NAVAL HEALTH RESEARCH CENTER

PREMILITARY INTIMATE PARTNER CONFLICT RESOLUTION IN A U.S. NAVY BASIC TRAINEE SAMPLE

L. L. Merrill
L. K. Hervig
J. S. Milner
C. E. Newell

Report No. 96-6

NAVAL HEALTH RESEARCH CENTER
P. O. BOX 85122
SAN DIEGO, CALIFORNIA 92186 – 5122

NAVAL MEDICAL RESEARCH AND DEVELOPMENT COMMAND
BETHESDA, MARYLAND

Premilitary Intimate Partner Conflict Resolution in a U.S. Navy Basic Trainee Sample

Lex L. Merrill[1]

Linda K. Hervig[1]

Joel S. Milner[2]

Carol E. Newell[1]

[1]Naval Health Research Center
P. O. Box 85122
San Diego, California 92186-5122

[2]Department of Psychology
Northern Illinois University
DeKalb, IL 60115-2892

Report No. 96-6, supported by the Bureau of Naval Personnel, Department of the Navy, under work unit PERS Reimbursable - 6309. The views expressed in this article are those of the authors and do not reflect the official policy or position of the Department of the Navy, Department of Defense, or the U.S. Government.

The authors acknowledge the contributions of the many people who aided in the completion of this study, especially the project sponsor, Dr. Sandra Rosswork, whose support made the study possible. Additional acknowledgements to Dr. Steven Thornton for project coordination, and the corpsmen and psychologists at RTC, Orlando, Florida, who did a superb job of collecting data. Finally, the authors extend their sincere gratitude to Naval Health Research Center personnel, LCDR Steven Linnville, MSC, USN, Ms. Lorene Irwin, HM2 Brian Appleton, HM3 Venus Valencia, HM3 Leslie Smith, Ms. Julie Heredia, Ms. Laura Patriarca, and Mr. James Wright, who scored questionnaires, entered data, and edited the manuscript.

SUMMARY

Problem: Anecdotal and empirical evidence has been used to support the assertion that intimate partner violence rates are higher among military personnel than in civilian comparison groups. Further, it has been suggested that intimate partner violence within the miliary may be negatively influenced by service-related conditions. A comparison of premilitary intimate partner violence rates between basic trainees and comparison groups is needed to aid in determining whether intimate partner violence among military personnel may be influenced by the miliary environment. Base-rate data are also required to aid in clarifying the need for and the scope and specificity of intervention programs.

Objective: The objective of this study was to investigate the rates of intimate partner verbal and physical violence (inflicted and received) and the rates of intimate partner inflicted physical injury among female and male Navy basic trainees.

Approach: Two versions (inflicted and received) of the Conflict Tactics Scales (CTS) were administered to 1,891 female and 1,885 male basic trainees during their first week of basic training at NTC, Orlando, Florida. The CTS was used to investigate rates of premilitary intimate partner conflict resolution tactics among trainees. Prevalence rates for intimate partner violence and physical injury were compared and contrasted with the rates for college samples.

Results: The rates of intimate partner physical violence reported by the trainees were at the upper end of the range of rates of intimate partner physical violence reported by college students. More female (46.9%), than male (31.9%), trainees reported at least one instance of expressing physical violence. In addition to a higher absolute frequency of physical violence, women, relative to men, reported significantly higher physical violence scores, which indicated that the women used physical violence at a higher rate than the men. Nevertheless, substantially more women (24.9%), than men (9.0%), reported being physically injured by an intimate partner, supporting the view that the consequences of intimate partner physical violence are more serious for women.

Conclusions: The results of this study suggest that a significant number of Navy personnel begin their careers with histories of intimate partner violence. The relatively high levels of intimate partner violence found among trainees supports the hypothesis that Navy personnel enter the Navy with histories of intimate partner violence that place them at risk of involvement in intimate partner violence during their careers. However, a longitudinal study is needed to disentangle the effect of military service on intimate partner violence rates. The relatively high rates of intimate partner violence found among trainees suggest it may be cost-effective to provide treatment, education, and prevention programs for basic trainees.

INTRODUCTION

In the past two decades, numerous studies have provided estimates of the incidence and prevalence of intimate partner violence in dating relationships (e.g., Arias, Samios, & O'Leary, 1987; Cate, Henton, Koval, Christopher, & Lloyd, 1982; Lane & Gwartney-Gibbs, 1985; LeJeune & Follette, 1994; Makepeace, 1981; O'Leary et al., 1989; Riggs, 1993; Riggs, O'Leary, & Breslin, 1990; Sigelman, Berry, & Wiles, 1984; White & Koss, 1991). Estimates of the prevalence of dating violence in college student samples range from 21.2% (Makepeace, 1981) to 52.8% (Sigelman et al., 1984). Although studies have documented substantial rates of dating violence, our understanding of the prevalence of dating violence is limited because the vast majority of studies have been conducted on college samples. In 1989, Sugarman and Hotaling stated that little is known about dating violence among nonstudent populations. Similarly, in 1990, Riggs et al. observed that there was a "lack of data regarding courtship aggression in noncollege-student samples" (p. 70). Despite the need for data on noncollege samples, the tendency to study college students has continued (e.g., LeJeune & Follete, 1994; White & Humphrey, 1994; White & Koss, 1991).

Browne (1993) stated that the reported rates of male violence against female intimate partners represent "marked underestimates of the problem." Browne contended that the underestimates may be partially attributed to existing surveys that "typically do not include the very poor; those who do not speak English fluently; those whose lives are especially chaotic; military families living on base; and individuals who are hospitalized, homeless, institutionalized, or incarcerated at the time the survey is conducted" (Browne, 1993, pp. 1077-1078). However, because data are generally lacking, the extent to which the college student data underestimate rates of intimate partner violence in the general population and in other special populations is unknown. Conversely, some authors have suggested that college students' rates may be higher than rates reported for other populations because students may have a greater awareness of intimate partner violence and, therefore, be more willing to report their violent intimate partner experiences (Lane & Gwartney-Gibbs, 1985).

The primary purpose of the present study was to provide descriptive data on the rates of intimate partner violence reported in a sample of Navy basic trainees. These data are needed, in part, because of the suggestion that military personnel may have higher rates of intimate

partner violence (e.g., Browne, 1993). A problem with studying selected groups, such as military families, is that if higher rates are found, it is not known if the rates are higher because individuals entering military service have higher existing rates of intimate partner violence or if service-related conditions (e.g., stress) increase existing rates of intimate partner violence, or if both factors contribute. Therefore, it is important to compare premilitary intimate partner violence rates of basic trainees to nonmilitary samples to aid in understanding intimate partner violence rates among naval personnel who have completed basic training.

A number of hypotheses were generated based on the assumption that histories of intimate partner violence in basic trainees would follow patterns similar to patterns observed in college student samples. First, because female students are reported to express physical violence at rates equal to (e.g., Arias et al., 1987; Marshall & Rose, 1988; Stets & Pirog-Good, 1987; Tontodonato & Crew, 1992; White & Koss, 1991) or above (Arias et al., 1987; Sigelman et al., 1984) physical violence rates reported by male students, it was expected that female trainees would report expressing physical violence at rates equal to or above rates reported by male trainees. Second, since higher injury rates for women, relative to men, have been reported in nonmilitary dating samples (e.g., Makepeace, 1986; Riggs, 1993), in samples of married individuals (e.g., Cascardi, Langhinrichsen, & Vivian, 1992; Vivian & Langhinrichsen-Rohling, 1994; Straus & Gelles, 1990), and in military samples of violent married individuals (e.g., Cantos, Neidig, & O'Leary, 1994; Langhinrichsen-Rohling, Neidig, & Thorn, 1995), it was hypothesized that female trainees, relative to male trainees, would report higher rates of physical injury. Third, based on previous reports, it was expected that individuals who reported physical injury, relative to individuals who did not, would indicate that higher levels of reasoning, verbal aggression, and physical violence were used by their intimate partners and by themselves (Billingham & Sack, 1986; Cantos et al., 1994; Cascardi et al., 1992). Billingham and Sack (1986) found evidence to support the idea that intimate partner violence is preceded by failed attempts to rationally resolve the conflict and Cantos et al. (1994) found a strong positive relationship between the presence of injuries and the use of more severe conflict tactics.

Additional hypotheses were generated with respect to the expected physical injury rates reported by individuals in each of four types of conflict resolution combinations (i.e., neither the respondents nor their intimate partners used physical violence, the respondents used physical

violence but their intimate partners never used physical violence, the respondents did not use physical violence but their intimate partners used physical violence, or the respondents used physical violence and their intimate partners used physical violence). When neither partner used physical violence, compared to other combinations, the lowest male and female rates of physical injury were expected. When only one partner used physical violence, compared to situations where neither partner used physical violence, the partner receiving the physical violence was expected to have higher rates of physical injury, with women reporting higher rates of physical injury than men. Further, when each partner used physical violence, relative to other combinations, the highest rates of physical injury were expected, with women reporting higher rates of physical injury than men. Finally, among those reporting physical injury, women, relative to men, were expected to report more severe physical injuries.

METHOD

Participants

Participants were Navy basic trainees stationed at the Recruit Training Command (RTC), Orlando, Florida, who volunteered to complete the survey measures. Initially, 3,776 basic trainees volunteered (n = 1,891 women and n = 1,885 men). About 92.5% of the male trainees and 89.9% of the female trainees who entered basic training completed the survey. Some trainees were unable to participate because they were engaged in testing or training. Additionally, some participants, 12.9% (n = 244) of the women and 17.5% (n = 330) of the men, had one or more incomplete items (more than 10% blank responses) on a subscale of the Conflict Tactics Scale (CTS) Intimate Partner (IP) or did not answer a question related to physical injury by an intimate partner. A portion of the incomplete questionnaires may be attributed to the instructions provided the trainees. As indicated in the procedures section, participants were told that they could "leave blank any section or question that (they) did not want to answer" and they were "free to stop at any time." The present incomplete rates can be compared to rates reported in a study using similar measures, which found that 24% of a sample of 6,159 male and female college students failed to complete all questions (White & Koss, 1991). After removal of participants with incomplete protocols, 87 women and 128 men who had CTS IP subscales with

all "zero" responses were removed (see test instrument section for rationale), leaving protocols from 1,560 female and 1,427 male basic trainees available for further analyses.

Because data were analyzed by gender, the demographic characteristics are provided for each gender (1,560 women and 1,427 men). The mean age for the women was 20.4 (*SD* = 2.7) years, and the mean age for the men was 20.2 (*SD* = 2.2) years. For women, the racial composition was 64.9% Caucasian (non-Hispanic), 22.0% African American, 6.9% Hispanic, 2.0% Asian/Pacific Islander, 1.9% Native American, and 2.3% other ethnic groups. For men, the racial composition was 74.9% Caucasian (non-Hispanic), 13.2% African American, 6.9% Hispanic, 2.8% Asian/Pacific Islander, 1.2% Native American, and 0.9% other ethnic groups. Among the women trainees, 84.2% were single, 1.9% were cohabiting, 9.6% were married, 4.2% were separated/divorced, and 0.1% were widowed. Among the male trainees, 90.0% were single, 1.8% were cohabiting, 6.9% were married, 1.2% were separated/divorced, and 0.1% were widowed. For the women, 3.9% had less than a high school education, 57.5% had finished high school or had a General Education Development (GED) diploma, 38.6% had attended business school or college (includes respondents with and without college degrees). For the men, 3.8% had less than a high school education, 57.2% had finished high school or had a GED diploma, 39.0% had attended business school or college (includes respondents with and without college degrees). Finally, information was gathered on the trainees' parents' family income in the past year. Among the women, 10.9% indicated $7,500 or less, 15.0% indicated from $7,501 to $15,000, 18.3% indicated from $15,001 to $25,000, 21.1% indicated from $25,001 to $35,000, 20.7% indicated from $35,001 to $50,000, and 14.1% indicated more than $50,000. Among the men, 7.0% indicated $7,500 or less, 11.9% indicated from $7,501 to $15,000, 16.5% indicated from $15,001 to $25,000, 19.9% indicated from $25,001 to $35,000, 23.0% indicated from $35,001 to $50,000, and 21.7% indicated more than $50,000.

Test Instruments

Demographic and Family History Questionnaire. This questionnaire contained a variety of items, including questions about the respondent's age, race, marital status, number of children, educational level, family (parents) income during the past year, and geographic location of primary childhood residence.

Conflict Tactics Scale Intimate Partner version (CTS IP). Two versions of a modified CTS (Form A; Straus, 1979, p. 87) assessed the techniques used by the respondents and their romantic partners to resolve conflicts (romantic partner was defined as a person with whom respondents were "dating, seeing, going steady with, or ... married"). One form of the CTS IP ("I did") asked the respondent how frequently she or he used different conflict resolution techniques with romantic partners. The second form of the CTS IP ("Did to me") asked the respondents to indicate how frequently their romantic partners used different conflict resolution techniques with them. Even though the CTS was initially developed for married couples, it frequently has been used to study courtship violence (e.g., Billingham & Sack, 1986; Bookwala, Frieze, Smith, & Ryan, 1992; Cate et al., 1982; Deal & Wampler, 1986; Kelly & DeKeseredy, 1994; Lane & Gwartney-Gibbs, 1985; Laner & Thompson, 1982; LeJeune & Follette, 1994; Makepeace, 1986; Ryan, 1995; Sack, Keller, & Howard, 1982; White & Humphrey, 1994; White & Koss, 1991).

The CTS IP surveys used in the present study contained 18 items. Three CTS IP subscales were scored: the reasoning subscale (the four original CTS Form A items); the verbal aggression subscale (the six original CTS Form A items); and, the physical violence subscale (eight items: original four CTS Form A items plus four items, "slapped the other person," "kicked, bit, or hit with a fist," "beat the other person," and "threatened the other person with a knife or gun," from the CTS Form R, Straus, 1990, p. 33). On both forms ("I did," "Did to me") of the CTS IP survey, the item response format consisted of five response categories indicating the frequency ("0" to "more than 10") that the conflict resolution technique was used. To obtain scale scores for the three CTS IP subscales on both the "I did" and "Did to me" surveys, the five response categories were treated as a 5-point Likert-type scale (scored 0 points for "0" to 4 points for "more than 10") and each response score was summed across the items within the three subscales to provide total subscale scores. This scoring approach is one of several CTS scoring procedures that has been suggested by the survey author (Straus, 1990, p. 36). Although there may be several reasons why respondents would mark "never" to all of the CTS IP survey items (e.g., they may never have used any conflict resolution techniques or they may never have had a romantic partner), the present study was interested only in those respondents who indicated that they had resolved conflicts with romantic partners, so respondents who marked "never" to all of the items on either of the CTS IP surveys ("I did," "Did to me") were excluded from the analyses. This

decision follows a procedure previously used in similar research with the CTS (i.e., Pan, Neidig, & O'Leary, 1994).

In the present study, for the total sample, the internal consistency (alpha) reliabilities for the CTS IP ("I did") reasoning, verbal aggression, and physical violence subscales were .75, .77, and .89, respectively. For the women, the internal consistency reliabilities for the CTS IP ("I did") reasoning, verbal aggression, and physical violence subscales were .73, .76, and .89, respectively; and, for the men, the internal consistency reliabilities for the CTS IP ("I did") reasoning, verbal aggression, and physical violence subscales were .78, .76, and .80, respectively. For the total sample, the internal consistency reliabilities for the CTS IP ("Did to me") reasoning, verbal aggression, and physical violence subscales were .76, .78, and .90, respectively. For the women, the internal consistency reliabilities for the CTS IP ("Did to me") reasoning, verbal aggression, and physical violence scales were .73, .76, and .89, respectively; and, for the men, the internal consistency reliabilities for the CTS IP ("Did to me") reasoning, verbal aggression, and physical violence subscales were .78, .78, and .88, respectively.

Physical Injury. Although the previously described CTS IP ("Did to me") measure assessed the receipt of physically violent acts, the CTS IP did not ask if the respondent had been physically injured by an intimate partner. Thus, immediately following the CTS IP items, an additional item asked if the respondent had ever been physically injured by a romantic partner. In an attempt to obtain a general indication of seriousness of the physical injury, five response options were available, ranging from "no, I was never injured" to "yes, the injury required hospitalization" (see Table 3). The physical injury item was scored from 1 through 5, respectively.

Procedure

The survey questionnaires used in the present study were administered as part of a more extensive survey package that was offered to Navy basic trainees during their first week at the RTC. Data collection began in January 1994. The collection of data from the male trainees was completed in March 1994. Because there were fewer women trainees than male trainees, the data collection from women was completed in April 1994, after the number of women tested was approximately equal to the number of men tested. The survey was administered in a classroom

setting by two (one male and one female) U. S. Navy hospital corpsmen who were psychological technicians with previous experience in administering psychological tests.

As part of the process of requesting that trainees participate in the study, a Corpsman read a description of the study. Trainees who agreed to participate were given a Privacy Act statement and an informed consent, which included a detailed description of the study and the procedures used to assure confidentiality. In addition, the Privacy Act statement and the informed consent were read to the participants. Participants were told they could "leave blank any section or questions that (you) do not want to answer" and they were "free to stop at any time before completing the survey." In the event that the recall of past traumatic experiences caused respondent distress, participants were informed that professional counseling would be provided upon request. Throughout the study, participants were treated in accordance with the standards described in the "Ethical Principles of Psychologists and Code of Conduct" (American Psychological Association, 1992).

RESULTS

The percentage of female and male trainees reporting their own use and their intimate partners' use of the different types of conflict resolution techniques measured by the CTS reasoning, verbal aggression, and physical violence subscales are presented in Table 1. The correlations between the female and male trainees' reports of receiving and inflicting intimate partner verbal aggression and physical violence are reported in Table 2. The percentages of female and male trainees reporting their own use and their intimate partners' use of the different conflict resolution techniques as measured by the individual CTS items are presented in the Appendix, Tables A1 and A2, respectively.

Table 1

Percentage of Women and Men Reporting Their Use and Their Intimate Partners' Use of Reasoning, Verbal Aggression, and Physical Violence Techniques on CTS Conflict Scales

	Women			*Men*		
CTS items	*Never*	*Once*	*> once*	*Never*	*Once*	*> once*
CTS reasoning						
Inflicted (I did)	2.0	1.0	97.0	2.0	1.8	96.2
Received (Did to me)	3.9	2.8	93.3	3.8	2.0	94.2
CTS verbal aggression						
Inflicted (I did)	11.8	8.1	80.1	16.2	8.1	75.7
Received (Did to me)	14.2	8.0	77.8	14.1	6.8	79.1
CTS physical violence						
Inflicted (I did)	53.1	10.3	36.6	68.1	11.5	20.4
Received (Did to me)	59.7	9.4	30.9	56.7	11.1	32.2

Table 2

Correlations Between Receiving and Inflicting Verbal Aggression and Physical Violence by Gender

	Verbal Aggression		*Physical violence*	
	Received	*Inflicted*	*Received*	*Inflicted*
Women				
Verbal aggression inflicted	.75	-.-	.45	-.-
Physical violence inflicted	.49	.68	.56	-.-
Men				
Verbal aggression inflicted	.81	-.-	.50	-.-
Physical violence inflicted	.45	.50	.69	-.-

Note. All correlations significant at $p < .001$.

For each gender, the relationships (including effect sizes) between reported rates of inflicted ("I did") and experienced ("Did to me") intimate partner violence and ethnicity, family income, educational level, and geographic region (West, Midwest, Northeast, and South) were examined by chi-square analyses. Because a large number of demographic characteristics were tested for significance, an .01 alpha level was used to determine significance for each test.

For the women, the rates of inflicted ("I did") intimate partner violence varied significantly by educational level, $\chi^2(2, n = 1{,}558) = 14.09$, $p = .001$, $w = .10$, but did not vary significantly by ethnicity, $\chi^2(5, n = 1{,}552) = 13.22$, $p = .02$, family income, $\chi^2(5, n = 1{,}538) = 11.25$, $p = .05$, or geographic region, $\chi^2(3, n = 1{,}466) = 10.42$, $p = .02$. Approximately 49.2% of the female trainees with less than a high school education ($n = 61$), 50.8% of those with a high school education or GED ($n = 897$), and 41.0% of those with at least some college education ($n = 600$) reported they had inflicted physical violence on an intimate partner.

For the men the rates of inflicted ("I did") intimate partner violence varied significantly by ethnicity, $\chi^2(5, n = 1{,}425) = 28.63$, $p = .0001$, $w = .14$, but did not vary significantly by family income, $\chi^2(5, n = 1{,}410) = 4.97$, $p = .42$, educational level, $\chi^2(2, n = 1{,}420) = 7.34$, $p = .03$, or geographic region, $\chi^2(3, n = 1{,}358) = 7.78$, $p = .05$. About 29.3% of the White/non-Hispanic men ($n = 1{,}068$), 47.9% of the African-American men ($n = 188$), 34.3% of the Hispanic men ($n = 99$), 25.0% of the Asian men ($n = 40$), 17.6% of the American Indian men ($n = 17$), and 23.1% of the male trainees that marked "other" ethnic background ($n = 13$) reported they had inflicted physical violence on an intimate partner.

For the women, the rates of intimate partner violence received ("Did to me") varied significantly by family income, $\chi^2(5, n = 1{,}538) = 14.23$, $p = .01$, $w = .10$, and educational level, $\chi^2(2, n = 1{,}558) = 14.96$, $p = .001$, $w = .10$, but did not vary significantly by ethnicity, $\chi^2(5, n = 1{,}552) = 7.18$, $p = .21$, or geographic region, $\chi^2(3, n = 1{,}466) = 3.89$, $p = .27$. The receipt of intimate partner violence was reported by 40.1% of the female trainees with family incomes of $7,500 of less ($n = 167$), 43.0% of those with family incomes of $7,501 to $15,000 ($n = 230$), 49.1% of those with family incomes of $15,001 to $25,000 ($n = 281$), 37.5% with family incomes of $25,001 to $35,000 ($n = 325$), 38.4% with family incomes of $35,000 to $50,000 ($n = 318$), and 34.6% of those with family incomes of more than $50,000 ($n = 217$). About 50.8%

of the trainees with less than a high school education (n = 61), 43.5% of those with a high school education or GED (n = 897), and 34.5% of those with at least some college education (n = 600) reported receiving physical violence from an intimate partner.

For the men, the rates of intimate partner violence received ("Did to me") varied significantly by ethnicity, $\chi^2(5, n = 1{,}425) = 18.91$, $p = .002$, $w = .11$, and educational level, $\chi^2(2, n = 1{,}420) = 11.60$, $p = .003$, $w = .09$, but did not vary significantly by family income $\chi^2(5, n = 1{,}410) = 4.47$, $p = .48$, or geographic region, $\chi^2(3, n = 1{,}358) = 2.33$, $p = .51$. The receipt of intimate partner violence was reported by 41.4% of the White/non-Hispanic men (n = 1,068), 54.3% of the African-American men (n = 188), 51.5% of the Hispanic men (n = 99), 32.5% of the Asian men (n = 40), 29.4% of the American Indian men (n = 17), and 23.1% of the male trainees that marked "other" ethnic background (n = 13). About 57.4% of the male trainees with less than a high school education (n = 54), 45.4% of those with a high school education or GED (n = 812), and 38.3% of those with at least some college education reported receiving physical violence from an intimate partner (n = 554).

The percentage of female and male trainees who reported physical injury by an intimate partner are presented in Table 3. The means and standard deviations for the CTS reasoning, verbal aggression, physical violence subscale scores as a function of receipt of physical injury and gender are presented in Table 4. For women and men, the relationships between reported rates of physical injury by an intimate partner and ethnicity, family income, educational level, and geographic region were examined by chi-square analyses. For the women, the rates of reported physical injury by an intimate partner did not vary significantly by ethnicity, $\chi^2(5, n = 1{,}552) = 14.07$, $p = .02$, family income, $\chi^2(5, n = 1{,}538) = 5.62$, $p = .34$, educational level, $\chi^2(2, n = 1{,}558) = 3.55$, $p = .17$, or geographic region, $\chi^2(3, n = 1{,}466) = 4.24$, $p = .24$. For the males, the rates of reported physical injury by an intimate partner did not vary significantly by ethnicity, $\chi^2(5, n = 1{,}425) = 9.42$, $p = .09$, family income, $\chi^2(5, n = 1{,}410) = 3.76$, $p = .58$, educational level, $\chi^2(2, n = 1{,}420) = 1.24$, $p = .54$, or geographic region, $\chi^2(3, n = 1{,}358) = 1.26$, $p = .74$.

A multivariate analysis of variance (MANOVA) was conducted, which examined the effects of injury (injury/no injury), gender (women and men), and a two-factor (injury by gender) interaction on the six dependent variables (CTS reasoning, "I did," "Did to me," CTS verbal

aggression, "I did," "Did to me," and CTS physical violence, "I did," "Did to me" subscales) presented in Table 4. The multivariate test for the main effect of injury was significant, Wilks' lambda = .87963, $p < .01$. Follow-up univariate analyses revealed that the main effect for injury was significant for the CTS reasoning, verbal aggression, and physical violence inflicted scores, Fs(1, 2983) = 6.93, 145.13, and 144.88, respectively, $p < .01$. In addition, the main effect for injury was significant for the CTS verbal aggression and physical violence received scores, Fs(1, 2983) = 193.75 and 390.64, respectively, $p < .01$; whereas, the main effect for injury was not significant for CTS reasoning received scores, Fs(1, 2983) = 0.01, $p > .01$. Thus, the respondents who received physical injury, compared to respondents who reported no injury, indicated they used higher levels of reasoning, verbal aggression, and physical violence, and these respondents reported that their partners (overall) used more verbal aggression and physical violence, but not more reasoning.

Table 3

Percentage of Women and Men Reporting Physical Injury by an Intimate Partner

	Women		*Men*	
Item/response options	*n = 1,560*	*%*	*n = 1,427*	*%*
Physically injured by partner?				
No, I was never injured	1,171	75.1	1,298	91.0
Yes, but no treatment was required	272	17.4	106	7.4
Yes, but the injury was treated by someone other than a medical professional	75	4.8	17	1.2
Yes, and the injury required professional medical treatment	34	2.2	4	0.3
Yes, and the injury required hospitalization	8	0.5	2	0.1
Total reporting physical injury	389	24.9	129	9.0

Table 4

Means and Standard Deviations for the CTS Scales as a Function of Physical Injury and Gender

	Received injury		*No injury reported*	
CTS items	*Women*	*Men*	*Women*	*Men*
CTS reasoning				
Inflicted				
M	8.23	8.04	7.58	7.69
SD	3.17	3.55	3.35	3.63
Received				
M	6.85	7.07	6.78	7.16
SD	3.36	3.41	3.40	3.71
CTS verbal aggression				
Inflicted				
M	8.57	8.81	5.84	5.07
SD	5.75	5.56	4.94	4.57
Received				
M	9.21	9.65	5.41	5.67
SD	6.16	6.12	4.82	4.92
CTS physical violence				
Inflicted				
M	4.83	3.43	1.95	1.07
SD	6.17	5.59	3.94	2.84
Received				
M	6.57	6.38	1.17	2.07
SD	7.91	7.55	2.56	4.02

The multivariate test for the main effect of gender was significant, Wilks' lambda = .97695, $p < .01$. Follow-up univariate analyses revealed that the main effect for gender was significant for CTS physical violence inflicted scores, $Fs(1, 2983) = 27.35$, $p < .01$, but was not significant for the CTS reasoning and verbal aggression inflicted scores, $Fs(1, 2983) = 0.05$ and 0.97, respectively, $p > .01$. The main effect for gender was not significant for CTS reasoning, verbal aggression, and physical violence received scores, $Fs(1, 2983) = 2.47$, 1.60, and 2.15, respectively, $p < .01$. Thus, the only gender difference found in the conflict tactics used and received was that women, relative to men, reported that they used higher levels of physical violence.

The multivariate test for the injury by gender interaction was significant, Wilks' lambda = .99306, $p < .01$. However, none of the follow-up univariate injury by gender interactions was significant for the CTS reasoning, verbal aggression, and physical violence inflicted scores, $Fs(1, 2983) = 0.65$, 3.53, and 1.42, respectively, $p > .01$. Likewise, none of the univariate injury by gender interactions was significant for the CTS reasoning, verbal aggression, and physical violence received scores, $Fs(1, 2983) = 0.18$, 0.10, and 4.99, respectively, $p > .01$.

The percentage of the sample indicating each of the four types of conflict resolution combinations are presented in Table 5. The percentage of respondents reporting physical injury and the physical injury scores for individuals who reported physical injury in each of the four types of conflict resolution combinations also are presented in Table 5. The mean physical injury score for each cell was computed by averaging the physical injury score (from 2 to 5) of the participants within each cell. Inspection of the data in Table 5 reveals that, of the trainees who reported their partners were physically violent, three times as many women (41.7%), as men (13.9%), reported being the victim of physical injury. Less clear is the pattern of reported seriousness of physical injury. To determine if a significant partner combination by gender interaction was present for seriousness of injury, a two-factor (partner combination and gender) analysis of variance (ANOVA) was planned. However, this analysis was not conducted because one interaction cell contained a small number of participants ($n = 6$), and there was a lack of homogeneity of variance, $F(7, 28850) = 4.59$, $p < .001$.

Table 5

Frequency and Percentage* of Four Types of Conflict Resolution Combinations and of Physical Injury and the Means and Standard Deviations of the Physical Injury Scores

	Women		*Men*	
Type/injury	*n*	*%*	*n*	*%*
Neither respondent nor partner used physical violence	734	47.1	759	53.2
Physical injury	94	12.8	31	4.1
Physical injury score	$M = 2.47$; $SD = .80$		$M = 2.13$; $SD = .43$	
Respondent used physical violence but partner did not	197	12.6	50	3.5
Physical injury	33	16.8	6	12.0
Physical injury score	$M = 2.55$; $SD = .75$		$M = 3.17$ $SD = .75$	
Respondent did not use physical violence but partner did	94	6.0	213	14.9
Physical injury	39	41.5	20	9.4
Physical injury score	$M = 2.51$; $SD = .72$		$M = 2.10$; $SD = .31$	
Both partners used physical violence	535	34.3	405	28.4
Physical injury	223	41.7	72	17.8
Physical injury score	$M = 2.38$; $SD = .71$		$M = 2.25$; $SD = .62$	

* For the four types of conflict resolution combinations, the denominator for the percentage was the total sample, whereas for the physical injury reported for each type of conflict resolution interaction, the denominator for the percentage was the frequency of that type of conflict resolution interaction.

Table 6 lists the percentage rates for inflicted and received intimate partner physical violence by gender for 5 studies of college students and the present study. Although the comparison studies were chosen for descriptive purposes only, the studies reported definitions and measures of physical violence similar to those used in the present study. Specifically, the studies shown in Table 6 used a: (1) form of the CTS to measure intimate partner physical violence, (2) design that did not consist of only married couples, (3) sample of at least 200 individuals, (4) method of data presentation that included rates of intimate partner physical violence shown by gender, and (5) reporting period of more than one year. However, Table 6 includes a study that collected data via a mail-in procedure with usable response rates of less than 50% (Lane & Gwartney-Gibbs, 1985) and a study that consisted of only participants who were in a "serious dating relationship" (Thompson, 1991). All of the comparison studies shown in Table 6 used relatively small convenience samples of college students from various geographic areas. Because the studies employed different modifications of the CTS, methodology, and participants it is not possible to directly compare the data from these studies with the data from the present study. Despite the preceding caveats, Table 6 is presented to allow for a descriptive comparison of CTS IP data for trainees and college students. As can be seen in Table 6, rates of reported inflicted ("I did") physical violence range from 30% to 52% for women and 23% to 54% for men. Rates of received ("He/She did") physical violence ranged from 28% to 48% for women and 28% to 59% for men. Of the 5 studies found that reported CTS IP total rates for the infliction of physical violence, 2 studies (Arias et al., 1987; Sigelman et al., 1984) reported a higher rate for women, and one study (Sigelman et al., 1984) reported a higher rate for men for the infliction of physical violence than did the present study. Of the studies shown in Table 6, 2 (Lane & Gwartney-Gibbs, 1985; Sigelman et al., 1984) reported a higher rate for women and 2 (Arias et al., 1987; Sigelman et al, 1984) reported a higher rate for men for receiving physical violence than did the present study.

Table 6

Percentage of Women and Men Reporting Their Use and Their Intimate Partners' Use of Violence for Trainees and College Students

	Inflicted		*Received*		*N*		*Geographic*
Sample	*Women*	*Men*	*Women*	*Men*	*Women*	*Men*	*area**
College students							
Arias et al. (1987)	49	30	38	50	175	95	NY
Gryl, Stith, & Bird (1991)	30	23	28	39	156	124	VA
Lane & Gwartney-Gibbs (1985)	41	30	42	34	165	160	OR
Sigelman et al. (1984)	52	54	48	59	388	116	KY
Thompson (1991)	28	25	30	28	169	167	MA
Unweighted mean percentage	40	32	37	42			
Weighted mean percentage	42	34	40	40			
Trainees	47	32	40	43	1,560	1,427	

Note. All percentages are rounded. * NY = New York, VA = Virginia, OR = Oregon, KY = Kentucky, MA = Massachusetts.

DISCUSSION

This study investigated the rates of intimate partner verbal and physical violence (inflicted and received) and the rates of intimate partner inflicted physical injury reported by a large sample female and male Navy basic trainees prior to entering military service. Overall, 50.0% of the trainees reported receiving, inflicting, or receiving and inflicting intimate partner physical violence. About 41.7% of the trainees reported receiving physical violence from an intimate partner with more men (43.3%) than women (40.3%) reporting at least one instance of receiving physical violence from an intimate partner. Overall, 39.7% of the trainees reported inflicting physical violence on an intimate partner, with more women (46.9%) than men (31.9%) reporting at least one instance of inflicting physical violence on an intimate partner. In addition to a higher absolute frequency of physical violence, women, relative to men, reported significantly higher physical violence scores, which indicated that the women used physical violence at a higher rate

than did the men. Nevertheless, substantially more women (24.9%) than men (9.0%) reported being physically injured by an intimate partner, supporting the view that the consequences of intimate partner physical violence are more serious for women.

Numerous studies have used the CTS IP version or a comparable instrument to collect data from women and men concerning their relationships with intimate partners of the opposite gender (for reviews see Pirog-Good & Stets, 1989; Stark & Flitcraft, 1991; White & Koss, 1993). Female and male intimate partner physical violence rates reported in the present study and rates reported in other studies are presented in Table 6. Inspection of the rates presented in Table 6 reveals that, although the rate for the infliction of violence by female trainees and the rate for the reception of violence by male trainees are higher, the rates of inflicted and received violence are similar to the unweighted and weighted (by sample size) mean rates of the comparison studies. Two studies, not listed in Table 6, are worthy of mention for comparison purposes. In the first study, Sugarman and Hotaling (1989) reviewed the dating violence literature and computed an overall mean violence prevalence rate of 31.9% for 14 studies of college students, while the rate for the present study was 50.0%. The overall violence rate, for the present study and Sugarman and Hotaling (1989), includes participants who inflicted, received, or inflicted and received intimate partner physical violence. Additionally, Sugarman and Hotaling (1989) computed mean prevalence rates for 12 studies of college students for inflicted (women = 39.3%; men = 32.9%) and received (women = 36.2%; men = 33.3%) intimate partner physical violence, which are lower than those found for trainees. Sugarman and Hotaling (1989) used different criteria than were used to select the studies shown in Table 6. In the second study, White and Koss (1991) reported incidence rates (intimate partner physical violence that occurred in the previous year) for inflicted physical violence (women = 35.1%; men = 36.7%) and received physical violence (women = 32.4%; men = 38.7%) in a representative national sample of college students (2,602 women and 2,105 men) which are lower than those for trainees. However, White and Koss (1991) placed the CTS item, "Threatened to hit or throw," in their physical violence scale which may have inflated their rates. Although it is emphasized that the parameters of the studies cited in the preceding comparisons differ widely, it appears the rates of intimate partner violence reported by the trainees were at the upper end of the range of rates of intimate partner physical violence reported by college students. Finally, intimate partner violence rates are not

available for community (non-college) samples. Therefore, a comparison of trainee intimate partner violence rates with rates of non-college samples is not possible.

Within the trainee data, the percentage of respondents indicating they inflicted physical violence and the CTS physical violence scores were higher for the female trainees, which has also been observed in some of the surveys of nonmilitary samples (e.g., Arias et al., 1987; Sigelman et al., 1984). Although the present study did not investigate the possible reasons for different rates of physical violence as a function of gender, Arias et al. (1987) have suggested that women engage in more physical violence because they are less concerned with causing physical injury. Alternatively, Arias et al. have suggested that observed gender difference in physical violence rates may be an artifact of reporting differences, with men underreporting their use of physical violence.

Despite the finding that women reported higher rates of inflicting physical violence, as hypothesized, female trainees appeared to be more negatively impacted by intimate partner physical violence than male trainees because they reported higher rates of physical injury. Overall, more of the female (24.9%) than the male (9.0%) trainees reported being physically injured by a partner (see Table 3). Further, 41.7% of the women who reported the receipt of intimate partner physical violence indicated they had also received a physical injury, whereas 13.9% of the men who reported the receipt of intimate partner physical violence indicated they had received a physical injury.

The rates of female and male trainee physical injury can be compared to the rates of three studies that collected data related to intimate partner physical violence and injury. Comins (1984) surveyed 354 female college students to determine rates of physical violence and injury in dating relationships for the year prior to the survey and found that 14.4% (51) of the total sample reported receiving a physical injury from an intimate partner. Comins (1984) also found that 27.7% (51) of the 52% (184) of the women that reported being the recipient of physical violence also reported receiving physical injuries. Hamberger, Saunders, & Hovey (1992) surveyed women (n = 351) from 18 to 75 years of age at a community-based family practice clinic who had been in a committed relationship for at least 6 months. Hamberger et al. (1992) found that 24.7% of the patients at the clinic reported receiving a physical injury from an intimate partner sometime during their life. In a study of college students (M age = 21.5 years), Makepeace

(1986) found an overall physical injury rate of 8.6% for women (n = 1,279) and 1.5% for men (n = 1,059). As shown in Table 7, the lower overall rates found by Makepeace (1986) can be attributed to the lower overall level of intimate partner physical violence found in his sample. The percentage of intimate partner physical injury found in the Comins (1984) and Makepeace (1986) studies are similar to those found in the present study when physical injury is computed as a percentage of those who received physical violence. The overall rate of intimate partner physical injury reported by female trainees is similar to that reported by female patients in the Hamberger et al. (1992) study. However, Hamberger et al. (1992) studied female medical patients with a higher mean age (35.6 vs 20.4 years) than the women participants in the present study, which would be expected to impact lifetime prevalence rates.

Table 7

Comparison of Intimate Partner Physical Violence and Physical Injury Rates for Trainees and College Students

	*Physical violence**				*Physical injury*			
	Women		*Men*		*Women*		*Men*	
Sample	*n*	*%*	*n*	*%*	*n*	*%*	*n*	*%*
Students**	259	20	123	12	110	42	16	13
Trainees	629	40	618	43	262	42	92	15

Note. * Received physical violence; ** Makepeace (1986).

Among the women and men who reported physical injury, it also was hypothesized that women would report more serious physical injury than men. This was based in part on the finding that wives of U.S. Army men who were assaulted by their husbands, compared to Army men who were assaulted by their wives, received more physical injuries that required medical treatment (Cantos et al., 1994; Langhinrichsen-Rohling et al., 1995). Although statistical tests were not performed, it should be noted that the data in Table 5 reveal that once injury occurred, the pattern of means for seriousness of the physical injury was not as predicted. The most serious injury was reported by men who indicated that they used physical violence but their

partners did not. This finding may have been caused by a number of factors, such as chance given the small sample size (n = 6) and relatively large variance for the injury scores in this group. However, it is also possible that the injured men in this group, who reported inflicting physical violence but did not report receiving any physically violent behavior on the CTS measure, were nevertheless indicating the results of a serious assault that was not captured by the CTS. Unfortunately, information related to the physical injury were not collected in the present study. Although the present data demonstrate that women report more physical injuries, additional explorations of the nature and seriousness of physical injuries experienced by women and men are needed to determine if gender differences exist. Finally, it should be noted that in a study of the lifetime prevalence of dating violence, Marshall and Rose (1988) also failed to find a significant gender difference in the amount of injury reported for the most serious incidents.

Additional examination of the trainees who reported physical injury, relative to those who did not report injury, indicated that higher levels of verbal aggression and physical violence, albeit not reasoning, were used by their intimate partners and higher levels of reasoning, verbal aggression, and physical violence were used by themselves. Despite a theoretical basis for a relationship between levels of conflict tactics and physical injury among intimate partners (Straus & Gelles, 1990), this appears to be the first report of such an association. However, Cantos et al. (1994) reported that the potential for intimate partner physical injury increases with the use of more severe conflict tactics.

A few moderator variable effects were observed for demographic variables on CTS physical violence scores. Ethnic differences were observed for male reports of the infliction and receipt of physical violence, and income level impacted female reports of received physical violence. The only other demographic effects for reports of physical violence were that educational level was associated with women's reports of the infliction of physical violence and women's and men's reports of the receipt of physical violence. In addition, no demographic effects (ethnicity, family income, educational level, and geographic region) were found for female or male trainee's reports of physical injury. Further, in the instances where several demographic factors are significant, it is unclear if one or both demographic factors have an independent influence since demographic factors may be correlated (e.g., ethnic background and education). Finally, the lack of demographic findings may be noteworthy. For example, the present study did not find

significant geographic differences for rates of intimate partner physical violence rates which contrasts with the results of White and Koss (1991). White and Koss (1991) collected CTS data from a nationally representative sample of 2,602 women and 2,105 men who were attending college. They found that students in the Great Lakes and Southeast regions of the United States reported the highest levels of physical violence, while students from the Plains States and Far West reported the lowest levels of physical violence. These differences may be attributed to the distinct methods used in the studies to cluster the states. The present study divided the respondents by state of origin into 4 regions (U.S. Bureau of the Census, 1993) while White and Koss (1991) divided their respondents by state of origin into 8 regions as described in Linsky and Straus (1986). Additionally, White and Koss (1991) scored the CTS item "Threatened to hit or throw something" as physical violence, while the present study scored it as verbal aggression in accordance with the procedure described by the instrument developer (Straus, 1990).

The present findings must be interpreted with caution due to a number of study limitations. The present study used self-reports, which may underestimate violence rates. The study could not determine if the accuracy of the self-reported behavior differed by gender. In addition, the findings describing the experience of intimate partner verbal and physical violence and physical injury represent lifetime experiences. Thus, it is not known if the same partner who inflicted physical violence was the partner who inflicted injury in those reporting physical injury. All that is known from the present study is that the experience of intimate partner physical violence during a respondent's lifetime is strongly associated with the receipt of physical injury, especially for women. Another limitation is that the physical injury group may have included nonaccidental as well as accidental injury by an intimate partner. This possibility is evident when data in Table 5 are inspected. These data reveal that for individuals who indicated on the CTS that neither the respondent nor their partners had used any form of physical violence, 12.8% of the women and 4.1% of the men still reported physical injury by an intimate partner. In such cases, either the respondents were reporting accidental physical injury by an intimate partner or the CTS physical violence subscale items were not sufficient to detect all types of physically violent behavior. To the extent that this latter explanation is valid, the intimate partner physical violence rates estimated in the present study, which are based on the CTS physical violence subscale, will underestimate the actual rates of intimate partner physical violence. The question also arises as

to whether a similar subset of individuals has been incorrectly classified as not physically violent in the national surveys and in other studies that have used the CTS physical violence scale to determine intimate partner physical violence rates (Straus & Gelles, 1990; White & Koss, 1991).

REFERENCES

American Psychological Association. (1992). *Publication manual of the American Psychological Association.* Washington, DC: American Psychological Association.

Arias, I., Samios, M., & O'Leary, K. D. (1987). Prevalence and correlates of physical aggression during courtship. *Journal of Interpersonal Violence, 2,* 82-90.

Billingham, R. E., & Sack, A. R. (1986). Courtship violence and the interactive status of the relationship. *Journal of Adolescent Research, 1,* 315-325.

Bookwala, J., Frieze, I. H., Smith, C., & Ryan, K. (1992). Predictors of dating violence: A multivariate analysis. *Violence and Victims, 7,* 297-311.

Browne, A. (1993). Violence against women by male partners: Prevalence, outcomes, and policy implications. *American Psychologist, 48,* 1077-1087.

Cantos, A., Neidig., & O'Leary, K. D. (1994). Injuries of women and men in a treatment program for domestic violence. *Journal of Family Violence, 9(2),* 1994.

Cascardi, M., Langhinrichsen, J., & Vivian, D. (1992). Marital aggression: Impact injury and health correlates for husbands and wives. *Archives of Internal Medicine, 152,* 1178-1184.

Cate, R. M., Henton, J. M., Koval, J., Christopher, F. S., & Lloyd, S. (1982). Premarital abuse: A social psychological perspective. *Journal of Family Issues, 3,* 79-90.

Comins, C. A. (1984). *Violence between college dating partners: Incidence and contributing factors.* Unpublished Doctoral Dissertation, Auburn University, Auburn, AL.

Deal, J. E., & Wampler, K. S. (1986). Dating violence: The primacy of previous experience. *Journal of Social and Personal Relationships, 3,* 457-471.

Gryl, F. E., Stith, S. M., & Bird, G. W. (1991). Close dating relationships among college students: Differences by use of violence and by gender. *Journal of Social and Personal Relationships, 8,* 243-264.

Hamberger, L. K., Saunders, D. G., & Hovey, M. (1992). The prevalence of domestic violence in community practice and rate of physician inquiry. *Family Medicine, 24,* 283-287.

Kelly, K. D., & DeKeseredy, W. S. (1994). Women's fear of crime and abuse in college and university dating relationships. *Violence and Victims, 9,* 17-30.

Lane, K. E., & Gwartney-Gibbs, P. A. (1985). Violence in the context of dating and sex. *Journal of Family Issues, 6,* 45-59.

Laner, M. R., & Thompson, J. (1982). Abuse and aggression in courting couples. *Deviant Behavior, 3,* 229-244.

Langhinrichsen-Rohling, J., Neidig, P., & Thorn, G. (1995). Violent marriages: Gender differences in levels of current violence and past abuse. *Journal of Family Violence, 10,* 159-176.

LeJeune, C., & Follette, V. (1994). Taking responsibility: Sex differences in reporting dating violence. *Journal of Interpersonal Violence, 9,* 133-140.

Linsky, A., & Straus, M. (1986). *Social Stress in the United States.* Dover, MA: Auburn House Publishing Co.

Makepeace, J. M. (1981). Courtship violence among college students. *Family Relations, 30,* 97-102.

Makepeace, J. M. (1986). Gender differences in courtship violence victimization. *Family Relations, 35,* 383-388.

Marshall, L. L., & Rose, P. (1988). Family of origin violence and courtship abuse. *Journal of Counseling and Development, 66,* 414-418.

O'Leary, K. D., & Barling, J., Arias, I., Rosenbaum, A., Malone, J., & Tyree, A. (1989). Prevalence and stability of physical aggression between spouses: A longitudinal analysis. *Journal of Consulting and Clinical Psychology, 57,* 263-268.

Pan, H. S., Neidig, P. H., & O'Leary, K. D. (1994). Male-female and aggressor-victim differences in the factor structure of the Modified Conflict Tactics Scale. *Journal of Interpersonal Violence, 9,* 366-382.

Pirog-Good, M. A., & J. E. Stets (Eds.). (1989). *Violence in dating relationships: Emerging social issues.* New York, NY: Praeger.

Ryan, K. M. (1995). Do courtship-violent men have characteristics associated with a "battering personality?" *Journal of Family Violence, 10,* 99-120.

Riggs, D. S. (1993). Relationship problems and dating aggression: A potential treatment target. *Journal of Interpersonal Violence, 8,* 18-35.

Riggs, D. S., O'Leary, K. D., & Breslin, F. C. (1990). Multiple correlates of physical aggression in dating couples. *Journal of Interpersonal Violence, 5,* 61-73.

Sack, A. R., Keller, J. F., & Howard, R. D. (1982). Conflict tactics and violence in dating situations. *International Journal of Sociology of the Family, 12,* 89-100.

Sigelman, C. K., Berry, C. J., & Wiles, K. A. (1984). Violence in college students' dating relationships. *Journal of Applied Social Psychology, 5,* 530-548.

Stark, E., & Flitcraft, A. H. (1991). Spouse abuse. In M. L. Rosenberg & M. A. Fenley (Eds.), *Violence in America: A Public Health Approach* (pp. 123-157). New York, NY: Oxford University Press.

Straus, M. A. (1979). Measuring intrafamily conflict and violence: The Conflict Tactics (CT) Scales. *Journal of Marriage and the Family, 41,* 75-88.

Straus, M. A. (1990). Measuring intrafamily conflict and violence: The Conflict Tactics (CT) Scales. In M. A. Straus & R. J. Gelles (Eds.), *Physical violence in American families* (pp. 29-47). New Brunswick, NJ: Transaction Publishers.

Straus, M. A., & Gelles, R. J. (Eds.). (1990). *Physical violence in American families.* New Brunswick, NJ: Transaction Publishers.

Stets, J. E., & Pirog-Good, M. A. (1987). Violence in dating relationships. *Social Psychology Quarterly, 50,* 237-246.

Sugarman, D. B., & Hotaling, G. T. (1989). Dating violence: Prevalence, context, and risk markers. In M. A. Pirog-Good and J. E. Stets (Eds.) *Violence in dating relationships: Emerging social issues* (pp. 1-32). New York, NY: Praeger.

Thompson, E.H. (1991). The maleness of violence in dating relationships: An appraisal of stereotypes. *Sex Roles, 24(5),* 261-277.

Tontodonato, P., & Crew, B. K. (1992). Dating violence, social learning theory, and gender: A multivariate analysis. *Violence and Victims, 7,* 3-14.

U.S. Bureau of the Census. (1993). *Statistical abstracts of the United States: 1993 (113th ed.).* Washington, DC: U.S. Government Printing Office.

Vivian, D., & Langhinrichsen-Rohling, J. (1994). Are bi-directionally violent couples mutually victimized? A gender-sensitive comparison. *Violence and Victims, 9,* 107-124.

White, J. W., & Humphrey, J. A. (1994). Women's aggression in heterosexual conflicts. *Aggressive Behavior, 20,* 195-202.

White, J. W., & Koss, M. P. (1991). Courtship violence: Incidence in a national sample of higher education students. *Violence and Victims, 6,* 247-256.

White, J. W., & Koss, M. P. (1993). Adolescent sexual aggression within heterosexual relationships: Prevalence, characteristics, and causes. In H. Barbaree, W. Marshall, S. Hudson (Eds.), *The Juvenile Sex Offender* (pp. 182-202). New York, NY: The Guilford Press.

Appendix

Table A1 presents the percentage of female and male trainees reporting their own use of the different conflict resolution techniques measured by the individual CTS items. Table A2 presents the percentage of female and male trainees' reports of their intimate partners' use of the different conflict resolution techniques measured by the individual CTS items.

Table A1

Percentage of Trainees Reporting Their Own Use of Different Conflict Resolution Techniques

	Women			*Men*		
CTS items	*Never*	*Once*	*More than once*	*Never*	*Once*	*More than once*
Reasoning						
Tried to discuss issue calmly	5.1	9.3	85.6	8.7	9.3	82.0
Did discuss issue calmly	6.9	12.3	80.8	6.1	11.8	82.1
Sought information for my side	18.8	15.0	66.2	21.1	14.7	64.2
Brought in someone for help	67.0	11.9	21.1	61.0	16.1	22.9
Verbal aggression						
Argued heatedly without yelling	28.0	19.3	52.7	29.8	20.0	50.2
Yelled and/or insulted	40.7	18.5	40.8	46.7	20.1	33.2
Sulked and/or refused to talk	31.8	22.0	46.2	41.9	21.9	36.2
Stomped out of room	44.1	16.7	39.2	54.5	17.4	28.1
Threatened to hit or throw	75.7	7.5	16.8	81.1	6.9	12.0
Threw something (not at partner)	73.5	11.7	14.8	75.8	10.3	13.9
Physical violence						
Threw something at partner	82.5	7.4	10.1	89.9	5.1	5.0
Pushed, grabbed, or shoved	67.6	12.8	19.6	75.8	12.7	11.5
Slapped partner	71.4	16.2	12.4	89.1	6.3	4.6
Hit or tried to hit (no object)	74.1	11.0	14.9	89.8	5.6	4.6
Hit or tried to hit with object	88.7	5.7	5.6	94.4	2.8	2.8
Kicked, bit, or hit with fist	80.2	7.8	12.0	92.2	4.3	3.5
Beat up partner	95.2	2.2	2.6	95.4	2.4	2.2
Threatened with knife or gun	95.6	2.6	1.8	96.7	1.3	2.0

Table A2

Percentage of Trainees Reporting Their Intimate Partner's Use of Different Conflict Resolution Techniques

	Women			*Men*		
CTS items	*Never*	*Once*	*More than once*	*Never*	*Once*	*More than once*
Reasoning						
Tried to discuss issue calmly	9.7	13.8	76.5	11.0	12.3	76.7
Did discuss issue calmly	10.6	16.1	73.3	8.7	14.5	76.8
Sought information for my side	27.1	18.4	54.5	25.3	16.9	57.8
Brought in someone for help	70.5	12.1	17.4	59.7	14.5	25.8
Verbal aggression						
Argued heatedly without yelling	31.6	19.4	49.0	29.1	19.0	51.9
Yelled and/or insulted	42.8	17.8	39.4	45.9	17.2	36.9
Sulked and/or refused to talk	34.7	18.5	46.8	36.2	20.0	43.9
Stomped out of room	49.9	15.8	34.3	48.4	16.6	35.0
Threatened to hit or throw	74.8	7.2	18.0	76.6	8.8	14.6
Threw something (not at partner)	73.5	10.0	16.5	75.2	9.4	15.4
Physical violence						
Threw something at partner	85.3	4.6	10.1	82.4	7.2	10.4
Pushed, grabbed, or shoved	67.0	11.4	21.6	73.1	10.8	16.1
Slapped partner	81.9	8.7	9.4	73.9	13.6	12.5
Hit or tried to hit (no object)	79.7	7.3	13.0	78.2	8.3	13.5
Hit or tried to hit with object	90.4	4.6	5.0	87.3	5.5	7.2
Kicked, bit, or hit with fist	84.9	5.2	9.9	81.1	8.7	10.2
Beat up partner	91.5	3.9	4.6	95.1	2.0	2.9
Threatened with knife or gun	94.0	3.2	2.8	95.6	2.2	2.2

Table 3A

Percentage of Women and Men Reporting Their Use and Their Intimate Partner's Use of Reasoning, Verbal Aggression, and Physical Violence Techniques on CTS Conflict Scales

	Women			*Men*		
CTS Scales	*Never*	*Once*	*> once*	*Never*	*Once*	*> once*
CTS Reasoning						
Inflicted (I did)	2.0	1.0	97.0	2.0	1.8	96.2
Received (Did to me)	3.9	2.8	93.3	3.8	2.0	94.2
CTS Verbal Aggression						
Inflicted (I did)	11.8	8.1	80.1	16.2	8.1	75.7
Received (Did to me)	14.2	8.0	77.8	14.1	6.8	79.1
CTS Physical Violence/Minor						
Inflicted (I did)	55.1	14.2	30.7	70.1	12.3	17.6
Received (Did to me)	61.7	10.5	27.8	59.3	13.3	27.3
CTS Physical Violence/Severe						
Inflicted (I did)	69.5	7.8	22.7	86.4	3.9	9.7
Received (Did to me)	74.5	6.8	18.7	72.4	6.6	21.0

REPORT DOCUMENTATION PAGE

Form Approved
OMB No. 0704-0188

1. AGENCY USE ONLY *(Leave blank)*	2. REPORT DATE	3. REPORT TYPE AND DATE COVERED
	July 1996	

4. TITLE AND SUBTITLE
Premilitary Intimate Partner Conflict Resolution in a U.S. Navy Basic Trainee Sample

5. FUNDING NUMBERS
Program Element:
Work Unit Number:
6309

6. AUTHOR(S) Lex L. Merrill, Linda K. Hervig, Joel S. Milner, Carol E. Newell

7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)
Naval Health Research Center
P. O. Box 85122
San Diego, CA 92186-5122

8. PERFORMING ORGANIZATION
Report No. 96-6

9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)
Naval Medical Research and Development Command
National Naval Medical Center
Building 1, Tower 2
Bethesda, MD 20889-5044

10. SPONSORING/MONITORING AGENCY REPORT NUMBER

11. SUPPLEMENTARY NOTES
None

12a. DISTRIBUTION/AVAILABILITY STATEMENT
Approved for public release; distribution is unlimited.

12b. DISTRIBUTION CODE

13. ABSTRACT *(Maximum 200 words)*

A comparison of premilitary intimate partner violence (IPV) rates with comparison groups is needed to determine whether IPV among military personnel is influenced by the military environment. Base-rate data are required to clarify the need for and the scope and specificity of intervention programs. Two versions, IV and RV, of the Conflict Tactics Scales (CTS) were administered to 1,891 female and 1,885 male basic trainees. The rates of IP physical violence for trainees were at the upper end of the range of rates for college students. More female (46.9%), than male (31.9%), trainees reported at least one instance of IP. In addition to a higher absolute frequency of physical violence, women, relative to men, reported significantly higher physical violence scores, which indicated that the women used physical violence at a higher rate than the men but more women (24.9%), than men (9.0%), reported being physically injured by an IP, supporting the view that the consequences of IP physical violence are more serious for women. The relatively high levels of IPV found among trainees supports the hypothesis that Navy personnel enter the Navy with histories of IPV that place them at risk of involvement in IPV during their careers.

14. SUBJECT TERMS	15. NUMBER OF PAGES
Intimate partner violence, spouse abuse, physical violence	32
	16. PRICE CODE

17. SECURITY CLASSIFICATION OF REPORT	18. SECURITY CLASSIFICATION OF THIS PAGE	19. SECURITY CLASSIFICATION OF ABSTRACT	20. LIMITATION OF ABSTRACT
Unclassified	Unclassified	Unclassified	Unlimited