Health study team [<http://www.cpc.unc.edu/projects/addhealth>].) Table 1 shows descriptive information on the sample of participants

and relationships included in the current analyses.

### Measures

All relationship-level questions were asked separately for each relationship (e.g., respondents with 2 partners were asked each set of questions twice, once for each partner). To assess perpetration of physical violence within intimate relationships, respondents answered 2 questions ("How often in the past year have you threatened your partner with violence, pushed or shoved him/her, or thrown something at him/her that could hurt," and "How often in the past year have you slapped, hit, or kicked your partner") on the following scale: 0 = never, 1 = once, 2 = twice, 3 = 3–5 times, 4 = 6–10 times, 5 = 11–20 times, 6 = more than 20 times, 7 = did not happen

in the past year, but happened prior to that. Two parallel questions assessed the partner's perpetration of violence toward the respondent. Responses to the questions were highly correlated (respondent's perpetration,  $r=0.65$ ; partner's perpetration,  $r=0.78$ ) and were thus averaged to create indices of IPV perpetration by the respondent and IPV perpetration by the partner. Injuries from partner violence were assessed with a single question for the perpetration of injuries upon the partner ("How often has partner had an injury, such as a sprain, bruise, or cut because of a fight with you"), and a parallel question assessed the partner's perpetration of injuries to the respondent. Analyses were conducted at the relationship level with respondents providing data about their own perpetration and their partners perpetration (data was not directly collected from partners and was therefore not available).

**Analytic Plan**

To examine the prevalence of nonreciprocal and reciprocal IPV, we first classified each relationship as having either no IPV (neither the respondent nor the partner perpetrated violence against the other) or any IPV (either the respondent or the partner perpetrated violence against the other). We classified relationships with IPV as having either reciprocal IPV (both respondent and partner perpetrated violence against the other) or nonreciprocal IPV (either the respondent or the partner perpetrated against the other, but not both). Finally, we divided the relationships with nonreciprocal IPV into those that were perpetrated by men versus those perpetrated by women.

To examine the seriousness of IPV by reciprocity (nonreciprocal vs reciprocal), we restricted the analyses to only those relationships with IPV and used logistic regression to model reports of violence frequency and injury occurrence. For violence frequency, because responses were nonnormally distributed and the response options were not evenly spaced, we collapsed response codes 1–6 into 3 ordinal categories of violence frequency (low=responses 1 or 2; medium=response 3; high=responses 4–6) and conducted ordinal logistic regression. For injury occurrence, we coded whether violence perpetration had resulted in an injury

or not (yes=codes 1–7; no=code 0) and conducted binary logistic regression.

Each logistic regression model included reciprocity (nonreciprocal vs reciprocal) and perpetrator gender (men vs women) as predictors, along with several control variables: respondent gender (men vs women), respondent race/ethnicity (White, Black, Hispanic, other), education (less than high school, high-school graduate, some college, college graduate), relationship length (less than 3 months vs greater than 3 months), and relationship type (ever married, ever lived together but not married, never lived together nor married). Finally, to properly analyze the data, we configured data so that each potential perpetrator in a relationship (i.e., the respondent and the partner) was considered a separate case. This was necessary because comparisons of reciprocal IPV with respect to violence frequency and injury occurrence would be within-subject comparisons (i.e., they would be on the same line of data), whereas comparisons of nonreciprocal IPV would be between-subject comparisons. Additionally, all analyses were weighted to provide national estimates.<sup>19</sup> Weights were assigned to each participant on the basis of grade of education, gender, and race, and according to the sampling frame, which oversampled specific groups of adolescents. Analyses were conducted with SAS version 9.1 (SAS Institute Inc, Cary, NC) and SUDAAN version 9 (Research Triangle Institute,

Research Triangle Park, NC) to accommodate the complex sampling design and to provide accurate standard errors for analyses.

**RESULTS**

Table 2 shows the proportion of all relationships with any IPV, the proportion of violent relationships with reciprocal and nonreciprocal IPV, and the proportion of relationships with nonreciprocal IPV with perpetrators who were men versus those who were women. Proportions were reported for the overall sample and by respondent gender. Overall, IPV was reported in 23.9% of relationships, with women reporting a greater proportion of violent relationships than men (28.4% vs 19.3%;  $P<.01$ ). Among violent relationships, nearly half (49.7%) were characterized as reciprocally violent. Women reported a significantly greater proportion of violent relationships that were reciprocal versus nonreciprocal than did men (women=51.5%; men=46.9%;  $P<.03$ ). Among relationships with nonreciprocal violence, women were reported to be the perpetrator in a majority of cases (70.7%), as reported by both women (67.7%) and men (74.9%). To look at the data another way, women reported both greater victimization and perpetration of violence than did men (victimization=19.3% vs 16.4%, respectively; perpetration=24.8% vs 11.4%, respectively). In fact, women's

**TABLE 2—Weighted Estimates of Violence Occurrence for Reciprocally and Nonreciprocally Violent Relationships, Overall and by Gender: Young Adults Aged 18–28 Years, National Longitudinal Study of Adolescent Health, United States, 2001**

Variable	Overall, no. (%) N = 18 761	Men, no. (%) n = 8531	Women, no. (%) n = 10 230
All relationships			
Nonviolent	14 152 (76.1)	6 897 (80.7)	7 255 (71.6)
Violent	4 609 (23.9)	1 634 (19.3)	2 975 (28.4)
Among violent relationships			
Reciprocal IPV	2 270 (49.7)	738 (46.9)	1 532 (51.5)
Nonreciprocal IPV	2 339 (50.3)	896 (53.1)	1 443 (48.5)
Among cases with nonreciprocal IPV			
Perpetrated by men	670 (29.3)	232 (25.1)	438 (32.3)
Perpetrated by women	1 669 (70.7)	664 (74.9)	1 005 (67.7)

Notes. IPV = intimate partner violence. Percentages reflect weighted estimates of the distribution of the variables for the US young adult population.

**TABLE 3—Weighted Estimates of Violence Frequency and Injury Occurrence by Reciprocity Status and Perpetrator Gender: Young Adults Aged 18–28 Years, National Longitudinal Study of Adolescent Health, United States, 2001**

Variable	Violence Frequency, no. (%)			Injury occurrence, no. (%)
	Low (n = 4447)	Medium (n = 1549)	High (n = 760)	
Reciprocity				
Nonreciprocal	1721 (73.3)	413 (18.5)	167 (8.2)	266 (11.6)
Reciprocal	2726 (60.6)	1136 (25.6)	593 (13.8)	1271 (28.4)
Perpetrator gender				
Men against women	1883 (65.1)	623 (21.1)	368 (13.8)	850 (28.8)
Women against men	2564 (64.6)	926 (24.9)	392 (10.5)	687 (18.1)
Gender by reciprocity				
Men against women: nonreciprocal	457 (69.0)	119 (17.6)	76 (13.4)	136 (20.0)
Men against women: reciprocal	1426 (64.0)	504 (22.1)	292 (13.9)	714 (31.4)
Women against men: nonreciprocal	1264 (75.0)	294 (18.9)	91 (6.1)	130 (8.1)
Women against men: reciprocal	1300 (57.2)	632 (29.1)	301 (13.7)	557 (25.3)

Note. Percentages reflect weighted estimates of the distribution of the variables for the US young adult population.

greater perpetration of violence was reported by both women (female perpetrators=24.8%, male perpetrators=19.2%) and by men (female perpetrators=16.4%, male perpetrators=11.2%).

Next we restricted the analyses to only violent relationships and examined violence frequency and reported injury occurrence as a function of reciprocity and perpetrator gender. Table 3 shows the percentages for violence frequency and injury occurrence by reciprocity and perpetrator gender. To analyze the frequencies in Table 3, we conducted logistic regression to examine the relationship between reciprocity and perpetrator gender and the 2 indices of the seriousness of the violence. For each dependent variable, the initial model included the main effects of reciprocity and perpetrator gender along with the reciprocity by perpetrator gender interaction. If the interaction was not significant, it was dropped from the model. If the interaction was significant, we computed the reciprocity effect separately for perpetrators who were men and those who were women.

Table 4 shows results of the logistic regression models. For violence frequency, the main effects of perpetrator gender and reciprocity were both significant and there was a significant interaction. For perpetrators who were men, the reciprocity effect was nonsignificant

(adjusted odds ratio [AOR]=1.19;  $P=.17$ ), which indicated that the frequency of violence perpetrated by men did not vary by reciprocity. For perpetrators who were women, IPV was more frequent when perpetrated in the context of reciprocal IPV versus nonreciprocal IPV (AOR=2.23;  $P<.001$ ). In other words, women perpetrated IPV more frequently in the context of reciprocal violence than in nonreciprocal violence. As can be seen Table 3, a greater percentage of women in reciprocally violent relationships perpetrated medium and high levels of violence (29.1% and 13.7%, respectively), than did women perpetrators in nonreciprocally violent relationships (18.9% and 6.1%, respectively).

For injury occurrence, both perpetrator gender and reciprocity were significant predictors, but the interaction was not significant. Injury was more likely when violence was perpetrated by men than by women (men=28.8% vs women=18.8%; AOR=1.30), and in relationships for which IPV was reciprocal versus nonreciprocal (reciprocal=28.4% vs nonreciprocal=11.6%; AOR=4.41).

## DISCUSSION

Our findings show that reciprocal violence was about as common as nonreciprocal violence in this national sample of young

adults, with about half of violent relationships being characterized by reciprocal violence. More importantly, we found that violence was perpetrated more frequently (by women only) and was more likely to result in injury when it was reciprocal as opposed to nonreciprocal.

Our findings that half of relationships with violence could be characterized as reciprocally violent are consistent with prior studies.<sup>8,9,11</sup> We were surprised to find, however, that among relationships with nonreciprocal violence, women were the perpetrators in a majority of cases, regardless of participant gender. One possible explanation for this, assuming that men and women are equally likely to initiate physical violence,<sup>20</sup> is that men, who are typically larger and stronger, are less likely to retaliate if struck first by their partner. Thus, some men may be following the norm that “men shouldn’t hit women” when struck first by their partner. A different explanation is that men are simply less willing to report hitting their partner than are women.<sup>21</sup>

This explanation cannot account for the data, however, as both men and women reported a larger proportion of nonreciprocal violence perpetrated by women than by men. One might be tempted to think that men who perpetrate violence in nonreciprocal relationships are the traditional male “batterer.” However, the data were not consistent with this representation; women who were victims of nonreciprocal violence experienced *less* violence and a *lower* likelihood of injury than did women who were victims of violence in reciprocally violent relationships. Some have suggested that survey studies, such as this one, likely exclude the more severely abused women typically studied in clinical settings.<sup>22</sup> Thus, our findings may represent 1 form of partner violence—what Johnson<sup>23</sup> has called *common couple violence* or *situational violence*—that is likely to be found in broader population samples rather than in clinical samples.

In analyses of reports of violence frequency and injury occurrence, 2 clear findings emerged. First, perpetrators who were men were more likely to inflict an injury on a partner than were those who were women, regardless of reciprocity status. This replicates findings in the literature at large that women are more likely to be injured by partner violence

**TABLE 4—Ordinal Logistic Regression Results for Violence Frequency and Binary Logistic Regression Results for Injury Occurrence: Young Adults Aged 18–28 Years, National Longitudinal Study of Adolescent Health, United States, 2001**

Variable	Violence Frequency AOR <sup>a</sup> (95% CI)	Injury Occurrence AOR (95% CI)
Reciprocity <sup>b</sup>		
Reciprocal violence	NA <sup>b</sup>	4.41 (3.56, 5.47)*
Nonreciprocal violence	NA <sup>b</sup>	1.0
Perpetrator		
Men against women	NA <sup>b</sup>	1.30 (1.14, 1.48)*
Women against men	NA <sup>b</sup>	1.0
Perpetrator gender × reciprocity interaction	$P < .001$	$P = .13^c$
Men against women perpetration		
Reciprocal violence	1.26 (0.92, 1.72)	
Nonreciprocal violence	1.0	
Women against men perpetration		
Reciprocal violence	2.30 (1.88, 2.82)*	
Nonreciprocal violence	1.0	

Notes. AOR = adjusted odds ratio; CI = confidence interval; NA = not applicable. Percentages reflect weighted estimates of the distribution of the variables for the US young adult population.

<sup>a</sup>All odds ratios are adjusted for respondent gender, respondent race, respondent education, relationship length, and relationship type.

<sup>b</sup>Because of a significant reciprocity × perpetrator gender interaction, results are presented separately for perpetrators who were men and those who were women.

<sup>c</sup>The reciprocity × gender interaction was dropped from the model because it was not significant.

\* $P < .001$ .

than are men.<sup>1,7</sup> Second, relationships with reciprocal violence resulted in more frequent violence (by women only) and a greater likelihood of injury caused by both male and female perpetrators. Reciprocal violence was more dangerous for the victim, both men and women, than was nonreciprocal violence. In fact, men in relationships with reciprocal violence were reportedly injured more often (25.2%) than were women in relationships with nonreciprocal violence (20.0%); this is important as violence perpetrated by women is often seen as not serious.<sup>10</sup> An important caveat to these findings is that we do not know the extent or severity of the injuries reported, only that they were reported to have occurred.

These findings highlight the importance of considering relationship violence in the context of the relationship. Many authors have noted that research and prevention should begin to shift away from the sole focus on violence by men against women given the accumulation of data indicating that partner violence is perpetrated by both men and women.<sup>10,20</sup> The data presented here suggest

that it is critical to begin to study some of the relationship processes that contribute to reciprocal partner violence as those are most likely to result in injury.

### Implications for Prevention and Intervention

The finding that IPV is more frequently perpetrated by women and is more likely to result in injury when perpetrated in the context of reciprocal IPV can best be understood in the context of a conflict-based theoretical model, which suggests that conflict leads to increasingly coercive interactions that may spiral into violence.<sup>15,24,25</sup> For example, suppose partner A shoves partner B and that partner B does not retaliate but instead storms out of the house; the violence may end as nonreciprocal violence with no injury. If Partner B retaliates by slapping or punching partner A, the violence then becomes reciprocal and injury becomes more likely with each escalating blow. This pattern suggests that retaliation may be a primary mechanism for the increased injury associated with reciprocal violence, though we

cannot test this hypothesis using this study's data. An escalation explanation is supported by longitudinal studies that show that violence between relationship partners tends to escalate over time from verbal abuse to physical abuse<sup>26–28</sup> and that victimization from violence is a strong predictor of perpetration of violence.<sup>12,29</sup> The escalation of negative, coercive interactions has been central to, and strongly supported in, Patterson's<sup>30</sup> work, which describes family processes that support the development of aggression, and has been suggested to play a role in dating violence.<sup>25</sup>

In such cases, it may be important to work with both relationship partners to help them understand when and how conflict escalates to violence and how to interrupt that process. Intervention with violent couples has been extremely controversial but has recently been recognized as viable in some cases, such as when there is low-to-moderate violence, when both partners agree to counseling and wish to remain an intact couple, when violence is reciprocal, and when there are low levels of intimidation, fear, and control.<sup>31–33</sup> Couples counseling would not be appropriate for patterns of partner violence in which there is severe abuse, high levels of fear on the part of the victim, and control of one partner by the other.

### Limitations

There are several limitations of this work. The first set centers around the measures of partner violence. All measures were assessed using only participant reports about their own perpetration of violence and that of their partners. The data are thus subject to all the biases and limitations inherent to this form of data collection, such as recall bias, social desirability bias, and reporting bias. Regarding reporting biases, there has been much discussion of whether there are differences in reported IPV by the gender of the reporter. A meta-analysis of the reliability of the conflict tactics scale concluded that there is evidence of underreporting by both genders, and that underreporting may be greater for men,<sup>34</sup> for more severe acts of IPV.<sup>21</sup> It would have been ideal to collect violence data from both partners, but those data were not collected from the full Add Health sample.

A second measurement issue pertains to the scope of violence measures. The 3 questions

included in the Add Health study do not capture all forms of violence that occur between relationship partners, including many of the more severe forms of partner violence on the Conflict Tactics Scale (e.g., used a knife or gun, choked, or burned). Questions about emotional, verbal, psychological, or sexual aggression were also not included. Similarly, only a single item assessed injury to victims and it focused on injury frequency and excluded injury severity and whether medical attention was needed or sought. Thus, it is unclear whether the data presented here would be similar had the violence and injury assessment been more thorough or if different forms of violence had been measured and analyzed separately. Perhaps more important than the limited measures of violence and injury is the fact that no data were collected about the causes or function of violence. Such data are needed to understand why relationships with reciprocal violence are more violent and more likely to result in injury. We speculated that retaliation may lead to escalating violence and injury, but data are needed to examine this hypothesis. Future studies should focus on the causes and context of reciprocal and nonreciprocal IPV.

Another limitation is that the Add Health study obtained partner violence data primarily about relationships considered to be important as defined by the Add research team. Thus, it is not clear how this selection bias may have impacted the findings—that is, whether the findings would be the same with a fuller sample of relationships. However, our findings are consistent with previous research on other samples that have shown reciprocal partner violence is fairly common with adolescents<sup>11</sup> and with broader populations.<sup>8,9</sup> Finally, as noted, the data collected were part of a nationally representative sample selected when participants were in middle and high school. The use of a nationally representative sample greatly increases the generalizability of the findings, but this particular sample is of limited range in age (18–28 years) and likely does not include the most severely abused victims who are subjected to extreme control by their partners and may be unable or unwilling to participate in research.<sup>22</sup>

This study indicates that reciprocity of partner violence is an important correlate

of violence severity. Research, and prevention and treatment approaches should begin to examine the specific context of partner violence to improve prevention efforts. This includes understanding the distal and immediate causes and motives that lead to partner violence. Many authors have noted that there are many forms of partner violence<sup>22</sup> and different types of perpetrators who are violent for different reasons.<sup>35,36</sup> Research is needed that uses both representative samples and samples of victims and perpetrators from clinical settings to fully understand the range and scope of partner violence. ■

### About the Authors

At the time of this study, Daniel J. Whitaker and Linda S. Saltzman were with the Division of Violence Prevention, National Center for Injury Prevention and Control, Centers for Disease Control and Prevention, Atlanta, Ga. Tadesse Haileyesus is with the Office of Statistics and Programming, National Center for Injury Prevention and Control. Monica Swahn is with the Office on Smoking and Health, Centers for Disease Control and Prevention.

Requests for reprints should be sent to Daniel Whitaker, Centers for Disease Control and Prevention, 4770 Buford Highway, NE, MS K-60, Atlanta, GA 30341 (e-mail: dpw7@cdc.gov).

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**Note.** The findings and conclusions in this report are those of the authors and do not necessarily represent the views of the Centers for Disease Control and Prevention.

### Contributors

D.J. Whitaker designed the research, conducted analyses, and was responsible for writing the article. T. Haileyesus was responsible for conducting the analyses. All authors contributed to the design of the research and to the writing of the article.

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### Human Participant Protection

This research was reviewed and approved by the institutional review board of the Centers for Disease Control and Prevention.

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