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DOMINANCE AND SYMMETRY IN PARTNER VIOLENCE BY MALE AND FEMALE UNIVERSITY STUDENTS IN 32 NATIONS¹

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Abstract

The study investigated the widely held belief that violence against partners in marital, cohabiting, and dating relationships is almost entirely perpetrated by men, and that when women assault their partners, it has a different etiology than assaults by men. The empirical data on these issues were provided by 13,601 university students who participated in the International Dating Violence Study in 32 nations. The results in the first part of this paper show that almost a third of the female as well as male students physically assaulted a dating partner in the 12 month study period, and that the most frequent pattern was mutuality in violence, i.e. both were violent, followed by "female-only" violence. Violence by only the male partner was the least frequent pattern according to both male and female participants. The second part of the paper focuses on whether there is gender symmetry in a crucial aspect of the etiology of partner violence -- dominance by one partner. The results show that dominance by either the male or the female partner is associated with an increased probability of violence. These results, in combination with results from many other studies, call into question the assumption that partner violence is primarily a male crime and that, when women are violent, it is self-defense. Because these assumptions are crucial elements in almost all partner violence prevention and treatment programs, a fundamental revision is needed to bring these programs into alignment with the empirical data. Prevention and treatment of partner violence could become more effective if the programs recognize that most partner violence is mutual and act on the high rate of perpetration by women and the similar etiology of partner violence by men and women.

* Other information on the International Dating Violence Study, and papers reporting results can be downloaded from <http://pubpages.unh.edu/~mas2>. I am indebted to Jennifer Hagberg for preparation of the tables and to Rose A. Medeiros for the charts. It is a pleasure to express appreciation to the members of the Family Research Laboratory Seminar for valuable comments and suggestions. The work has been supported by National Institute of Mental Health grant T32MH15161 and by the University of New Hampshire.

This paper reports the results of an empirical investigation of two of the most controversial and important issues in understanding physical violence between partners in a marital, cohabiting, or dating relationships. The answers to these questions can have profound implications for prevention and treatment of partner violence.

1. Is partner violence primarily perpetrated by men, as compared to women, and as compared to both partners engaging in violence?
2. To what extent is dominance by the male partner associated with partner violence, as compared to dominance by the female partner? In short is the issue one of male dominance or one of inequality between partners?

Just mentioning these two issues as topics for empirical investigation is often regarded as undermining the efforts to end partner violence. This is because these questions implicitly challenge two core principles that underlie most efforts to prevent and treat partner violence.

In relation to the first principle, that partner violence is primarily perpetrated by men, in an article on "Sexual Inequality, Cultural Norms, and Wife-Beating" published 30 years ago (Straus, 1976) I stated that "wives are much more often the victim of violence by their husbands than the reverse." In relation to the second principle, in that article I attributed male partner violence to "the hierarchical and male-dominant nature of society..." A correlated principle is that when men are violent the purpose is to coerce and dominate, whereas when women are violent it is almost always an act of self-defense or a response to unbearably humiliating and dominating behavior by the male partner. The idea that women are motivated to hit in order to coerce a male partner, or out of rage and anger over misbehavior by a male partner (such as sexual infidelity), is regarded as outrageous, and is taken as a sign of sexism and misogyny.

In the 35 years since I began research on partner violence, bit by bit, I have seen my assumptions about prevalence and etiology contradicted by a mass of empirical evidence from my own research and from research by many others. Consequently, I have gradually come to a much more multi-faceted view of partner violence. This view recognizes the overwhelming evidence that women assault their partners at about the same rate as men, and that the motives for violence by both males and females are diverse. However, few others have reached the same conclusion, and some of those few will not publicly express their position for fear of the type of ostracism that I have experienced (partly described in Straus and Gelles (Straus & Gelles, 1990)). Instead, the evidence on gender symmetry in prevalence and etiology is typically disregarded and often explicitly denied (Straus & Scott, In press). As will be suggested in the conclusion, this denial has crippled prevention and treatment efforts.

As implied by the previous paragraphs, there are at least two aspects of gender symmetry in partner violence: mutuality of perpetration by men and women and parallel etiology of violence. The main objectives of this paper are to present the results of a cross national study of these two aspects of gender symmetry and to draw out their implications for prevention and treatment programs. An additional objective is to illustrate use of an easily applied typology. This classifies cases into Male-Only violence, Female-Only violence, and Both Violent. Use of these simple but crucial categories are needed to help research and prevention and treatment programs act on the implications for prevention and treatment which flow from the empirical results presented in this paper.

PREVIOUS STUDIES OF MUTUALITY

The importance of data on mutuality is based on the assumption that violence occurs in the context of an ongoing system of family relationships. Therefore research and clinical work on partner violence can benefit from taking into account the behavior of both partners in the family system. This applies even when it might seem that only information on the behavior of one of the partners is needed, such as measuring progress in a treatment program for male batterers. Research has shown that the cessation of violence by one partner is highly dependent on whether the other partner also stops hitting (Feld & Straus, 1989; Gelles & Straus, 1988). Thus, even when monitoring a treatment program for a designated perpetrator, it is crucial to know the extent to which the partner has also ceased acts of physical aggression.

Several studies, including large and nationally representative samples, have found that female-only violence is as prevalent or more prevalent than male-only violence, and that the most prevalent pattern is mutual violence. The 1975 and the 1985 National Family Violence Surveys both found that about half of the violence was mutual, one quarter was male-only, and one quarter was female-only (Gelles & Straus, 1988; Straus, Gelles, & Steinmetz, 1980). The National Comorbidity Study (Kessler, Molnar, Feurer *et al.*, 2001) found similar percentages. Other studies showing similar results include (Anderson, 2002; Capaldi & Owen, 2001; McCarroll, Ursano, Fan *et al.*, 2004; Moffitt, Caspi, Rutter *et al.*, 2001; Williams & Frieze, 2005). In all of these studies, the predominant pattern was mutual violence.

Despite the clear evidence that couples differ in respect to symmetry and asymmetry in PV, the etiology of even the three types just described has seldom been investigated. If each has a different etiology, as is often claimed, especially for female perpetrators (see below), those differences need to be considered by prevention and treatment programs. Previous research by Medeiros and Straus (Medeiros & Straus, 2006a; Medeiros & Straus, 2006b), did find a similar pattern of risk factors for men and women, but they did not differentiate male-only, female-only, mutually violent couples, as was done for this paper.

RESEARCH ON GENDER SYMMETRY IN DOMINANCE

The literature on PV contains innumerable assertions that the etiology of PV is different for men and women. Violence by male partners is attributed to an effort to dominate and control whereas violence by female partners is attributed to self-defense or as a justified response to an overwhelming pattern of domination and degradation. The existence of dominated and demeaned female victims is clearly documented. However, the available evidence suggests that such cases are a very small percentage of partner violence (Gelles & Straus, 1988; Kaufman Kantor & Straus, 1990; Straus, 1991).

Dominance And Control

The idea that it is primarily men who use violence to dominate and control can be found in hundreds of journal articles. To take just one example by an experienced and respected research, Hamberger and Guse (Hamberger & Guse, 2002) assert that "Men in contrast {to women} appear to use violence to dominate and control...." But, even though their article cited about 80 studies, none provided empirical evidence on gender differences in dominance and control motivation. This is not because there are no studies comparing dominance as a motive by men and women. There are at least six such studies, including at least one very well known study. This is the 1975 National Family Violence Survey, as reported in the book *Behind Closed Doors: Violence In The American Family* (Straus *et al.*, 1980). This book reports results from a study of a nationally representative sample of 2,143 American couples. That study found

that equalitarian couples were the least violent, and that both male dominance and female dominance were associated with an increased the rate of violence. Moreover, the higher rate of violence applied to both male and female partners. Since then, several other studies have found that dominance or control by women is associated with an increased rate of violence by women (Kim, 2003; Medeiros & Straus, 2006b; So-Kum Tang, 1999; Stets & Pirog-Good, 1990; Straus et al., 1980; Straus & Members of the International Dating Violence Research Consortium, 2006; Sugihara & Warner, 2002). These results suggest that whenever there is dominance of one partner, there is an increased risk of violence by the dominant partner to maintain the dominant position or by the subordinate partner to achieve something blocked by the dominant partner, or to change the power structure.

Self-Defense

The belief that women's violence is primarily in self-defense follows from the beliefs that it is men who perpetrate partner violence and that men, but not women, assault to achieve dominance and control. If neither of those beliefs is correct, perhaps the idea that women's violence is primarily an act of self-defense is also not correct. This is an important aspect of partner violence that needs to be clarified, and is also important for the mutuality data to be presented because it might explain predominance of mutual violence.

On this issue as well as the two core issues, there is a huge discrepancy between the assertions and the evidence. For example, the influential World Health Organization report on violence states that "Where violence by women occurs it is more likely to be in the form of self-defense (32, 37, 38)." (Krug, Dahlberg, Mercy *et al.*, 2002). However, examination of references 32, 37, and 38 found that although all three *asserted* that women's violence was primarily in self defense, #32 Saunders (Saunders, 1986) reported no data on self-defense, #37 DeKesseredy et al (Dekeseredy, Saunders, Schwartz *et al.*, 1997) does report data but their data shows that only 6.9% of the women acted in self-defense, and reference #38 Johnson & Ferraro (Johnson & Ferraro, 2000) is a review paper that cites references 32 and 37 and other references which also present no empirical data.

At least six other studies that report data on self-defense. Like the DeKesseredy et al. study, five of the six found that only a small percentages of female violence was in self-defense (Carrado, George, Loxam *et al.*, 1996; Cascardi & Vivian, 1995; Felson & Messner, 1998; Follingstad, Wright, Lloyd *et al.*, 1991; Pearson, 1997; Sarantakos, 1998; Sommer, 1996). For the one study which found high rates of self-defense, the percentage in self-defense was slightly greater for men (56%) than for women (42%) (Harned, 2001). Rather than self-defense, the most usual motivations for violence by women are coercion, anger, and punishing misbehavior by their partner. For example, Pearson (Pearson, 1997) reports that 90 percent of the women she studied assaulted their partner because they were furious or jealous, or frustrated and not because they tried to defend themselves. These motives are parallel to the motivations of male perpetrators. Research on homicides by women shows similar results. For example, Jurik and Gregware (Jurik & Gregware, 1989) studied 24 female perpetrated homicides and found that 60% had a pervious criminal record, 60% had initiated use of physical force, and only 21% of the homicides were in response to "prior abuse" or "threat of abuse/death."

HYPOTHESES

The studies reviewed led to the following hypotheses:

1. The largest single category of partner violence is mutual violence, i.e. both partners engage in physical assault. The next most frequently occurring pattern is “female-only,” i.e., the female partner is violent and the male partner is not. The least frequently occurring pattern is “male-only.”

2. Dominance by one partner, regardless of whether it is the male or female partner, is associated with an increased probability of violence.

METHODS

The International Dating Violence Study

This research is part of the International Dating Violence Study, which is being conducted by a consortium of researchers in all major world regions. Each consortium member used the same core questionnaire, except for the final section, which was reserved for each member to add questions about issues of specific local or theoretical interest. A detailed description of the study, including the questionnaire and all other key documents, is available on the website <http://pubpages.unh.edu/~mas2>, and in previous articles reporting results from this study (Douglas & Straus, 2006; Straus, 2004; Straus & International Dating Violence Research Consortium, 2004).

Sample

This paper presents results for a convenience sample of 13,601 students at 68 universities in 32 nations. Table 1 lists the nations, and shows that they are located in all major world regions. The data were obtained by administering a questionnaire during regularly scheduled classes. Most of the classes were in psychology, sociology, criminology, and family studies. The results describe what was found for the students in those classes in each country and cannot be taken as representative of students in general.

Students who completed the questionnaire but were not in a dating relationship could not be included in the analyses. The questionnaires were also scanned for aberrant response patterns such as an implausibly high frequency of rare events, for example, 10 instances of attacking a partner with a knife or gun in the past year; or inconsistent answers, for example, reporting an injury but no assault. Based on this screening method, 6.2% of the respondents were dropped from the sample. A total of 13,601 students completed all the questions used for the analyses to be presented. The N's for each national setting are shown in Table 1.

Questionnaire Administration

The data were gathered using procedures reviewed by and approved by the boards for protection of human subjects at each of the universities in the study. The purpose of the study and the right to not participate were explained to all students. They were assured of anonymity and confidentiality, and given a debriefing form that explained the study in more detail and provided contact information for area social service agencies should they need assistance.

Measure Of Dominance

Dominance by the partner who completed the questionnaire was measured by the Dominance scale of the Personal and Relationships Profile (Straus, Hamby, Boney-McCoy *et al.*, 1999; Straus & Mouradian, 1999). This scale is a nine-item short form of the Dominance

scale developed by Hamby (Hamby, 1996). Examples of the items are “I generally have the final say when my partner and I disagree” and “My partner needs to remember that I am in charge.” The response categories are 1 = Strongly Disagree, 2 = Disagree, 3 = Agree, and 4 = Strongly Agree. The scale score is the mean of the nine items. The theoretical range of scores is from 1 to 4. The actual range for this sample is 1 to 3.96 (mean = 1.95, SD = 0.39).

Measures of Partner Violence

The CTS2. Physical assault was measured by the revised Conflict Tactics Scales or CTS2 (Straus, Hamby, Boney-McCoy *et al.*, 1996). In the past 25 years, the CTS have been used in hundreds of studies, mostly in North America, but also in many other countries. It has demonstrated cross-cultural reliability and validity (Archer, 1999; Straus, 1990a, 2004). This research used the CTS2 scale for physical assault, both overall, and the subscale for severe assault. Most of the assaults were in the “minor” category. Because severe violence is considered a unique phenomenon with a different etiology (Johnson & Ferraro, 2000; Straus, 1990b), all analyses were conducted for both the overall rates of partner violence, and the rates of severe violence.

This paper also uses the recently published “Mutuality Types” (Straus & Douglas, 2004) which classifies relationships where violence occurred into three categories: Male-Only, Female-Only, and Both Violent. This typology enables research on an important aspect of partner violence that, despite its use in studies such as the National Comorbidity Study (Kessler *et al.*, 2001), is seldom investigated: the degree to which partner violence is mutual or one sided. The CTS makes this possible, even when only one partner has completed the questionnaire, because CTS questions are asked in pairs. The first question in each pair asks about the behavior of the study participant and the second pair asks about the behavior of the partner. To control for possible gender bias in reporting on both their own behavior and that of their partner, all analyses examining the links between dominance and partner violence were done separately for male and female participants.

Physical Assault. The CTS2 items to measure “minor” assault are: (1) pushed or shoved, (2) grabbed, (3) slapped, (4) threw something at partner and (5) twisted arm or hair. The items in the “severe” assault scale are: (1) punched or hit a partner, (2) kicked, (3) choked, (4) slammed against a wall, (5) beat up, (6) burned or scalded and (7) used a knife or gun on partner. The “overall” rate of partner assault includes all of these items. Minor assault was scored as having occurred if one or more of the items were present. Severe assault was scored in the same way. Because most of the assaults were minor, the minor assault scale and the overall or “any” assault scales have a large overlap. Consequently the results for the “any assault” are almost the same as those for minor assault. To avoid this redundancy, this paper presents and omits the minor assault variable and presents results for any assault and for severe assault.

Social Desirability Scale

In research on self-reported criminal behavior, differences between groups could reflect differences in willingness to report socially undesirable behaviors as much or more than real differences in crime. To deal with this threat to validity, we controlled for score on a scale which measures the tendency to avoid reporting socially undesirable behavior -- the Social Desirability scale of the Personal and Relationships Profile (Straus *et al.*, 1999; Straus & Mouradian, 1999).

This is a 13-item scale asking about behaviors and emotions that are slightly undesirable but true of most people, such as “I sometimes try to get even rather than forgive and forget.” The more items a respondent denies, the more likely a respondent will avoid reporting partner

violence. The response categories and the theoretical range of the scale are the same as for the Dominance scale.

Demographic Characteristics Of The Sites

Table 1 shows that the demographic composition of the universities varied greatly from one nation to another. The data analysis controlled for these differences because they might be confounded with the variables of theoretical interest.

Gender. Gender was measured as the percent of female students in each national setting. Seventy one percent of the students were female because the questionnaires were administered in social science courses that tend to have a heavy concentration of female enrollments. Because this study is focused on issues in which gender differences are important, the analyses either controlled for gender or were replicated for male and female students.

Age. Students' ages ranged from 18 to 40, with a mean of 23. It is well established that younger ages are associated with higher rates of violent crime, including partner violence (Stets & Straus, 1989).

Relationship length. The length of the relationships varied greatly. While only 9.7% had been in their current relationship for one month, 38% had been in the relationships for from two to 12 months. Because relationships change over time, it was important to control for the length of time the couple had been together.

Data Analyses

Multinomial logistic regression analysis was used to test the hypothesized relationships of score on the Dominance scale to each of the violence mutuality types. The analyses controlled for age of respondent, length of the relationships, social desirability, socioeconomic status, and for analyses of the total sample, gender of the respondent

PREVALENCE OF PARTNER VIOLENCE

Assault Rates

Overall Assault Rate. Table 2 gives the percent of students in each national setting who reported a physical attack on a dating partner during the 12 months prior to completing the questionnaire. The data in the columns for violence by men are base on the reports by male students, and the data on violence by women are based on the reports of female students.

The first pair of columns in Table 2 under the heading Overall Assault gives the percent of male and female students physically assaulted a dating partner. The first row of these two columns shows that, for all the students in the study, about a quarter of both male and female students had physically attacked a partner during that year. These are extremely high rates, but they are on the low side of the range of rates from a large number of mostly North American studies which have found rates in the 20 to 40% range (Archer, 2000; Sugarman & Hotaling, 1989).

It is also important to note that there were very large differences between national settings in the percent who assaulted a partner. The column for assaults by male students

shows that the rates for any violence ranged from a high of 95.5% in Iran to a low of 10% in Singapore.

Severe Assault. Most of the attacks tabulated in the Overall Assault columns were “minor violence” such as slapping or throwing things at a partner in anger. However, the columns headed Severe Assault in Table 2 show much lower, but still high rates of “severe violence.” These are attacks such as punching, kicking, and hitting with an object, that have a higher probability of causing an injury. Overall, seven or eight percent of the students in this study severely attacked a dating partner. Again the rates obtained when students from all national contexts are combined are similar for males and females, although slightly higher for assaults by females. As in the case of the overall assault rate, there are large differences between national contexts in the rate of severely assaulting a dating partner. The column for Males in Table 2 shows that the rates ranged from a high of 42.9% in South Africa to zero percent in Malta and Singapore.

Ratio Of Male To Female Assaults. The columns headed "F % of M" give the percent that the rate of assault by females is of the rate of assault by males. The row for All nations together shows a tendency for the overall rate to be 29% greater than the rate of partner violence perpetrated by men in this study. For severe violence, the difference is a little greater - a 39% higher rate for women than for men. Examining the rows of Table 2 shows that the pattern of higher rates of assault by women is found in about two thirds of the 32 national settings in this study. Thus, as was also shown in a meta analysis of previous studies (Archer, 2000), the predominant pattern is for a larger percentage of women than men to physically attack their partner.

Mutuality And Asymmetry

Prevalence Of Mutual and Asymmetric Violence. Figure 1 and Tables 3 and 4 are based on the sub-group who reported one or more incidents of violence because they are the only students for which the question of mutuality is relevant. The left panel of Figure 1 presents the results on symmetry in partner violence using the Overall Assault measure. It shows that, regardless of whether the data were reported by male or female respondents, in over two thirds of the cases, both partners were violent, Female-Only violence characterized a fifth of the case, and Male-Only violence was found in one out of ten couples. The right panel of Figure 1 gives the results using the Severe Assault measure. Again, the results based on reports by males and females are very similar, and they show that the percent of mutual violence is still the largest category by far. The least frequently occurring type is Male-Only. B

National Setting Differences. Tables 3 and 4 focus compare national settings in mutuality types as reported by the combined samples of male and female students. The national settings are arrayed in rank order of the percent of Male-Only violence. Table 3, which uses the Overall Assault measure shows large differences between the national settings. The percent in the Male-Only category ranges from a high of 26.2% to a low of 2.8. There is no national setting in which “Male-Only” is the largest of the three mutuality categories. Even in the two nations with the largest percent of Male-Only violence (Greece and Malta) the percentages (26.2% and 21.7%) are far from even a simple majority. In every one of the 32 national settings, mutual violence is the largest category.

For severe Violence, the results in Table 4 parallel. In none of the 32 National settings is Male-Only the largest category. Moreover, for the two national settings which are highest in the percent of Male-Only violence (Malta and Sweden), it is important to keep in mind that these

are percentages of relationships in which violence occurred. Malta and Sweden are also national settings with very low rates of severe violence. Thus the high percentage of Male-Only violence represents a large piece of a small pie. In all 32 national settings, Both Violent is the largest category of Severe Violence.

Age And Partner Violence. These results for university student dating couples are similar in some respects to that found for older married and cohabiting couples, and different in some other respects. They differ in that, for older couples there is less mutuality because the percent of Male-Only and Female-Only is higher. Among older couples, the Male-Only and Female-Only types are about equally prevalent. They are similar in that the most frequent pattern is Mutual Violence, and that Male-Only is not predominant. Partner violence, like other types of violence decreases rapidly with age, from the 30-40% rate typically found for all couples (student or non-student) in the age group of this sample, to about 12% for US couples at age 40 (the median age of US married couples), and continues to slowly decline with increasing age (Stets & Straus, 1989; Suito, Pillemer, & Straus, 1990).

DOMINANCE BY MALES AND FEMALES

The column headed Males in Table 4 gives the mean Dominance scale scores of the male students in each national setting. The national settings are arrayed in rank order according to these scores. The nation with the highest score for Dominance by male partners is Tanzania, which is also the least modernized of the 32 nations in this study. The four national settings which are the next most male dominant are Russia, Iran, Taiwan and mainland China. The national setting in which male students have the lowest average dominance score is Sweden, which is a nation that has led the way in steps to promote gender equality. The other four of the five least male dominant national settings are Netherlands, Canada, Switzerland, and Malta.

The rank order of national settings discussed above is consistent with the idea that, among nation states, greater economic development and modernity is associated with a waning of the traditional pattern of male dominance. However, comparison of the Dominance scale scores of men and women is not consistent with the idea that men are more dominant in couple relationships. The row for All Nations in Table 4 shows that, for all students in the study, the mean Dominance score of the women is very slightly higher than that for men. Overall, the Dominance scale scores are higher for women than for men in 24 of the 32 nations, and in all 12 of the nations with the lowest scores for male dominance. Although the differences are small, they are not consistent with the large body of evidence showing greater male power in most societies (García-Moreno, Jansen, Ellsberg *et al.*, 2005; Sugarman & Straus, 1988).

Validity Of The Dominance Scale. The discrepancy between the nearly equal scores of male and female students on the Dominance scale raises questions about the validity of this scale. A standard way of examining the validity of a measure is to determine the degree to which it is correlated with another measure of known validity. This was done by correlating the Dominance scale with scores for the United Nations Gender Empowerment Index (as given in the Human Development Report 2005, an independent report commissioned by the United Nations Development Programme (<http://hdr.undp.org/>)). The Gender Empowerment scores were added to the data file for the 29 nations included in both this study and the UN study. Partial correlation analysis, controlling for the mean score of students in each national setting on the Social Desirability scale were computed. The partial correlation of $-.69$ indicates that the more Gender Empowerment as measured by the UN scale, the lower the Dominance score of the men in this study. For example, Tanzania has the lowest Gender Empowerment score and

also the highest Dominance score of the 29 national settings where both measures were available; and Sweden has the highest Gender Empowerment score and the lowest Dominance scale score. Thus, the Dominance scale scores for the men in this study are highly consistent with the widely used Gender Empowerment Measure.

RELATION OF DOMINANCE TO PARTNER VIOLENCE

A previous paper tested the idea that the etiology of partner violence by women is different than violence by men (Medeiros & Straus, 2006b). That study used all 23 risk factors measured by the Personal and Relationships Profile, but only for a sample of University of New Hampshire students. There is insufficient space in this paper to present that mass of data for the 32 national settings. However, there is sufficient space to present the results for a risk factor that is central to the feminist theory of PV – Dominance by one partner. According to feminist theory, dominance by the male partner should be closely related to male assaults on female partners. Dominance by female partners is not discussed in feminist analyses, so no inference can be made about its relation to violence against a male partner. However, the results of the six studies cited earlier suggest that dominance by a female partner will also be related to an increased probability of partner violence.

The results of the multinomial logistic regression analysis to investigate the degree to which dominance is part of the etiology of partner violence by women as well as by men are presented in Table 5 for violence in general, and in Table 6 for Severe Violence. To help focus on the central issue, the rows for the Dominance Scale and the Odds Ratio showing the relation of Dominance to PV are in bold type. To further help understand the relationships between dominance and partner violence, the regression coefficients were converted to estimated probabilities for each type of violence and those estimates are graphed in Figures 1 through 3.

The following sections first present the results from Table 5, which uses as the dependent variable whether there had been any violence in the relationship during the previous 12 months. Most of the violent acts in the overall measure of violence used for Table 5 are relatively minor, for example, slapping and throwing things at a partner). Because etiology of severe violence may be different for severe violence, Table 6 is focused on instances of severe violence, such as punching, choking, and hitting with an object.

Dominance And Overall Violence

Dominance By Men And Male-Only Violence. Part A of Table 5 refers to the behavior of the male students in this study, as reported by male students. The entry in the column of Odds Ratios for Dominance in the panel for Male-Only Violence shows an odds ratio of 2.29. This indicates that each increase of one point on the four point Dominance scale increases the probability of violence by male students 2.29 times. Of the other four variables in the Male-Only panel, only one – length of the relationship -- is significantly related to Male-Only violence. The odds ratio for age of 1.03 indicates that each additional month the relationship has been ongoing, increases the odds of Male-Only violence 1.03, or 3%. This may seem like a small odds ratio but it is statistically significant and, for long standing relationships such as one of ten months, it would mean a 3% increase for each month, or a total of a 30% increase in the odds of violence compared to a just established relationship. The age the student, the socioeconomic status of the student's parents, and score on the Socially Desirable Responding scale are not associated with an increase in the odds of Male-Only violence.

Dominance By Men And Female-Only Violence. Moving down to the panel for Female-Only violence (as reported by *male* students), shows similar results. The odds ratio for Dominance by the males in this study is associated increases the probability of Female-Only violence 1.96 times for each one point increase in the Dominance scale. The only other significant relationship in the Female-Only panel shows that the longer the relationship the higher the odds of Female-Only violence.

Dominance By Men And Mutual Violence. The results in the Both Violent panel of Part A of Table 5 are similar to the results for Male-Only and Female-Only violence, but there are three important differences. First, dominance by the male partner is associated with a three fold increase in the probability of both partners being violent. This is larger than the increase in the probability of Male-Only or Female-Only violence. That is, dominance by a male partner is more strongly associated with mutual violence than with Male-Only violence. Second, age was not related to the odds of Male-Only or Female-Only violence, but for Both Violent, each additional year of age, is associated with a small but statistically significant decrease in the odds of both partners being violent. This is consistent with many studies showing that violent crime decreases with age. Finally, the odds ratio of 0.31 for the Social Desirability scale indicates that increase of one point on this four point reduces the probability of both being violent by 69% ($1.00 - 0.31 = .69$ or 69%). In short, students identified by the Social Desirability scale as being unwilling to disclose minor types of socially undesirable behavior, are also much less likely to disclose a pattern of mutual violence in their dating relationships. This illustrates why it was necessary to control for score on the Social Desirability Scale by including the score on the Social Desirability scale as one of the independent variables in all the models tested. Consequently, all the odds ratios in Tables 4 and 5 are adjusted to control for score on the Social Desirability scale.

Dominance By Women And Male-Only Violence. The results for female participants in the study are presented in Part B of Table 5. The Male-Only panel shows an odds ratio of 2.629. This indicates that female dominance as reported by women is associated with about a two and half times greater probability of the Male-Only pattern of partner violence. The only other significant odds ratios in the Male-Only violence panel of Table 5B show that the probability of Male-Only violence increases by 3% for each additional month of the relationship has been in effect.

Dominance By Women and Female-Only Violence. The odds ratio in middle panel of Table 5B shows that female dominance is much more strongly linked to Female-Only violence than was shown for the relation of male dominance to Female-Only violence. That is, when there is dominance by either partner, it increases the odds of Female-Only violence, but the increase is much greater for female dominance. Three of the other four independent variables in Dominance By Females panel of Table 5 are also statistically significant.

Dominance By Women And Mutual Violence. The odds ratios in the Both Violent panel of Part B of Table 5 follow a pattern that is similar to that for men, but the effect of female dominance on the odds of mutual violence tends to be greater than the effect of male dominance. It also shows that the age is related to a decrease in the odds of mutual violence, and that the longer the relationship the greater the odds of mutual violence. Finally, as was found for male mutual violence as reported by males, the higher the score on the Social Desirability scale, the lower the odds of reporting mutual violence.

Predicted Probability Graphs

Figures 1 through 3 provide a visual means understanding the relationship between the Dominance scale and the probability of partner violence and also show the predicted probability of each of the three mutuality types. The upper line in Figure 2 plots the relationship between male-dominance as reported by males and the estimated probability of Male-Only assault. The estimated probabilities are after adjustment to control for the other three variables. The upper line shows that the more dominant the male partner, the greater the probability that he had assaulted is partner during the year covered by this study. Similarly, the lower line plots the relationship between female dominance as reported by females and the probability of Male-Only assault. It shows that female dominance is also associated with a greater chance of violence by the male partner, but that the probability of Male-Only violence is not any greater at the highest level of female dominance than at the middle level.

Figure 3 shows that, although dominance by either the male or female partner is associated with an increased probability of Female-Only violence, the relationship is weak for dominance by men (lower line) and strong for dominance by women (upper line).

Figure 4 shows that dominance by either the male or female partner is strongly associated with an increased probability of both partners being violent. The probability of mutual violence increases from about 10% for both male and female participants in this study who had the lowest Dominance scores to over 50% for participants with the highest score.

Dominance And Severe Violence

Table 6 presents the results using the Severe Violence scale of the CTS as the dependent variable. As in the case in the table using the overall violence scale (Table 5), Table 6 gives the results separately for dominance by the male partner (Part A) and by the female partner (Part B).

The results for severe violence parallel the results for the overall violence scale but the odds ratios tend to be larger. That is, dominance by either the male or female partner is more closely related to an increased probability of severe violence than to minor violence, even though the overall rate of severe violence is much lower (10% versus 30%).

The top row of Table 6A shows that male dominance is associated with a five-fold increase in the odds of severe Male-Only Violence. For female dominance, the top row of part B of Table 6 shows that female dominance is also associated with a five fold increase in severe Male-Only violence.

The middle panels of Table 6A and B show that male dominance is associated with a 1.67 times increase in the odds of severe Female-Only violence, but the middle panel of Table 6B shows that female dominance is associated with a much greater increase in the probability of Female-Only violence (a four fold increase). Finally, the lower panels of Table 6A and B show that male dominance is associated with 4.5 times increase in the probability of severe mutual violence, and the lower panel in Table 6B shows that female dominance is associated with an even greater increase in the probability of severe mutual violence (a 5.7 fold increase). In general, dominance by either partner is associated with an increased probability of severe violence, but dominance by the female partner increases the risk of severe Female-Only, and severe mutual violence, even more strongly than does dominance by the male partner.

DISCUSSION

The results reported in this paper are consistent with the first hypotheses -- that mutual violence is the most prevalent pattern, followed by Female-Only, and that Male-Only violence is the least frequently occurring pattern. The results in the section on prevalence rates add cross-national evidence to the already overwhelming evidence from North America which has found that about the same percentage of women are physically violent to their partners as men, and for young women the percentage is higher than for men (Archer, 2000). In none of the 32 nations studied was Male-Only violence the largest category. In many of the national contexts it was less than 10 percent of violent couples. The predominant pattern was one in which both partners were violent. The second largest category was couples where the female partner was the only one to carry out physical attacks. The predominance of mutual violence applies to severe violence such as punching and hitting with objects, as well as to minor violence. These results contradict the widely held belief that partner violence is predominantly a crime committed by men. Indeed, almost every treatment and preventive effort is based on that assumption, which these results suggest may be false.

What explains the predominance of mutual violence? No doubt many factors contribute, as they do for any other aspect of violence. Self-defense is one of those factors, but as the studies reviewed earlier indicate, self-defense explains only a small percentage of cases. Another part of the explanation is suggested by the fact that the second most common scenario is Female-Only. This may occur because, as Felson has shown, the concept of chivalry did not go down with the Titanic [Felson, 2002 #5944; Felson, 2000 #5359]. Consequently, up to a certain point, most men will not hit back if struck by a woman because 'you don't hit women.' But if physical attacks by a female partner continue, sooner or later male partners are likely to follow her example. To the extent that this scenario occurs, it provides an additional part of the explanation for the predominance of mutual partner violence.

The second hypothesis, that dominance by either partner, not just the male partner, is a risk factor for violence was also supported. In fact, this study found that dominance by the female partner is even more closely related to violence by women than is male-dominance. The results on dominance as a risk factor for violence, like the results on symmetry and asymmetry in perpetration, apply to both minor violence and severe violence. This contradicts the belief that when women hit, the motives are different, and that male-dominance is the root cause of partner violence. Thus, the results for this hypothesis call into question another basic assumption of most prevention and treatment programs.

Although the results are clear and "strong" in the sense that the relationships are consistent and statistically dependable and seem to apply world-wide, there are also limitations to keep in mind when considering the implications that follow from the results.

Limitations

Student Sample. This study is based on a sample of university students rather than a sample of the general population, and it is a convenience sample rather than a probability sample of students. Therefore, the conclusions apply to this sample and it remains unknown whether they also apply more broadly. However, there is voluminous research on dating partner violence and, with rare exception, the results are parallel to those found for general population samples. The main exception is the much higher rate of partner violence in student samples, which stems from their youthfulness rather than their being students.

A related sample issue is that this type of sample can differ importantly from a "clinical" sample of men and women arrested for partner violence or men and women who are victims of

partner violence. This difference is both a strength and a limitation. It is strength because non-clinical population samples are needed to guide prevention efforts. What is true of a clinical population often does not necessarily apply to the general population (i.e., the target of primary prevention). To assume that it does apply has been called the “clinical fallacy.” Conversely, what is true of the general population does not necessarily apply to clinical populations. To assume that it does has been called the “representative sample fallacy” (Straus, 1990b). A simple but important example is the widely held belief that once partner violence starts, it may escalate, but it will not cease. That is correct for samples of women in shelters for battered women. They would not be there if it had ceased. On the other hand, studies of the general population such as Feld and Straus (Feld & Straus, 1989) consistently find high rates of cessation. Thus, policies and practices based on the clinical group may not apply to the general population, just as advice based on the general population may not apply to clinical populations. Similarly, the results of this study concerning gender symmetry in perpetration and in etiology may not apply to severely assaulted and oppressed women, such as those who seek help from a shelter for battered women, or to women who are part of the small percent of violent couples (less than one percent) who have had violence progress to the point of police intervention (Kaufman Kantor & Straus, 1990).

Cross-Sectional Data. Caution is also needed because the results are based on cross sectional data and may not reflect a cause-effect relationship between dominance and partner violence. However, the analyses controlled for a number of variables that could produce spurious results, such as confounding with socioeconomic status, and differences in willingness to report socially undesirable behavior.

Self-Defense. Another limitation of the study is that there is no direct evidence which contradicts the belief that PV by women is primarily an act of self-defense. However, self-defense is unlikely to apply to the roughly one quarter of cases where the only violence was perpetrated by the female partner. Self-defense could, of course, apply to the two thirds of cases where the violence was mutual. However, the results of this study, and those reviewed earlier in this paper, have found that dominance by women is associated with mutual violence, This make the self-defense explanation less plausible. In addition, the studies that directly investigated self-defense (reviewed in the introduction) find that, for women as well as for men, violence in self-defense applies to only a minority of cases of partner violence.

Theoretical And Methodological Implications

Theoretical Implications. The results showing that mutual violence is the most prevalent form of partner violence in this sample and that Male-Only violence is the least prevalent form, and the results showing that dominance by either the male or the female partner, rather than just male dominance increases the probability of partner violence, call for a basic reorientation of the way partner violence is conceptualized, especially since these results are consistent with results from other studies, including nationally representative samples of the general population. It is the injustices and power struggles that are associated with inequality that gives rise to violence, not just inequality in the form of male-dominance. If male dominance is much more prevalent than female dominance (as is widely assumed), that aspect of inequality is extremely important for understanding, preventing, and treating, family violence, but for this sample as for others, male dominance is not more prevalent than female dominance. This is not to deny the existence of male dominant and oppressive relationships. It is only that such relationships, are rare among the students in the 32 nations studied.

Risk Factors Versus One-to-One Causes. It is important for both theoretical

understanding of domestic violence and clinical practice to keep in mind that dominance is a “risk factor” not a one-to-one cause. For example, the probability of the participants in this study assaulting a partner went from about ten percent for those with lowest Dominance scale score to about 50% for those with the highest Dominance scores, or a five-fold increase. However, these same results also indicate that half of those with the highest Dominance score did *not* assault their partner. Similarly, in the National Family Violence Survey, extremely male dominant partners had roughly ten times greater *probability* of assaulting a partner than did equalitarian men, but that raised the rate from 2% to 20%, which means that 80% of extremely male dominant partners did not assault their partner in the year covered by this study. These same principles apply to all risk factors such as binge-drinking (Kaufman Kantor & Straus, 1987) and corporal punishment as a child (Straus, 2001). Binge-drinkers and those who were spanked a lot have much higher rates of assaulting a partner, but are not violent to their partners, and most people who were spanked a lot as a child do not assault their partners.

Types Of Violence. Over the last 20 years, the fact that there are major differences within the category of “violent” has gained increasing acceptance in principle. A simple but important difference is variation in the chronicity and severity of partner violence. The typical pattern is an occasional episode of minor violence such as slapping and throwing objects at a partner, with only rare injury. This is what Straus and colleagues called “ordinary” or “normal” (in the statistical sense) violence (Straus, 1990b; Straus et al., 1980), and Johnson (Johnson, 1995a) called “common couple” violence. These cases are likely to differ in many ways from cases of chronic and severe assaults with a higher probability of injury. This pattern characterizes the experiences of many women who use services for female victims. However, they are only a tiny fraction of cases in community samples because such cases are rare in the first place, and because some of the victims and perpetrators do not disclose what has happened to survey interviewers (Straus, 1990b).

More comprehensive typologies have been developed by Holtzworth-Munroe (Holtzworth-Munroe, Meehan, Herron *et al.*, 1999; Holtzworth-Munroe & Stuart, 1994) who distinguishes between Family Only, Borderline/Dysphoric, and Generally Violent/Antisocial types; and by Johnson (Johnson, 1995b) who identifies what he originally identified “patriarchal terrorism” and has renamed as “terroristic” violence (Johnson & Ferraro, 2000). Still another aspect is the simple but crucial difference between Male-Only, Female-Only, and Both Violent types used for this paper.

The varying patterns of partner violence identified by these and other typologies, although increasingly recognized by both researchers and clinicians, have only rarely been put into the actual practice of research or of prevention and treatment. The implication for research is that investigations of etiology and consequences must avoid grouping all cases together, and instead examine the etiology and the consequence of each type. The same implication applies to prevention and treatment.

Policy And Practice Implications

This study and those cited in the introduction have revealed an overwhelming body of evidence that mutual violence is the predominant pattern in the general population; and this study along with a lesser but still large amount of evidence from previous studies, suggests that the etiology partner violence in the general population is mostly parallel for men and women.

The fact that dominance in the relationship was found to be a risk factor for violence by women as well as by men is crucial. Male dominance does need to be addressed, but so does

female dominance, and many other family system problems. In short, at least in the context of university student dating relationships, partner violence is more a gender-inclusive systemic problem than it is a problem of a patriarchal social system which enforces male dominance by violence.

Unfortunately, the organization, funding and staffing of current prevention and treatment efforts is wedded to the patriarchal dominance theory (Straus, 2006 In Press). If researchers or service providers do not declare allegiance to these articles of faith, they risk being denied funding and ostracized (see Straus (Straus, 1990c) and (Holtzworth-Munroe, 2005) for two sets of personal experiences). A recent example is “request for proposals” on research on physical and sexual violence against partners issued in December 2005 by the National Institute of Justice. Both specified that applications which dealt with male victims would not be considered for funding. The set of nine articles that provided the most comprehensive available review of risk factors for family violence (Heyman & Slep, 2001) included an article on risk factors for male violence but nothing on violence by women. This omission was in response to the interest expressed by the funding agency.

The refusal to recognize the multi-causal and family system nature of the problem has hampered the effort to end domestic violence. It has resulted in deliberately ignoring half the perpetrators. Despite these obstacles, the situation is slowly changing. The work described in this book are examples of the process. Another example occurred when the Violence Against Women act came up for renewal in late 2005. Men’s rights groups were successful in having the act revised to include a paragraph permitting funding of services for male victims. These groups also recognize that, because of the ideological commitment and organizational structure of the funding agencies, legal permission to fund programs that address female violence and male victimization does not mean that will occur. Consequently, the groups that lobbied to have the act changed are now preparing for legal action to put that provision into effect. They are, of course, focusing on services for male victims. This will be an important start in recognizing the family system nature of most partner violence. However, much more is needed.

The domestic violence service system, including services for female victims, needs to replace the default-assumption that partner violence is primarily the product of male dominance. Instead, the default-assumption needs to be that partner violence is predominantly mutual violence and other kinds of mutual mistreatment by a partner, and that the risk factors are mostly the same for males and females. At the same time, service providers need to remain alert to cases that do not fit the typical pattern, including cases which fit the classical image of an oppressed and battered spouse. Although there are men who fall in this category, it is more often women. In addition, the harmful effects of all levels of violence are greater for women, physically, psychologically, and economically. Consequently, although services for male victims are needed, the need for services for female victims will continue to be greater.

In addition to services for male victims, many important changes can follow from the predominance of mutual violence and the predominance of parallel etiology of violence by male and female partners. We believe that ignoring these facts hampers prevention and treatment efforts, and that the needed changes in prevention and offender treatment programs include the following:

- Replace the assumption that almost all partner violence is male-only, with the assumption that it could be mutual violence or female-only, and that this needs to be determined at the very onset of remedial efforts.
- Replace the single causal factor “patriarchal system” model with a multi-causal model.

Replace male-dominance as the major risk factor in need of change with dominance by either party, but only as one of many risk factors that need attention.
 Give equal attention to developing prevention programs targeted to violence by women and girls.
 Secondary prevention efforts need to be open to a variety of new approaches, of which one of the most promising is restorative justice (Mills, 2003, 2006; Strang & Braithwaite, 2002)

These changes in policy and practice, rather than weakening efforts to protect women, will enhance the protection of women because violence by women is a major factor contributing to the victimization of women. When women are violent, they are the partners most likely to be injured (Straus, 2005a, 2005b). Therefore, efforts to end partner violence by women will contribute to protect women. It is time to make the prevention and treatment effort one that is aimed at ending all family violence, starting with spanking children, not just violence against women. Only then will women, as well as all other human beings, be safe in their own homes. The research reported in this paper, which shows that symmetry in mutuality and etiology is the predominant pattern world-wide, might help to achieve that end.

Figure 1. PERCENT OF VIOLENT COUPLES IN EACH MUTUALITY TYPE

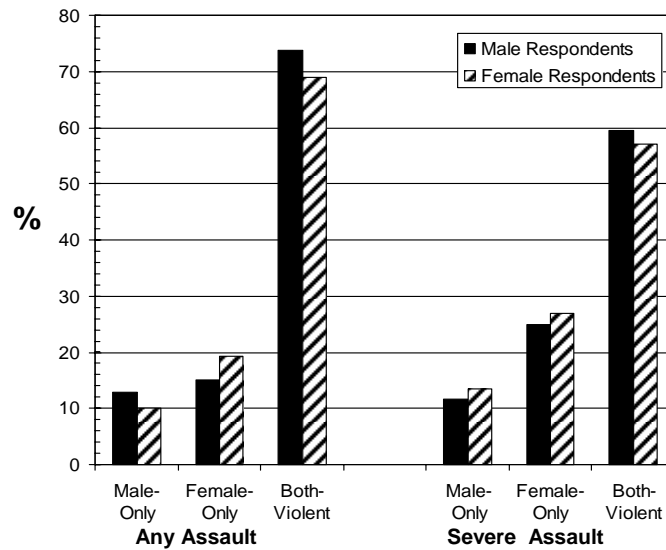


Fig. 2 Relationship Between Dominance Scale Score and Probability of Male-Only Violence, As Reported by Males and Females

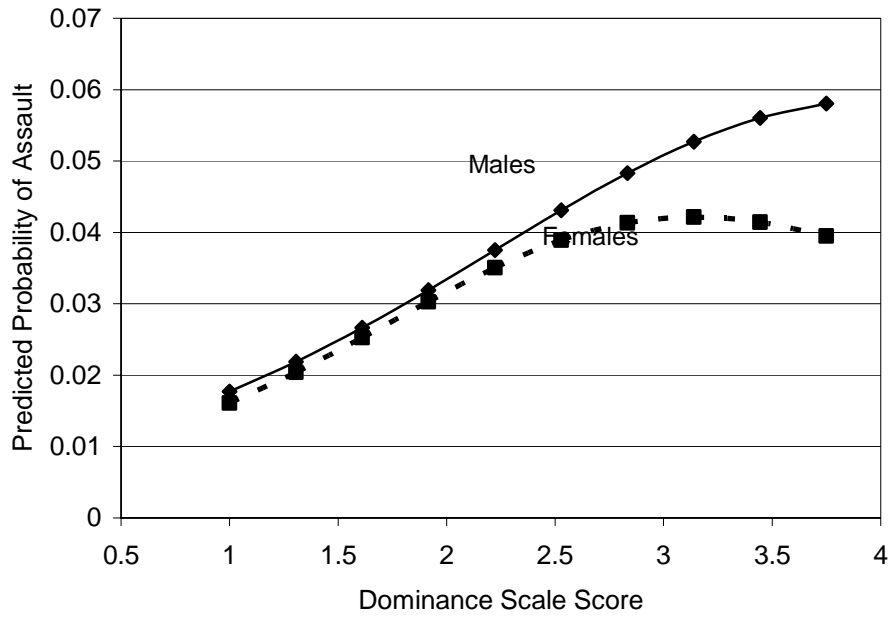


Fig. 3 Relationship Between Dominance Scale Score and Probability of Female-Only Violence, As Reported by Males and Females

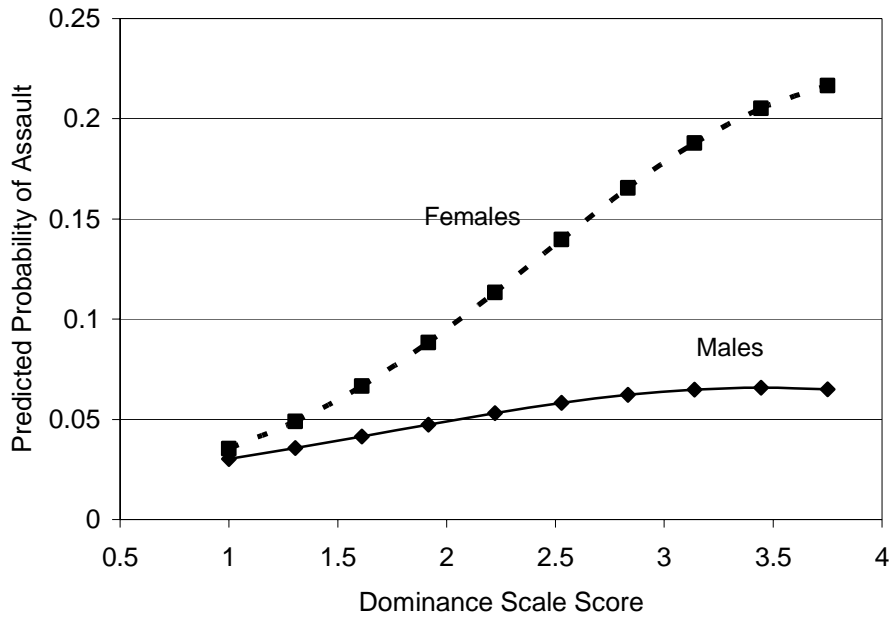


Fig. 4 Relationship Between Dominance Scale Score and Probability of Violence by Both Partners, as Reported by Males and Females

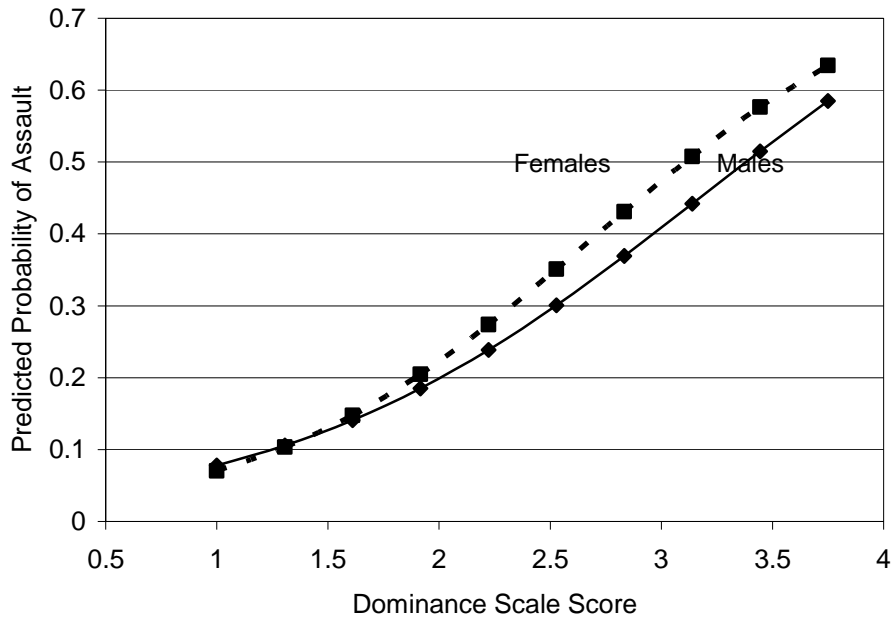


Table 1. Characteristics of Students by National Setting

National Setting	<i>N</i>	% Female	Age <i>M (SD)</i>	Social Desirability Scale <i>M (SD)</i>
All Countries	13,601	71.5	23.0 (6.22)	2.62 (.36)
Africa: South Africa (ZAF)	85	94.1	23.2 (4.68)	2.66 (.33)
Tanzania (TZA)	130	45.4	26.3 (4.72)	2.64 (.30)
Asia: China (CHN)	763	62.3	21.5 (2.67)	2.58 (.26)
China-Hong Kong (HKG)	521	69.7	24.4 (5.16)	2.55 (.29)
India (IND)	84	72.6	22.3 (2.38)	2.55 (.33)
Japan (JPN)	120	49.2	20.3 (1.09)	2.38 (.39)
Singapore (SGP)	199	71.4	24.5 (3.43)	2.53 (.31)
South Korea (KOR)	183	61.2	24.7 (3.87)	2.47 (.29)
Taiwan (TWN)	152	76.3	20.1 (1.86)	2.50 (.25)
Europe: Belgium (BEL)	686	78.4	27.5 (11.01)	2.64 (.36)
Germany (DEU)	483	69.2	24.1 (4.87)	2.50 (.30)
Great Britain (GBR)	480	82.6	20.8 (
Greece (GRC)	213	77.0	21.2 (2.20)	2.72 (.36)
Hungary (HUN)	152	68.4	22.3 (2.51)	2.61 (.35)
Lithuania (LTU)	347	68.0	20.5 (2.50)	2.52 (.29)
Malta (MLT)	97	76.3	22.4 (5.86)	2.60 (.37)
Netherlands (NDL)	380	87.4	23.4 (6.79)	2.67 (.38)
Romania (ROU)	236	89.8	21.0 (2.23)	2.77 (.38)
Russian Federation (RUS)	398	59.5	20.0 (2.79)	2.51 (.35)
Sweden (SWE)	671	76.2	28.5 (7.41)	2.64 (.36)
Switzerland (CHE)	310	76.8	34.2 (10.48)	2.62 (.35)
United Kingdom (UK)	407	86.0	20.9 (4.63)	2.57 (.37)
Latin America: Brazil (BRA)	236	67.4	21.0 (3.63)	2.66 (.39)
Guatemala (GTM)	168	48.2	19.6 (2.55)	2.60 (.38)
Mexico (MEX)	190	85.3	20.4 (3.56)	2.85 (.39)
Portugal (PRT)	352	68.2	21.7 (3.37)	2.74 (.33)
Venezuela (VEN)	209	62.7	23.9 (4.96)	2.91 (.41)
Middle East: Iran (IRN)	91	75.8	*	2.50 (.34)
Israel (ISR)	287	81.5	31.1 (8.64)	2.64 (.39)
North America: Canada (CAN)	1090	72.6	21.7 (4.26)	2.62 (.36)
United States (USA)	4020	69.3	21.6 (4.89)	2.64 (.37)
Oceania: Australia (AUS)	214	83.2	23.5 (7.11)	2.62 (.35)
New Zealand (NZD)	127	78.7	21.7 (5.82)	2.49 (.32)

Table 2. Prevalence of Overall Assault And Severe Assault, By Nation and Gender
(in rank order of male overall assault rate)

National Setting	Overall Assault			Severe Assault		
	Males	Females	F % of M	Males	Females	F % of M
All (median)	24.4	31.6	129	7.6	10.6	139
IRN	95.5	71.4	74	18.2	15.7	86
ZAF	42.9	39.3	91	42.9	14.0	32
GRC	38.5	25.5	66	17.6	13.9	79
IND	35.5	31.0	87	7.4	13.8	186
TZA	31.7	43.8	138	14.8	25.7	173
NDL	31.3	31.8	101	8.3	4.5	54
MLT	30.4	15.8	52	.0	5.3	530
ROU	29.2	32.2	110	8.7	10.8	124
BEL	28.9	34.7	120	7.2	11.6	161
MEX	26.7	47.3	177	13.3	17.2	129
CHE	26.7	24.2	90	6.9	5.4	78
USA	26.6	31.5	118	8.9	12.1	136
HUN	26.5	21.0	79	12.2	10.5	86
JPN	24.6	18.3	74	6.6	10.2	154
GBR	24.6	39.7	161	7.0	15.6	222
KOR	24.3	37.4	153	8.1	19.3	238
DEU	24.0	27.9	116	6.1	7.7	126
RUS	23.8	38.1	160	8.6	15.1	175
HKG	23.5	42.8	182	6.8	19.4	285
CHN	22.4	42.3	188	8.8	20.3	230
LTU	22.3	39.3	176	4.5	10.5	233
BRA	21.8	23.3	106	6.5	5.7	87
ISR	21.4	18.0	84	8.9	7.2	80
CAN	19.3	27.1	140	6.6	9.5	143
SWE	18.8	17.7	94	1.3	2.0	153
AUS	18.4	20.7	112	7.9	8.7	110
TWN	18.4	41.9	227	15.8	25.6	162
GTM	17.0	32.1	188	5.7	8.6	150
NZL	14.3	31.7	221	3.7	12.9	348
PRT	14.2	17.8	125	5.3	5.0	94
SGP	10.0	28.2	282	.0	7.0	700
VEN	25.3	23.7	93	14.5	9.6	66

* The F % of M percentages for Severe Violence in Malta and Singapore were computed by replacing the observed value of 0 for males with a value of 1 for purposes of this estimate.

Table 3. Prevalence And Mutuality of Any Physical Violence

Nation	Assault Rate (%)	MUTUALITY TYPE		
		Male-Only %	Female-Only %	Both-Violent%
All (median)	31.2	9.9	21.4	68.6
IRN	77.1	4.0	1.3	94.6
MEX	44.1	6.6	15.5	77.7
ZAF	39.5	7.6	10.2	82.0
GBR	37.5	4.2	19.2	76.5
TZA	37.4	6.9	1.7	91.3
HKG	37.0	7.7	36.9	55.2
TWN	36.1	6.7	25.4	67.8
CHN	34.7	6.9	31.7	61.2
LTU	33.9	5.6	23.5	70.7
BEL	33.4	11.2	19.8	68.8
IND	32.3	8.3	16.6	75.0
KOR	32.2	8.0	19.3	72.5
RUS	32.2	2.8	27.1	70.0
ROU	31.9	6.9	25.5	67.4
NDL	31.7	4.6	24.2	71.0
USA	30.0	9.7	20.6	69.6
GRC	28.5	26.2	16.2	57.5
NZL	27.9	8.7	28.2	63.0
DEU	26.6	12.4	24.8	62.7
CAN	24.9	9.4	22.1	68.3
CHE	24.7	9.4	25.8	64.7
VEN	24.3	17.4	19.0	63.4
GTM	24.2	8.3	25.0	66.6
HUN	22.7	12.5	17.5	70.0
SGP	22.7	9.4	32.0	58.4
BRA	22.	15.2	13.5	71.1
JPN	21.4	7.6	11.5	80.7
AUS	20.2	14.0	21.0	64.9
MLT	19.1	21.7	30.4	47.8
ISR	18.6	9.8	27.8	62.3
SWE	17.9	11.8	28.4	59.7
PRT	16.6	13.6	22.7	63.6

Table 4. Prevalence And Mutuality of Severe Physical Violence

Nation	Assault Rate (%)	MUTUALITY TYPE		
		Male-Only %	Female-Only %	Both-Violent%
All (median)	10.8	15.7	29.4	54.8
TWN	23.2	2.7	37.8	59.4
TZA	19.8	21.2	12.1	66.6
MEX	16.5	16.2	18.9	64.8
IRN	16.3	16.6	16.6	66.6
ZAF	16.1	18.7	25.0	56.2
CHN	15.9	19.7	41.3	38.8
HKG	15.5	9.0	43.4	47.4
GRC	14.8	24.3	17.0	58.5
KOR	14.8	6.4	22.5	70.9
GBR	14.4	11.2	28.1	60.5
RUS	12.4	7.5	30.1	62.2
IND	11.9	15.3	23.0	61.5
VEN	11.4	21.8	15.6	62.5
HUN	11.0	15.7	42.1	42.1
USA	11.0	15.2	28.1	56.6
NZL	10.9	.00	60.0	40.0
BEL	10.6	18.3	33.3	48.2
ROU	10.5	21.2	36.3	42.4
CAN	8.6	12.1	25.2	62.6
AUS	8.5	20.0	28.0	52.0
LTU	8.5	15.1	36.3	48.4
JPN	8.3	10.0	10.0	80.0
ISR	7.5	15.3	23.0	61.5
DEU	7.2	17.3	28.2	54.3
GTM	7.1	16.6	27.7	55.5
BRA	5.9	11.7	17.6	70.5
CHE	5.7	9.5	28.5	61.9
PRT	5.0	21.7	8.7	69.5
NDL	4.9	8.7	43.4	47.8
SGP	4.9	7.6	46.1	46.1
MLT	4.0	37.5	50.0	12.5
SWE	1.7	37.5	37.5	25.0

Table 5. Dominance Scale (In Rank Order Of Mean Male Dominance Score)		
	Mean Score Of:	
NATION	MALES	FEMALES
ALL (median)	1.98	1.99
TZA	2.38	2.38
RUS	2.37	2.21
IRN	2.27	2.32
TWN	2.23	2.28
CHN	2.22	2.15
GRC	2.17	1.98
KOR	2.17	2.25
LTU	2.11	2.20
HKG	2.10	2.16
IND	2.10	2.18
HUN	2.08	1.93
MEX	2.03	2.10
VEN	2.03	1.93
ZAF	2.01	2.08
ROU	2.00	2.01
GTM	1.97	1.98
BRA	1.96	1.94
SGP	1.96	2.03
USA	1.93	1.91
JPN	1.90	1.97
PRT	1.89	1.89
DEU	1.82	1.90
ISR	1.81	1.86
AUS	1.80	1.83
GBR	1.80	1.87
BEL	1.77	1.80
MLT	1.75	1.95
NZL	1.75	1.82
CAN	1.73	1.81
CHE	1.73	1.76
NDL	1.67	1.70
SWE	1.65	1.68

Table 6. Logistic Regression of Relation of Dominance By One Partner To Violence Mutuality Types, by Gender (All Violence)

Dependent Variable	Independent Variables	B	Std. Error	Wald	Sig.	Odds Ratio	95% Confidence	
A. MALE RESPONDENTS								
Male-Only Violence	Male Dominance	.830	.236	12.381	.000	2.293	.932	1.007
	Age (years)	-.032	.020	2.603	.107	.969	1.009	1.052
	Relationship Length (months)	.030	.011	7.768	.005	1.030	.757	1.092
	Socioeconomic Status Scale	-.095	.093	1.043	.307	.909	.540	1.603
	Social Desirability Scale	-.072	.278	.068	.795	.930	.540	1.603
Female-Only Violence	Male Dominance	.676	.198	11.635	.001	1.965	.942	1.003
	Age (years)	-.028	.016	3.069	.080	.972	1.020	1.056
	Relationship Length (months)	.037	.009	17.807	.000	1.038	.904	1.230
	Socioeconomic Status Scale	.053	.079	.453	.501	1.054	.495	1.227
	Social Desirability Scale	-.249	.232	1.158	.282	.779	.495	1.227
Both Violent	Male Dominance	1.131	.108	109.676	.000	3.098	.958	.991
	Age (years)	-.026	.009	9.362	.002	.974	1.039	1.059
	Relationship Length (months)	.048	.005	97.167	.000	1.049	.952	1.127
	Socioeconomic Status Scale	.	.043	.679	.410	1.036	.238	.399
	Social Desirability Scale	- 1.177	.131	80.343	.000	.308	.238	.399

B. FEMALE RESPONDENTS								
Male-Only Violence	Female Dominance	.967	.170	32.409	.000	2.629	.980	1.016
	Age (years)	-.002	.009	.044	.833	.998	1.016	1.045
	Relationship Length (months)	.030	.007	16.738	.000	1.030	.930	1.196
	Socioeconomic Status Scale	.053	.064	.694	.405	1.055	.637	1.275
	Social Desirability Scale	-.104	.177	.345	.557	.901	1.885	3.668
Female-Only Violence	Female Dominance	1.231	.104	139.649	.000	3.425	.972	.996
	Age (years)	-.016	.006	6.681	.010	.984	1.025	1.044
	Relationship Length (months)	.034	.004	57.532	.000	1.035	.911	1.064
	Socioeconomic Status Scale	-.016	.040	.156	.693	.984	.333	.518
	Social Desirability Scale	-.879	.113	60.369	.000	.415	.333	.518
Both Violent	Female Dominance	1.439	.074	382.723	.000	4.215	.954	.972
	Age (years)	-.038	.005	63.507	.000	.963	1.047	1.060
	Relationship Length (months)	.053	.003	274.468	.000	1.054	.948	1.056
	Socioeconomic Status Scale	.001	.027	.001	.980	1.001	.302	.412
	Social Desirability Scale	-1.042	.079	175.321	.000	.353	.302	.412

Table 7. Logistic Regression of Relation of Dominance By One Partner To Violence Mutuality Types, by Gender (Severe violence)

Dependent Variable	Independent Variables	B	Std. Error	Wald	Sig.	Odds Ratio	95% Confidence I	
							Lower Bound	Upper Bound
A. MALE RESPONDENTS								
Male-Only Violence	Male Dominance	1.638	.322	25.860	.000	5.147	2.737	9.677
	Age (years)	-.017	.028	.363	.547	.983	.931	1.038
	Relationship Length (months)	.038	.015	6.222	.013	1.038	1.008	1.070
	Socioeconomic Status Scale	-.044	.136	.106	.745	.957	.734	1.248
	Social Desirability Scale	-.411	.413	.988	.320	.663	.295	1.490
Female-Only Violence	Male Dominance	.517	.243	4.544	.033	1.678	1.043	2.700
	Age (years)	-.024	.020	1.400	.237	.977	.939	1.016
	Relationship Length (months)	.037	.011	11.597	.001	1.038	1.016	1.061
	Socioeconomic Status Scale	-.092	.097	.896	.344	.912	.753	1.104
	Social Desirability Scale	-.634	.290	4.777	.029	.530	.300	.937
Both Violent	Male Dominance	1.503	.170	78.278	.000	4.497	3.223	6.274
	Age (years)	-.009	.014	.419	.517	.991	.964	1.019
	Relationship Length (months)	.025	.008	10.660	.001	1.026	1.010	1.041
	Socioeconomic Status Scale	.046	.071	.427	.514	1.047	.912	1.202
	Social Desirability Scale	-.908	.216	17.697	.000	.403	.264	.616

Table 7 continued
B. FEMALE RESPONDENTS

Male-Only Violence	Female Dominance	1.611	.191	71.465	.000	5.010	3.448	7.280
	Age (years)	.005	.011	.226	.634	1.005	.984	1.027
	Relationship Length (months)	.029	.008	11.621	.001	1.029	1.012	1.047
	Socioeconomic Status Scale	-.009	.075	.013	.908	.991	.855	1.149
	Social Desirability Scale	-.148	.212	.484	.487	.863	.569	1.308
Female-Only Violence	Female Dominance	1.469	.139	112.396	.000	4.344	3.311	5.700
	Age (years)	-.024	.010	5.812	.016	.977	.958	.996
	Relationship Length (months)	.034	.006	30.014	.000	1.034	1.022	1.047
	Socioeconomic Status Scale	.111	.055	4.115	.042	1.117	1.004	1.243
	Social Desirability Scale	1.064	.158	45.269	.000	.345	.253	.470
Both Violent	Female Dominance	1.742	.110	250.716	.000	5.708	4.601	7.082
	Age (years)	-.027	.008	12.349	.000	.973	.958	.988
	Relationship Length (months)	.040	.005	66.981	.000	1.041	1.031	1.051
	Socioeconomic Status Scale	-.018	.043	.176	.675	.982	.903	1.069
	Social Desirability Scale	-.981	.125	61.379	.000	.375	.293	.479

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