

**Title: Physical Aggression, Forced Sex, and Stalking Victimization By a Dating Partner: An Analysis of the National Violence Against Women Survey**

Running Head: Dating violence: physical aggression, forced sex, and stalking

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**Abstract**

This study used the National Violence Against Women Survey (NVAWS) of women and men to estimate non-cohabitating dating violence prevalence by type (physical, forced sex, and stalking), associations between dating violence and other types of interpersonal violence across the lifespan, and association of dating violence with longer-term mental health including substance abuse. Among respondents aged 18-65, 8.3% of 6,790 women and 2.4% of 7,122 men experienced physical aggression, forced sex, or stalking victimization by a dating partner. Few (20.6% of women and 9.7% of men) reported more than one type of dating violence. Childhood physical aggression by a parent or guardian was strongly associated with subsequent dating violence risk for men and women. Dating violence (physical aggression specifically) was associated with current depressive symptoms, current therapeutic drug use (antidepressants, tranquilizers or pain medications), and current recreation drug use for women. Implications for parents, survivors, health care and service providers are discussed.

**Keywords:** (7) Violence; dating violence; physical aggression; forced sex; stalking; substance use; health

Although research on the use of physical aggression, forced sex, and stalking victimization among dating partners has increased considerably in recent years our understanding of dating violence, especially among adolescents, is severely limited. Reviews of previous studies suggest that dating violence is an issue of significant public health importance (Glass, Fredland, Campbell, Yonas, Sharps, & Kub, 2003; Lewis & Fremouw, 2001) largely because it is surmised that dating violence is an antecedent to intimate partner violence (IPV) (Bernard & Bernard, 1983; Henton, Cate, Koval, Lloyd, & Christopher, 1983; Kelly & Loesch, 1983; Makepeace, 1981). Researchers have tended to focus on physical and/or psychological abuse while few have examined the frequency of physical aggression, forced sex, and stalking victimization among dating partners. Many questions remain unanswered regarding the experience of aggression, its patterns, and its associations. This paper reports on an analysis of women and men who were victims of physical aggression, forced sex, or stalking behaviors in a dating relationship.

Research has shown that physical aggression occurs in at least 20% of all dating relationships (Arias, Samios, & O'Leary, 1987; White & Koss, 1991) and several studies have estimated that the rates of physical aggression range from 20% - 50% (Bernard & Bernard, 1983; Burcky, Reuterman, & Kopsky, 1988; Cate, Henton, Koval, Christopher, & Lloyd, 1982; Dye & Eckhardt, 2000; Fagan & Browne, 1994; Makepeace, 1981; Matthews, 1984; Siegelman, Berry, & Wiles, 1984; White & Koss, 1991). Lifetime prevalence rates range from 22% (Harned,

2001) to 79% (Marshall & Rose, 1990) among women and from 19% (Harned, 2001) to 73% (Marshall & Rose, 1990) among men.

The most frequently reported acts of physical aggression, generally measured by the Conflict Tactics Scale (Straus, 1979), experienced by both women and men are milder forms of violence such as pushing, grabbing, and shoving (Arias et al., 1987; Bookwala, Frieze, Smith, & Ryan, 1992; Dye & Eckhardt, 2000; Siegelman et al., 1984) while severe forms of violence defined as being beaten, choked, kicked, or threatened with a knife or a gun were reported significantly less frequently (Coffey, Leitenberg, Henning, Bennett, & Jankowski, 1996; V.A. Foshee, 1996; Lejeune & Follette, 1994; Sugarman & Hotaling, 1989). Comparable findings concerning the most frequently reported acts of physical aggression in dating relationships were reported by Mahlstedt & Keeny (1993). In their study of 130 women who had experienced dating violence, the most frequent forms of physical aggression reported were pushing (67%), grabbing (52%), restraint (41%), and hitting (40%) while severe acts of aggression were experienced less frequently (Mahlstedt & Keeny, 1993). This is consistent with the findings of Coker, McKeown, Sanderson, Davis, Valois, & Huebner (2000) who reported that only 12% of the 5,414 high school students sampled, reported severe forms of dating violence.

Findings that indicate women and men resort to physical aggression in order to resolve conflicts in their dating relationships raise questions regarding the lack of gender differences in the expression of physical violence and the issue as to whether there appears to be a significant trend for mutually aggressive acts

(Arias et al., 1987; Bookwala et al., 1992; Dye & Eckhardt, 2000; Foshee, 1996; Marshall & Rose, 1990; White & Koss, 1991). Nonetheless, the consequences of physical violence victimization in terms of injuries (Coffey et al., 1996; Follingstad, Rutledge, Polek, & Hawkins, 1988; Foshee, 1996) and fear of their partners (Capaldi & Owen, 2001) are greater for women than men. Molidor & Tolman (1998) corroborate the finding that female/male perpetration does not differ in overall frequency of violence in dating relationships. However, they found that girls were significantly more likely than boys to experience severe violence and to report more severe physical and emotional reactions to the violence. Even though research has tended to focus solely on physical aggression among dating partners, experiencing severe acts of violence must also be construed to include experiencing forced sex.

Coker et al (2000) reported that forced sex is a common occurrence among high school students. Forced sex victimization rates range from 10% - 25% among young women and from 4.4% - 16% among young men (Baier, Rosenzweig, & Whipple, 1991; Bergman, 1992; Coker et al., 2000; Koss & Cook, 1998; Struckman-Johnson, 1988; Zweig, Barber, & Eccles, 1997). Harned (2001) found that females reported more sexual victimization and attempted rape than did males and males reported perpetrating more sexual violence than did females. Similarly, Foshee (1996) found that among dating partners, females (14.5%) were significantly more likely than males (6.9%) to experience some form of sexual violence by a dating partner, whereas males (4.5%) were significantly more likely than females (1.2%) to report perpetrating sexual violence against a dating

partner. In a large cross-sectional study (N=81247 high school aged boys and girls), Ackard & Neumark-Sztainer (2002) found that 1.4% of girls and 1.2% of boys had ever experienced date rape. Smith, White, & Thornton (In Press) found higher rates of sexual violence among females. They reported that 50% of female students experienced sexual violence before the end of high school and by the end of college, the number increased to 80%.

In addition, it is possible that when considered in the context of a dating situation, stalking behaviors represent severe psychological abuse. In a probability sample of two and four-year colleges with a probability sample of women within each campus selected, the rate of stalking victimization in the 7 months since the college term had started was 13.1% (Fisher, Cullen, & Turner, 2000). This rate is considerably higher than would have been projected from the Tjaden & Thoennes (1998) National Violence Against Women sample, but consistent with several convenience samples on college campus where 10 to 30% reported having been stalked enough to generate fear (Davis, Ace, & Andra, 2002; Davis, Frieze, & Maiuro, 2002). The majority of stalking victims appear to be women who are stalked by men offenders, who are significantly more likely than males to report being stalked (when fear is included in the definition), and who are more likely than men to be stalked by a dating or intimate partner (Davis, Coker, & Sanderson, 2002). Female stalking victimization has been significantly associated with physical and psychological abuse while male stalking victimization has been significantly associated with psychological abuse (Logan, Leukefeld, & Walker, 2000).

Examining the associations of physical aggression, forced sex, and stalking victimization by a dating partner and other types of interpersonal violence across the lifespan is well justified. Several studies have suggested that childhood physical abuse is significantly related to dating violence and IPV (Blackburn, 2000; Davis, Ace et al., 2002; Downs, Miller, Testa, & Panek, 1992; Follette & Alexander, 1992; Malik, Sorenson, & Aneshensel, 1997; Marshall & Rose, 1990; Siegelman et al., 1984; Wolfe, Scott, Wekerle, & Pittman, 2001) while other studies have suggested that child sexual abuse is a significant predictor of experiencing physical aggression and/or stalking victimization (Wood, 1996). Banyard and colleagues (2000) reported that child sexual abuse was significantly associated with physical aggression but yielded no correlation between child sexual abuse and forced sex by a dating partner. Contrarily, Humphrey & White (2000) using the Sexual Experiences Survey reported that girls who experience sexual assault before the age of 14 years are at a two-fold increased risk for adolescent sexual assault than non-victims and at a four-fold increased risk to suffer re-victimization in college. Blackburn (2000) found that stalking victims are more likely than non-victims to report multiple forms of child and adult physical abuse while others suggest that there is no significant relationship between childhood physical and/or sexual abuse and dating aggression (Foo & Margolin, 1995; O'Keefe, 1997). Nonetheless, those who report having a history of child maltreatment are at a substantially higher risk for experiencing dating violence and IPV than those who do not.

There are no studies, to our knowledge, that look at the longer-term health associations for women or men who have experienced physical aggression, forced sex, or stalking in a dating situation. Current health problems associated with dating violence or rape ((Ackard & Neumark-Sztainer, 2002; Coker, 2000; Silverman, Raj, Mucci, & Hathaway, 2001) partner violence have been examined in a few studies (Coker, McKeown et al., 2000; Coker, Smith, Bethea, King, & McKeown, 2000; Davis, Coker et al., 2002) however these studies did not measure the frequency of physical, sexual, and stalking victimization. The purpose of this analysis is to investigate the associations between physical aggression, forced sex, or stalking in a dating relationship and subsequent physical and mental poorer health for both men and women.

## **METHODS**

The study analyzed data from the National Violence Against Women Survey (NVAWS) conducted by Tjaden and Thoennes (1998). This random-digit-dial telephone survey of 8,000 men and 8,000 women, sampled to be representative of the United States (U.S.) population, estimated rates of sexual assaults, physical aggression, and stalking victimization among men and women. A simple random sample of working residential phone numbers was drawn. Interviewers at Schulman, Ronca, Bucuvalas, Inc. conducted the interviews from November 1995 to May 1996. Detailed questions included the nature of the victimization, respondent's relationship with the perpetrator, frequency of assaults, and respondent's age when first assaulted. The interview also included questions to characterize the demographic profile and the health status of the

respondent. The average length of the English interview was 25 minutes while the average Spanish interview length was 32 minutes.

### **Measures of Dating Violence by Type**

Using the questions included in the NVAW, we operationally defined dating violence to include physical aggression by a dating partner, sexual assaults resulting in penetration by a dating partner, and stalking by a current or former dating partner. We excluded cohabiting intimate partners in the definition of a dating partner. The NVAWS used the twelve items from the CTS (Straus & Gelles, 1990) to measure physical aggression (scale measure of internal consistency, Cronbach's alpha = 0.88); we used a cutpoint of one or greater to define physical aggression by a dating partner. Subjects were asked the following questions to assess physical aggression "After you became an adult did any adult male or female ever (1) throw something at you that could hurt you, (2) push, grab or shove you, (3) pull your hair, (4) slap or hit you, (5) kick or bite you, (6) choke or attempt to drown you, (7) hit you with some object, (8) beat you up, (9) threaten you with a gun, (10) threaten you with a knife or other weapon, (11) use a gun on you, (12) use a knife or other weapon on you". Respondents who answered yes to any of these were then asked how many persons had done these things to them and the nature of their relationship of this person(s). If any of the perpetrators were categorized as boyfriend / girlfriend or date, this experience was coded as physical aggression by a dating partner.

The NVAWS used five questions adapted from the National Women's Study (National Center for Crime Victims, 1992) to define forced sex. We

operationally defined lifetime forced sex to include forced vaginal or anal sex with penetration, forced penetration with objects, or forced oral sex. Forced sex without penetration was not included in our definition of forced sex. Respondents who answered questions indicated that forced sex had occurred were also asked what their relationship was to the perpetrator. Those that reported that a boyfriend or date was the perpetrator were defined as experiencing forced sex by a dating partner.

The NVAWS used the 20-item stalking index developed by Tjaden & Thoennes (1998) (Cronbach's alpha = 0.82). Men and women who answered yes to any of the specific stalking behaviors and reported that this behavior occurred on more than one occasion were defined as being stalked. Respondents were additionally asked their relationship to the stalker. Respondents who reported that a current or former dating partner was the stalker were defined as being stalked by a dating partner. For this analysis we did not require that the respondent report a high degree of fear of the stalker.

In summary, dating violence was then characterized as (1) physical aggression by boy/girl friend or date when the respondent was an adult, (2) lifetime forced sex (vaginal, oral, anal sex, or penetration with objects) by a dating partner, or (3) stalking (by specific behaviors on more than one occasion) by a current or former dating partner.

### **Demographics and Measures of Interpersonal Violence**

The following demographic factors about the respondent were available from the NVAW survey: age, ethnicity, current employment status, current

marital status, educational attainment, coverage for medical care costs, and family income. The NVAWS used the abbreviated 12-item Conflict Tactics Scale (Straus & Gelles, 1990) to assess physical aggression during childhood by a parent or guardian ( $\alpha = 0.81$ ); we used a cut point of greater than or equal to 2 to dichotomously define childhood physical aggression. We also used four sexual assault questions and the age at sexual assault to create a variable measuring whether the respondent was ever sexually assaulted as a child (less than age 18). Intimate partner violence (IPV) was defined as physical, sexual, psychological abuse, or stalking by an intimate partner who had lived with the respondent. We used a cutpoint of greater than 1 of 12 physical aggression questions to indicate physical IPV. Forced sex by an intimate partner was assessed using four questions adapted from the National Women's Study (National Center for Crime Victims, 1992) experiencing forced sex was defined by a yes answer to any of the four sexual assault questions. Stalking was defined using the same 20-item scale (Tjaden & Thoennes, 1998) used to measure stalking by a dating partner. We use the Power and Control scale developed by Holly Johnson (Durant, Colley Gilbert, Saltzman, & Johnson, 2000) and included in the NVAWS to define abuse of power and control as described elsewhere (Davis, Coker et al., 2002). Briefly, we used exploratory principal component factor analysis and identified 7 of 13 items of the scale that loaded on the same construct we labeled "abuse of power and control" by an intimate cohabitating partner. These items included: "frightens you", "makes you feel inadequate", "prevents you from knowing about or having access to the family income even when you ask", "prevents you from working

outside the home”, “insists on changing residence even when you don’t need or want to”, “tries to limit your contact with family or friends” and “insists on knowing who you are with at all times.

### **Health Indicators**

Several indicators of current health status were available from the NVAWS. To estimate the associated between dating violence and the health indicators, we used only questions asked of all respondents, which addressed current mental and physical health or current drug or alcohol use. Current physical health was assessed with the following question, “In general, would you say your health was... excellent, very good, good, fair, or poor?” We created a dichotomous variable measuring poor health compared with fair, good, very good, and excellent health. The prevalence of current poor health was 2.4%. Current depressive symptoms was assessed using questions contained in the SF-36 Health Survey (alpha = 0.78 for 8 item scale; range 8-32). These 8 questions were selected from the 13 items used by Beck & Beck (1972) as the short form of the Beck Depression Inventory (BDI) which is the standard sort-form screening device in the field (Shaver & Brennan, 1991) and correlates .91 with the full 21-item BDI. We used a cutpoint of >20, which is more conservative than the >16 suggested by Beck & Beck (1972), and 10.4% reported significant depressive symptoms with this definition. Alcohol and drug use was defined to include current (past month) alcohol use and use of antidepressants (3.8% users), prescription painkillers or tranquilizer (12.2% users), and illegal recreational drug use (3.4% users). Current alcohol use over the last 12 months was measured in

the NVAWS by the average days per week or month alcohol was consumed and, on days alcohol was consumed, the number of drinks per day. We used these questions to define heavy alcohol use as those using alcohol at least 3-4 times per week and drinking at least 4 drinks per day relative to those who drank less than this amount; 6.9% of men and 1.3% of women were heavy alcohol users.

### **Response Rates**

Tjaden and Thoennes (1998) report that the participation rate was 72.1% for women and 68.9% for men. We additionally excluded from analyses persons older than 65 (1,159 women and 840 men) and those who did not report their age, education, or marital status (51 women and 43 men). Thus, the total sample used in this study consisted of 6,790 women and 7,122 men.

### **Statistical Analyses**

All analyses were conducted using SAS 8.1 (Cary, NC, SAS, 2000). We chose not to weight the NVAWS data to maintain consistency with all published estimates from the NVAWS. Furthermore, as our research objective is analytical and not descriptive and we do not aim to provide nationally representative estimates for the association between dating violence, demographic correlates and health indicators, our use of unweighted data is justified, as recommended by Korn & Graubard (1999). We did, however, adjust all odds ratios (aOR) using multiple logistic regression for health insurance status, and age as a means of reducing bias associated with differing response rates by these demographic factors.

Table 1 reports the frequency of the stalking and physical aggression tactics and type of sexual assaults reported by dating violence victims. Gender differences in the dating violence rates and tactics used are reported in the table as are chi-square tests of proportions. Table 2 presents demographic correlates of dating violence by type and within gender; differences in the proportion of dating violence by type and demographic correlates are tested using the chi-squared statistic and these are adjusted for age and health insurance coverage. Table 3 presents the correlation between dating violence by type and other forms of interpersonal violence using multiple logistic regression. Finally, multiple logistic regression was used to explore the association between a range of indicators of current health status (as the dependent variable) and dating violence by type adjusting for age, health insurance coverage, and other interpersonal violence experienced as illustrated in Table 4.

## RESULTS

Among women, 8.3% reported either physical aggression by a dating partner (4.3%), a sexual assault by a date (3.2%) or being stalked by a current or former dating partner (2.8%). Among men, 2.4% reported either physical aggression by a dating partner (1.2%), a sexual assault (0.06%) or being stalked by a current or former dating partner (1.6%). Women were significantly more likely than men to report sexual assaults, physical aggression and being stalked by a dating partner. The mean ages at first experiencing dating violence by type were  $22.7 \pm 7.4$  for physical aggression,  $19.8 \pm 6.3$  for date rape and  $24.4 \pm 8.5$  for stalking by a dating partner. There were ~~as~~ no statistically significant differences in age at dating violence between the genders.

Figure 1 presents the distribution of types of dating violence and their overlap for women and men, respectively, among those who experience some type of dating violence. Few men (9.7%) or women (20.6%) experienced more than one type of dating violence. Among women experiencing dating violence, physical aggression by a dating partner was ~~are~~ the most commonly reported form of dating violence (51.5%) followed by sexual assaults (38.9%) and stalking (33.2%) ~~while~~ ~~reas~~ among men stalking was the most commonly reported form of dating violence (62.5%) followed by physical aggression (45.1%) and sexual assaults were very rare (2.2%).

Table 1 represents the specific physical aggression tactics and the stalking tactics victims reported their dating partner used. The mean number of physical aggression tactics used by a dating partner against women in the sample was 3.60 (2.64 standard deviation) with a range of 1-12 and for men this mean was 4.20 (2.72 standard deviation) with a range of 1-11. The ~~sre~~ differences were not statistically significant. Men were more likely than women to report that ~~nt~~ their dating partner threw objects, kicked or bite them, hit them with objects, and threatened them with a knife or other object. Women were more likely than men to report that ~~tr~~ their dating partner choked or tried to drown them. Among the 219 women who reported forced sex by a dating partner, 89.5% reported vaginal forced sex, 30.1% forced oral sex, 11.4% forced anal sex, and 20.5% reported penetration with objects. Among those who reported forced sex with penetration (definition of sexual assault), 24.7% also reported incidents of forced sex without penetration.

Women stalked by a date reported more stalking tactics used (3.55 mean  $\pm$  2.21 standard deviation; 1-9 range) than did men (2.79 mean  $\pm$  1.94 standard deviation; 1-7 range). Additionally women who were stalked were significantly

more likely to report high levels of fear associated with being stalked (41.1%) than were men who were also stalked by a date (2.7%).

Because there was little overlap in the types of dating violence reported by men and women, we evaluated demographic correlates of each type of dating violence (physical aggression and stalking) separately for men and women.

Because so few men reported sexual assaults by a dating partner, we present demographic correlates of this type of dating violence for women only.

Demographic characteristics are those of the respondents at the time of the interview and not necessarily at the time of the assault. The mean years since the dating violence was 10 years. In Table 2, the number of individuals in the demographic strata is presented separately for women and men. The rate of dating violence by type is also presented for women and separately for men. If significant differences in demographic correlates for the given type of dating violence are observed, these are noted on the table by the level of statistical significance. Younger age was strongly associated with reporting all types of dating violence for women and men. When adjusting for age and health insurance coverage, currently divorced or separated and single women and men were significantly more likely than married individuals to report all types of dating violence. Race was not associated with any type of dating violence for women; non-white men were twice as likely as white men to report physical aggression by a dating partner. Women with some college education or a college degree were more likely to report force sex, being stalked by a date, and physical aggression while a college education was associated with stalking by a date for men. After adjusting for age and health insurance coverage, income was not consistently associated with dating violence experience for men or women. However, women and men with government medical care coverage (e.g. Medicare, Medicaid, MediCal, and military, veteran, or social services payments) were more likely to

report physical aggression. Men with no medical care coverage were also more likely to report physical aggression by a date. Lastly, women who were currently employed were more likely to report physical aggression, stalking and forced sex by a dating partner.

Table 3 presents the correlation between other forms of interpersonal violence in childhood, with intimate adult partners (cohabitating or marital partners), and dating violence victimization by type and within gender. For each type of dating violence, the proportion experiencing dating violence by type is presented among those who have and have not experienced the interpersonal violence category of interest. The OR adjusted for age and health insurance coverage for the association and the 95% confidence interval (CI) are also presented. For both women and men, childhood physical aggression by a parent or guardian was associated with all type of dating violence. The majority of men reporting dating violence of any type had experienced childhood physical aggression (60.3%) as had 37.7% of women similarly victimized. Increasing numbers of tactics used by the parent or guardian were associated with subsequent dating violence risk in a dose-dependent manner for men and women; the adjusted ORs and 95% CI for subsequent dating violence and reporting one childhood physical aggression tactic were 1.5 (1.2, 1.8), for those reporting two tactics, 2.2 (1.8, 2.8), for those reporting 3-4 tactics, 2.3 (1.8, 2.9), and 3.1 (2.4, 4.0) for those reporting 5 or more tactics (data not shown in Table 3). Additionally, these associations did not differ by the severity of the aggression. To illustrate, the following aORs and 95% CIs were calculated for dating violence and tactics arranged in increasing severity: having a parent “throw something at you that could hurt you” (aOR = 2.3; 95% CI = 1.8, 2.8), “push, grab, or shove you” (aOR=2.0; 95% CI = 1.7, 2.3), “beat you up” (aOR = 2.0, 95% CI 1.7, 2.5) and “threatened you with a weapon” (aOR=2.0; 95% CI = 1.2, 2.9). Childhood forced

sex was associated with physical aggression by a dating partner for women and stalking by a dating partner for men. The majority of dating violence among women (94.0%) and men (97.8%), however, occurs among those who have not experienced forced sex as children.

Physical aggression by a dating partner was not consistently associated with IPV by type for women or men with the exception that physical aggression by a date was associated with abuse of power and control by an intimate partner for men and women. Being stalked by a date was associated with all types of IPV for women and men. Similarly forced sex by a dating partner was associated with all types of IPV for women.

Table 4 presents the association between dating violence by type and current health status. The prevalence of the health indicator is presented by gender and adjusted OR and 95% CIs, adjusted for age, health insurance coverage, and other interpersonal violence, were presented for the association between dating violence by type and the health indicator. Dating violence was not associated with the respondent's current perception of their physical health. However, among women, physical aggression by a dating partner was associated with current depressive symptoms (aOR=1.5, 95% CI = 1.1, 2.0), current antidepressant use (aOR=1.7, 95% CI = 1.1, 2.6), current tranquilizer or pain killer use (aOR=1.4, 95% CI = 1.1, 1.9) and with current recreational drug use (aOR=2.3, 95% CI = 1.3, 3.7). Stalking by a dating partner was also associated with recreational drug use (aOR=2.2; 95% CI= 1.2, 4.1) among women. Dating violence victimization for men was not associated with any current health indicator or substance use.

Because the dating violence experience may have occurred many years in the past (range from current experience to 45 years ago; mean = 10.6; standard deviation = 9.2 years) we explored whether time since last dating violence was

associated with the health indicators (Table 5). We grouped dating violence by type of experience (stalking, aggression, or force sex) and time since the last event ( $\leq 5$  years and 5 or more years with those never experiencing dating violence as the unexposed group). We restricted this analysis to women only because we lacked sufficient power for parallel analyses among men. More recent (last 5 years) stalking by a dating partner was associated with current depression and current antidepressant medication use while physical aggression of more than 5 years ago was associated with current depression and antidepressant usage. Similarly less recent physical aggression was associated with current pain medication use. More recent physical aggression, forced sex, and stalking were all associated with current recreational drug use while less recent dating violence was not consistently associated with dating violence. A similar pattern was observed for recent dating violence by type and current heavy alcohol usage among women. Among men, less recent physical aggression (aOR = 2.4, 95% CI = 0.9, 6.8) and stalking (aOR = 2.7, 95% CI = 1.2, 6.9) were more strongly associated with recreation drug use.

## **DISCUSSION**

The aims of this paper were to report on the frequency, patterns, and associations of dating violence experienced by type for women and men in a population based sample. The results of our analyses [of the NVAWS](#) add to the existing literature regarding physical aggression, forced sex, and stalking victimization by dating partners and our results indicate that women who experience dating violence, are more likely than men to report experiencing physical aggression, sexual assaults, and stalking behaviors. These results are consistent with studies (Baier et al., 1991; Bjerregaard, 2001; Blackburn, 2000; Coker, McKeown et al., 2000; Davis, Coker et al., 2002; Foshee, 1996; Harned, 2001; Logan et al., 2000; Makepeace, 1986; Marshall & Rose, 1990; N. K.

O'Keefe, Brockopp, & Chew, 1986; Smith et al., In Press; Tontodonato & Crew, 1992; White & Koss, 1991; Zweig et al., 1997) the majority of which were not [were not population based samples.](#)

The lifetime prevalence of dating violence (8.3% among women and 2.4% among men) reported for this study falls at the lower end of the range of prevalence estimated recently provided in systematic reviews (Glass et al., 2003; Lewis & Fremouw, 2001); the range is from 9% (Roscoe & Callahan, 1985) to 79% (Marshall & Rose, 1990) with approximately 20% being the more frequently reported lifetime prevalence estimate. Several factors may explain the lower rates of dating violence observed in this study. First, this population-based sample was obtained through random-digit dial and includes an older and probably more affluent sample when compared with high school based samples. The NVAWS asks about acts of physical aggression by an adult. Aggression by a dating partner who was not an adult would be excluded in these dating violence estimates. When asking about dating violence among younger populations, subjects have less time over which to recall their experiences, thus for the NVAWS the lower prevalence may be a function of forgetting or perhaps discounting violence. Jackson, Cram & Seymour (2000) found that although high school aged boys and girls reported similar rates of dating violence victimization, boys were significantly more likely than girls to report not being bothered by the aggression. Men may be less likely to recall dating violence over time if the violence had little impact on them. Unfortunately data were not available from the NVAWS to characterize the directionality or intent of physical aggression by dating violence by men and women. Finally, interviewee fatigue may have also been a factor in the lower prevalence estimates. If a respondent reports acts of physical aggression by an adult, a set of questions are asked about each person who was physically aggressive toward the respondent. Respondents with multiple violence

experiences may neglect to report all incidents given the time required to report. If true, earlier experiences in adulthood would most likely be excluded and these might disproportionately be dating violence experiences.

We found little overlap in the types of dating violence experienced by both women and men. Recall that this is one of the few studies to explore stalking by a dating partner and to explore patterns of dating violence by type. While we did find that some demographic factors (i.e. age and marital status for women and men and current employment for women) were correlated with all types of dating violence, there were some differences in demographic correlates of dating violence by type and by gender. Non-white race was associated with physical aggression by a date yet not with being stalked and only among men. Being currently insured by a government program of health insurance was significantly associated with only physical aggression by a date for women and men. Recall that these correlations are adjusted. These differences in correlates of dating violence by type suggest the need to continue to characterize the range of dating violence experience. Our not finding significant overlap in physical and forced sex forms of dating violence is somewhat inconsistent with past studies (Ackard & Neumark-Sztainer, 2002; Coker, McKeown et al., 2000; Jackson et al., 2000) perhaps due to the reasons cited above for the lower prevalence of dating violence reporting the NVAWS.

For both women and men, dating violence victimization by type was clearly associated with a history of childhood physical aggression, childhood sexual abuse, and with partner violence. Childhood physical abuse has been associated with all types of dating violence (Blackburn, 2000; Downs et al., 1992; Marshall & Rose, 1990; Siegelman et al., 1984; Wolfe et al., 2001) while childhood forced sex has been associated with experiencing physical aggression and stalking victimization only (Banyard et al., 2000; Blackburn, 2000). Davis et

al (2002), [drawing on this same data set, also](#) found that for both women and men, stalking victimization was clearly associated with a history of childhood physical aggression and sexual abuse. Our findings suggest that the impact of childhood physical assaults by a parent or guardian on subsequent risk of dating violence victimization may have significant public health importance. Almost one third of men and one quarter of women (Table 3) reported at least one physically aggressive behavior by a parent or guardian during their childhood. If we assume that childhood physical aggression is etiologically linked to dating violence and calculate the population attributable risk for childhood physical aggression and dating violence, we find that 41.3% of dating violence victimization can be attributable to childhood physical aggression by a parent for men as can 19.6% of dating violence victimization among women. We found that the number of childhood physical aggressive tactics used by parents were associated with a significantly increased risk of dating violence victimization for both men and women (chi-square for continuous variable = 92.24,  $p < 0.0001$ ). Interestingly, the less severe forms of physical aggressive tactics used were as strongly associated with subsequent dating violence as the more severe forms for both men and women. Parental marital violence may also explain this link between childhood physical aggression and dating violence since adults who use violence against a partner frequently use violence against children. McCloskey & Lichter (2003) report from a longitudinal cohort study that children exposed to parental partner violence were significantly more likely to report aggression toward adolescent peers and dating partners. These findings have public health importance because corporal punishment is still a relatively common practice and we find that relatively minor aggression which may not be viewed as child abuse are strongly associated with risk of subsequent dating violence victimization for men and women. These findings are consistent with those of Straus & Kantor (1994) who

found that children experiencing corporal punishment were at increased risk of developing a range of negative mental health outcomes as adults and of partner violence and physical abuse of children. Similarly, DuRant, Cadenhead, Pendergrast, Slavens, & Linder, (1994) found that corporal punishment was associated with adolescents' self-reported use of violence.

Previous research suggests that adolescent dating violence is similar to IPV in terms of severity and frequency (Guite, 2001; Makepeace, 1981) and appears to surpass that of married couples. Others interpret this to mean that there is an overall reduction in physical aggression between partners as they grow older and attempt to resolve their conflicts [by more constructive means](#) (Billingham, Bland, & Leary, 1999; McLaughlin, Leonard, & Senchak, 1992). All forms of dating violence were associated with abuse of power and control by subsequent intimate partners for both women and men. Stalking by a dating partner for both men and women and sexual assaults by a date among women were associated with physical, assaults, sexual assaults, and stalking by an intimate partner.

Dating violence victimization was associated with adverse mental health outcomes for women in the NVAWS. Consistent with other research reviewed by Glass, Fredland, Campbell, Yonas, Sharps & Kub (2003), dating violence was associated with deleterious health effects and with subsequent development of substance abuse. Coker et al (2000) reported that female adolescent dating violence victims were significantly more likely than males to report negative mental health outcomes while male adolescents who perpetrate dating violence were at greater risk of adverse health outcomes and poorer life satisfaction (Coker, McKeown et al., 2000). Underreporting of dating violence is a clear possibility in this study given the time since last experiencing dating violence (average of 10 years) and this bias may explain our relatively lower rates of dating violence. Gender differences in willingness to report aggression, stalking or

forced sex by a date, over the telephone, may also impact underreporting of dating violence and may explain our seeing no association between dating violence and mental health or substance use for men. Because the NVAWS is exclusively victimization survey, we do not know whether some men or women who report victimization may also be perpetrators. Further, physical aggression, as measured using an abbreviated form of the Conflict Tactics Scale (CTS), does not provide the context needed to assess the intent or directionality of physical assaults. Past research (Coker, McKeown et al., 2000; Foshee, Linder, MacDougall, & Bangdiwala, 2001; Gray & Foshee, 1997) suggests that mutual dating violence is relatively common although the health impact may not be similar by gender.

Several additional limitations also deserve mention. We were not able to ~~establish~~recognize the causality ~~of~~ for the observed links between dating violence, future IPV, and health outcomes in this cross-sectional study. Anonymous survey data regarding perceived health status and current drug and alcohol use may be misclassified. Dating violence may have shorter term mental and physical consequences for both men and women yet given the time since first experiencing dating violence in this study and the fact that we only have data on current health status, we may not be able to observe these associations. Finally, we have limited statistical power to detect difference in health and substance use risks by the specific dating violence type particularly for men.

This is the first large population-based study to provide estimates of dating violence victimization among women and men. Additionally, this is the first study to investigate the association between physical aggression, forced sex, and stalking victimization by a dating partner, interpersonal violence across the lifespan, and long-term mental health effects for both women and men. Our data clearly show that dating violence victimization is a significant issue and deserves further scrutiny. We have shown here that physical aggression and stalking by a

dating partner may have an impact that is quite enduring for women. In contrast with past analyses of the negative effects of dating violence (Coker, McKeown et al., 2000), we were able to control for the potential impact of demographic factors and other interpersonal violence on the association between dating violence and health outcomes.

## IMPLICATIONS

This analysis of dating violence by type demonstrates need to include both forced sex and stalking to the range of aggressive behaviors some dating partners use to control their partners. Developing and validating a dating violence screening tool that includes physical aggression, forced sex, stalking, and psychological abuse could be an important advancement for the field. Parents, teachers, counselors, and health care providers could use this screening tool to identify young adolescents or adults who may be experiencing dating violence and help identified individuals receive needed support and services to counter act this violence.

Our finding that childhood physical aggression by a parent or guardian was associated with a two to three fold increased risk of subsequently being a victim of all three types of dating violence studies for both men and women deserves and has received some action. Violence toward children, even in the context of discipline, may increase risk of children becoming a victim or perhaps a perpetrator of violence (Straus & Kantor, 1994; Straus & Mouradian, 1998; Straus & Stewart, 1999; Straus, Sugarman, & Giles-Sims, 1997). Stein & Perrin (1998), for the American Academy of Pediatrics, provide advice to parents on alternatives to corporal punishment when discipline is needed and they warn of the potentially deleterious side effects of corporal punishment. Other health care providers have called for efforts to end violence, including corporal punishment, within families (Wissow & Roter, 1994) and in schools (Anonymous, 1992). Yet

most family physicians (70%) and pediatricians (59%) support the use of corporal punishment (McCormick, 1992) and the prevalence of corporal punishment remains high (Straus & Stewart, 1999). More must be done to educate parents, health care providers, teachers, and the criminal justice community in alternatives to corporal punishment for effective discipline as a primary prevention intervention to reduce interpersonal violence including dating and partner violence.

For victims, seeking help from family, friends, school counselors, local service providers, and local law enforcement officials are all important options. Developing a personal safety plan is also a practical and empowering step. This plan includes a safe place to go, if needed, and alternative locations for copies of keys, money, credit cards, clothes, and important papers. If a date becomes a stalker, a key message for victims is seek help. Despite victims' hopes, stalkers rarely stop this behavior on their own. Victims need to document the stalking behaviors with, for example, logs or tapes of calls or emails, pictures of the stalking outside of school, home, or work, and police documentation of injury and property damage.

For the criminal justice community, there is a clear need for comprehensive training on the credibility of dating violence reports from women and men, and the respective safety needs of dating violence victims. Data from the NVAWS indicate that stalking victims believe that informal warnings by police are effective (Tjaden & Thoennes, 1998). Coordination of efforts by police, lawyers and judges, to assist victims and effectively rehabilitate perpetrators is needed.

For researchers, future analyses are need to examine dating violence victimization and perpetration by type to include physical aggression, forced sex, psychological abuse, and stalking behaviors. Ideally, research should be

population-based, longitudinal in nature, and include information on important confounding factors. Additional research is needed to explore short and longer-term health effects of dating violence by type.

For society as a whole and individuals specifically, we are responsible for how we care for one another. Caring includes how we discipline our children, treat our spouses, neighbors, coworkers, and how we respond to victims and perpetrators of violence. Both need non-judgmental emphatic support. This does not mean that perpetrators should not be held accountable for their actions but that compassion is important toward behavior change. The important work of McCloskey & Lichter (2003) support this assertion. In a longitudinal study of children exposed to partner more empathic youths were significantly less likely to engage in dating and peer aggression. The authors suggest that interventions should emphasize “empathy building” to reduce future violence among those at high risk of dating and partner violence (McCloskey & Lichter, 2003).

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Table 1. Dating Violence Tactics Used Among Women and Men reporting Physical Aggression, Stalking, or Forced Sex by a Dating Partner

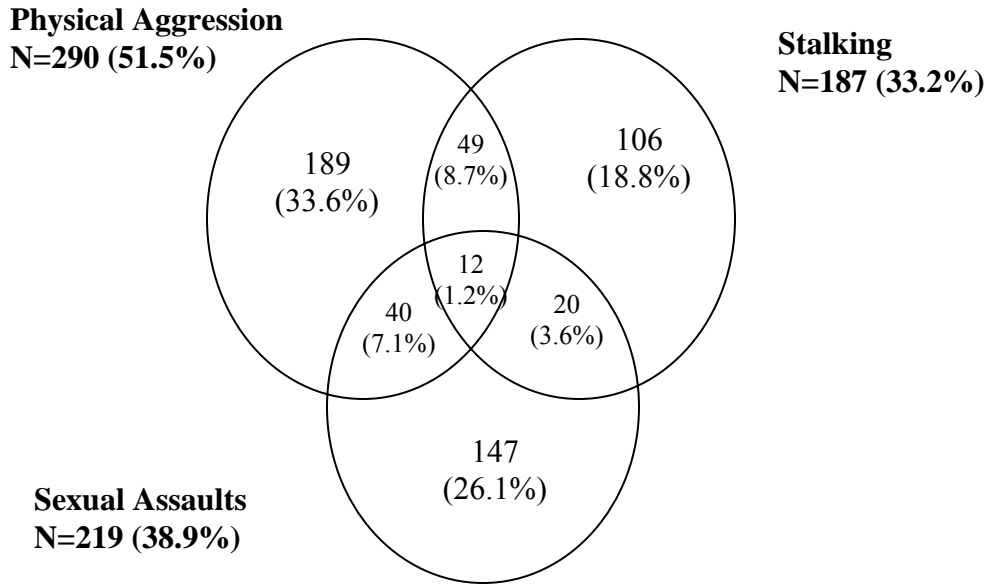
<b>Among those reporting physical aggression by a dating partner</b>	<b>Women (N=290)</b>		<b>Men (N=83)</b>	
<b>Specific Conflict Tactic</b>	<b>#</b>	<b>%</b>	<b>#</b>	<b>%</b>
Dating partner threw objects at respondent ( R )	93	32.1% *	38	45.8%
Dating partner pushed, grabbed, or shoved R	223	76.9%	66	79.5%
Dating partner pulled R's hair	108	37.2%	23	27.7%
Dating Partner slapped or hit R	215	74.1%	61	73.5%
Dating partner kicked or bite R	58	20.0%**	37	44.6%
Dating partner choked or tried to drown R	59	20.3%*	9	10.8%
Dating partner hit R with object	61	21.0%**	36	43.4%
Dating partner beat up R	94	32.4%*	17	20.5%
Dating partner threatened R with gun	48	16.6%	17	20.5%
Dating partner threatened R with other weapon	45	15.5%**	26	31.3%
Dating partner used a gun	13	4.5%	6	7.2%
Dating partner used other weapon	27	9.3%	13	15.7%
<b>Type of sexual assault by a dating partner among those experiencing forced sex by a dating partner</b>	<b>Women (N=219)</b>		<b>Men (N=4)</b>	
Vaginal penetration	195	89.0%	0	0.0%
Oral	66	30.1%	2	50.0%
Anal	24	11.0%	1	25.0%
With objects (vaginal, oral, anal penetration)	45	20.5%	2	50.0%

Table 1. Dating Violence Tactics Used Among Women and Men reporting

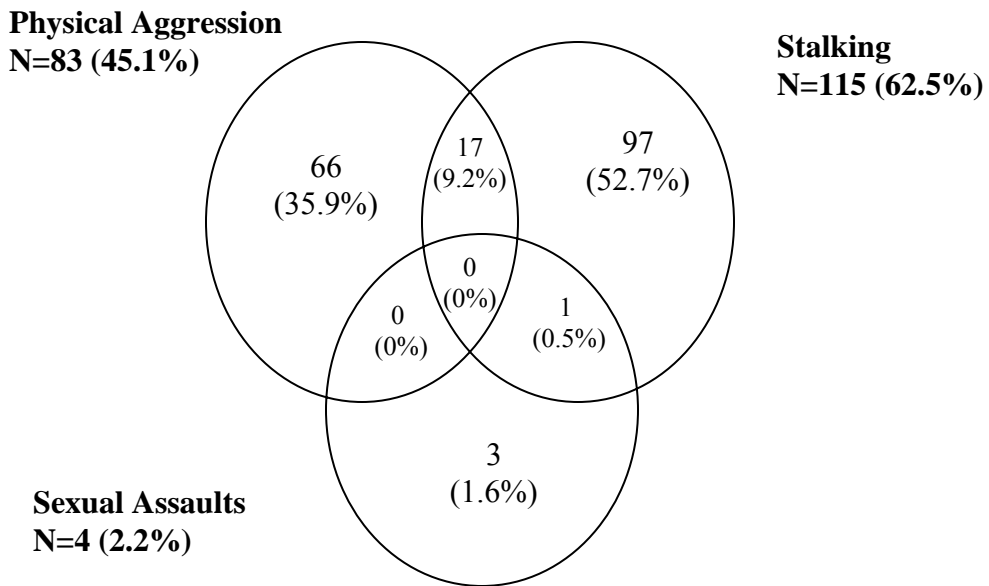
Physical Aggression, Stalking, or Forced Sex by a Dating Partner (continued)

<b>Among those stalked by a dating partner</b>	Women (N=187)		Men (N=115)	
<b>Specific stalking tactics</b>	#	%	#	%
Followed R	142	76.0%**	69	60.0%
Spied on R	101	54.0%**	41	35.7%
Stood outside R's home, school, or workplace	114	61.0%*	54	47.0%
Sent R unsolicited letters or other written correspondence	62	33.2%	34	29.6%
Left unwanted items for R to find	39	20.9%	24	20.9%
Made unsolicited phone calls to R	121	64.7%	75	65.2%
Showed up at places R was even though he/she had no business being there	2	1.1%	1	0.9%
Vandalized R's property	42	22.5%	21	18.3%
Threaten R's pets	9	4.8%	1	0.9%
Killed R's pets	4	2.1%	0	0.0%
Threatened R or someone close to R	15	8.0%**	0	0.0%
Verbal abused R	1	0.5%	1	0.9%
Other type of stalking	10	5.4%*	0	0.0%
<b>Level of fear associated with stalking (among those who were stalked by a dating partner)</b>				
Very afraid	76	41.1%**	3	2.7%
Somewhat afraid	75	40.5% <sup>8</sup>	34	30.0%
Not afraid	36	18.4%	78	67.3%

**Figure 1. Types of Dating Violence experienced**



**among 563 women experiencing some type of violence**



**among 184 men experiencing some type of violence**

**Table 2. Demographic characteristics of men and women experiencing dating violence by type (NVAWS)**

Characteristic Strata	Among Women (N=6790)				Among Men (N=7122)		
	# in strata	% Aggression † N=290	% Stalked N=187	% Forced Sex N=219	# in strata	% Aggression † N=83	% Stalked N=115
<b>Age</b>	<b>N</b>				<b>N</b>		
18-25	943	6.5% **	5.1% **	4.4% **	1046	3.0% **	3.4% **
26-35	1756	6.0%**	3.9%**	3.9% **	1846	1.7% *	2.3% **
36-45	1868	5.0%**	2.3%**	3.4% **	2033	0.5% **	1.0%
46-55	1388	1.7%	1.8%*	2.6% *	1392	0.5%	0.7%
56-65 (REF)	835	0.8%	0.5%	1.3%	805	0.4%	0.8%
<b>Current Marital Status</b>							
Divorced/Separated	954	5.8% **	5.0% **	5.5% **	762	1.2% *	3.2% **
Widowed	221	1.4%	1.4%	2.3%	521	0.0%	0.0%
Single	1175	8.3% **	5.1% **	4.2%	1636	3.1% **	3.3% **
Married (REF)	4440	3.0%	1.7%	2.5%	4672	0.5%	0.8%

**Table 2. Demographic characteristics of men and women experiencing dating violence by type (NVAWS) (continued)**

Characteristic Strata	Among Women (N=6790)				Among Men (N=7122)		
	# in strata	% Aggression† N=290	% Stalked N=187	% Forced Sex N=219	# in strata	% Aggression† N=83	% Stalked N=115
<b>Race</b>							
White (REF)	5181	4.2%	2.9 %	3.3%	5491	0.9%	1.5%
Non-White	1609	4.6%	2.4%	3.1%	1631	2.2% *	2.2%
<b>Educational Attainment at interview</b>							
< High School (REF)	613	3.4%	2.0%	1.8%	637	1.7%	0.9%
High School Grad.	2299	3.0%	1.7%	2.7%	2209	1.3%	1.5%
Some College	2053	5.5% *	3.3%	3.9% *	1942	1.5%	2.4% *
College Graduate	1825	4.9%	3.7% *	3.7% *	2334	0.6%	1.2%
<b>Currently Employed</b>							
Yes	4868	4.8% **	3.1% *	3.6% *	6163	1.2%	1.7%
No	1922	2.9%	1.8%	2.3%	959	1.2%	1.0%

Table 2. Demographic characteristics of men and women experiencing dating violence by type (NVAWS) (continued)

Characteristic Strata	Among Women (N=6790)				Among Men (N=7122)		
	# in strata	% Aggression† N=290	% Stalked N=187	% Forced Sex N=219	# in strata	% Aggression† N=83	% Stalked N=115
<b>Household Income at interview</b>							
<\$20,000	1341	5.3%	3.0%	3.8%	881	1.7%	1.6%
\$20,000-\$35,000	1147	4.1%	3.4%	4.3%	1237	1.1%	2.2%
\$35,000-\$50,000	1134	4.2% *	3.2%	3.5%	1262	1.0%	1.4%
\$50,000-\$80,000	997	4.1%	2.6%	2.8%	1388	1.0%	1.8%
>\$80,000 (REF)	544	4.6%	3.7%	3.5%	864	0.8%	0.8%
Refused	1627	3.6%	1.6%	2.0%	1490	1.4%	1.7%
<b>Health Insurance</b>							
No insurance	1065	4.4%	2.7%	3.2%	1021	2.1% *	1.7%
Government	613	6.4% *	3.4%	3.3%	620	2.1% *	2.1%
Private (REF)	5052	4.0%	2.7%	3.2%	5382	0.9%	1.6%
Don't Know / Refused	60	1.7%	3.3%	0.0%	99	1.0%	0.0%

Legend for Table 2

Note. Correlate of increased dating violence risk adjusted for age and current health insurance coverage.

REF = Referent group

† Physical Aggression (based on 12-item Conflict Tactic Scale)

\*\* p value <0.01; \* p value 0.01-0.05; ‡ p=0.06

**Table 3. Dating Violence Experience by type and other types of interpersonal violence across the lifespan among women and men**

		Among Women (N=6790)						Among Men (N=7122)				
		Aggression †		Stalking		Forced Sex		Aggression †		Stalking		
Interpersonal Violence	# in strata	%	Adjusted OR* (95% CI)	%	Adjusted OR* (95% CI)	% (N)	Adjusted OR* (95% CI)	# in strata	%	Adjusted OR* (95% CI)	% (N)	Adjusted OR* (95% CI)
<b>Childhood Physical Aggression</b>												
Yes	1656	6.6%	1.9 (1.5, 2.4)	4.3%	1.9 (1.4, 2.5)	5.4%	2.1 (1.6, 2.8)	2488	1.9%	2.4 (1.5, 3.7)	3.1%	3.8 (2.5, 5.5)
No	5133	3.5%	1.0 REF	2.3%	1.0 REF	2.5%	1.0 REF	4634	0.8%	1.0 REF	0.8%	1.0 REF
<b>Forced Sex during Childhood</b>												
Yes	302	7.3%	1.8 (1.1, 2.8)	3.6%	1.3 (0.7, 2.5)	3.0%	0.9 (0.5, 1.8)	42	2.4%	1.6 (0.3, 12.0)	7.1%	4.3 (1.3, 14.4)
No	6488	4.3%		2.7%	1.0 REF	3.2%	1.0 REF	7080	1.2%	1.0 REF	1.6%	1.0 REF
<b>Violence by an Intimate Partner by type of violence</b>												
<b>Physical Aggression</b>												
Yes	1177	3.6%	0.9 (0.6, 1.2)	3.7%	1.6 (1.1, 2.3)	6.0%	2.5 (1.9, 3.4)	438	1.6%	1.4 (0.6, 3.1)	3.4%	2.6 (1.4, 4.3)
No	5613	4.4%	1.0 REF	2.7%	1.0 REF	2.6%	1.0 REF	6684	1.1%	1.0 REF	1.5%	1.0 REF
<b>Sexual Assaults</b>												
Yes	295	5.1%	1.3 (0.8, 2.2)	6.8%	3.1 (1.9, 5.0)	6.1%	2.2 (1.3, 3.6)	11	9.1%	5.9 (0.7, 50.0)	18.2%	12.3 (2.5, 59.3)
No	6495	4.2%	1.0 REF	2.6%	1.0 REF	3.1%	1.0 REF	7111	1.2%	1.0 REF	1.6%	1.0 REF

**Table 3. Dating Violence Experience by type and other types of interpersonal violence across the lifespan among women and men (NVAWS) continued**

		Among Women (N=6790)						Among Men (N=7122)					
		Physical Aggression		Stalking		Forced Sex		Physical Aggression		Stalking			
Interpersonal Violence	# in strata	%	Adjusted OR * (95% CI)	%	Adjusted OR * (95% CI)	% (N)	Adjusted OR * (95% CI)	# in strata	%	Adjusted OR * (95% CI)	% (N)	Adjusted OR * (95% CI)	
<b>Abuse of Power and Control by an Intimate Partner</b>													
Yes	1271	5.5%	1.6 (1.2, 2.1)	4.7%	2.5 (1.8, 3.4)	6.8%	3.3 (2.5, 4.4)	663	2.0%	1.8 (1.1, 3.4)	3.9%	3.3 (2.1, 5.2)	
No	5519	4.0%	1.0 REF	2.3%	1.0 REF	2.4%	1.0 REF	6459	1.1%	1.0 REF	1.4%	1.0 REF	
<b>Stalking by an intimate partner</b>													
Yes	388	3.9%	0.9 (0.5, 1.5)	5.4%	2.2 (1.4, 3.5)	6.7%	2.3 (1.5, 3.6)	81	0.0%	NE	8.6%	6.7 (3.0, 15.1)	
No	6402	4.3%	1.0 REF	2.6%	1.0 REF	3.0%	1.0 REF	7041	1.2%	1.0 REF	1.5%		

**Legend for Table 3**

REF = Referent group

† Physical Aggression (based on 12-item Conflict Tactic Scale)

NE = Not estimatable

\* OR Adjusted for age as a continuous variable and current health insurance coverage

Table 4. **Dating Violence by type and Current Perceived Health Status and Substance Use among women and men ages 18-65 (NVAWS)**

Health Indicator	Among Women (N=6790)				Among Men (N=7122)		
	Adjusted* Odds Ratio (& 95% CI)						
	Dating Violence & Health Indicator						
	Prevalence of Health Indicator	Dating Violence by type			Prevalence of Health Indicator	Dating Violence by type	
	Aggression† (N=290)	Stalking (N=187)	Forced Sex (N=218)		Aggression† (N=83)	Stalking (N=115)	
Current poor health	2.7%	1.0 (0.5, 2.3)	1.3 (0.6, 3.1)	1.0 (0.4, 2.4)	2.2%	0.7 (0.1, 4.9)	1.1 (0.3, 4.6)
Current depression	13.4%	1.5 (1.1, 2.0)	1.2 (0.8, 1.7)	1.2 (0.9, 1.8)	7.5%	0.9 (0.4, 1.9)	1.0 (0.5, 1.8)
<b>Current drug or alcohol use by type</b>							
Antidepressants	5.4%	1.7 (1.1, 2.6)	1.5 (0.8, 2.5)	1.4 (0.8, 2.4)	2.3%	NE	NE
Tranquilizer/Pain Med.	11.2%	1.4 (1.1, 1.9)	0.9 (0.6, 1.4)	1.2 (0.9, 1.8)	8.2%	1.0 (0.5, 2.0)	1.3 (0.8, 2.3)
Recreational drugs	2.1%	2.3 (1.3, 3.7)	2.2 (1.2, 4.1)	1.4 (0.7, 2.8)	4.8%	1.3 (0.6, 2.6)	1.2 (0.7, 2.3)
Heavy alcohol use	1.3%	1.8 (0.8, 3.6)	1.8 (0.8, 4.3)	1.0 (0.4, 2.8)	6.9%	1.2 (0.6, 2.5)	1.4 (0.8, 2.4)

**Legend for Table 4**

\* OR adjusted for age, health insurance coverage, and interpersonal violence experienced as a child or by an intimate partner

† Physical Aggression (based on 12-item Conflict Tactic Scale)

NE = Not estimable

Table 5. **Dating Violence by type and recency of last experience and Current Perceived Health Status and Substance Use among women ages 18-65 (NVAWS)**

Health Outcome	Adjusted Odds Ratio* (95% CI): Dating Violence by type and recency**					
	Physical aggression by a date		Forced Sex by a date		Stalking by a date	
	Last experience	Last experience	Last experience	Last experience	Last experience	Last experience
	1-5 years ago	>5 years ago	1-5 years ago	>5 years ago	1-5 years ago	>5 years ago
	N=97	N=193	N=39	N=179	N=88	N=99
Current poor health	0.5 (0.1, 3.9)	1.4 (0.6, 3.2)	1.6 (0.2, 12.4)	1.0 (0.4, 2.6)	1.0 (0.2, 4.4)	1.8 (0.7, 5.2)
Current depression	1.3 (0.8, 2.2)	<b>1.7 (1.2, 2.4)</b>	<b>2.1 (1.0, 4.7)</b>	1.2 (0.8, 1.7)	1.6 (0.9, 2.7)	1.0 (0.5, 1.8)
Current antidepressant use	0.9 (0.3, 2.6)	<b>2.1 (1.3, 3.5)</b>	2.0 (0.6, 6.5)	1.5 (0.9, 2.5)	<b>2.1 (1.0, 4.4)</b>	1.3 (0.6, 2.8)
Current pain medication	1.2 (0.7, 2.2)	<b>1.5 (1.1, 2.2)</b>	1.9 (0.8, 4.2)	1.2 (0.8, 1.8)	1.3 (0.7, 2.3)	0.8 (0.4, 1.4)
Current Recreational drug use	<b>2.1 (1.0, 4.4)</b>	<b>2.6 (1.4, 5.0)</b>	2.4 (0.8, 7.0)	1.1 (0.4, 2.7)	<b>3.0 (1.5, 6.1)</b>	1.4 (0.4, 4.4)
Heavy alcohol use	2.2 (0.8, 6.2)	1.6 (0.6, 4.4)	2.5 (0.6, 10.8)	0.7 (0.2, 2.7)	2.3 (0.8, 6.7)	1.5 (0.4, 6.1)

\* OR adjusted for age, health insurance coverage, and interpersonal violence experienced as a child or by an intimate partner

\*\* = timing of last dating violence; 1-5 years, >5 years, comparison unexposed group are those never experiencing dating violence

† Physical Aggression (based on 12-item Conflict Tactic Scale)