



Dominance and symmetry in partner violence by male and female university students in 32 nations

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Abstract

The study investigated the widely held beliefs that physical violence against partners (PV) in marital, cohabiting, and dating relationships is almost entirely perpetrated by men, and that the major risk factor for PV is *male* dominance in the relationship. The empirical data on these issues were provided by 13,601 university students in 32 nations who participated in the International Dating Violence Study. The results in the first part of this paper show that almost one-third of the female as well as male students physically assaulted a dating partner in the previous 12 months, and that the most frequent pattern was bidirectional, 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 article focuses on whether there is gender symmetry in a crucial aspect of the etiology of partner PV — 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 PV is primarily a male crime and that, when women are violent, it is usually in self-defense. Because these assumptions are crucial elements in almost all partner PV prevention and treatment programs, a fundamental revision is needed to bring these programs into alignment with the empirical data. Prevention and treatment of PV could become more effective if the programs recognize that most PV is bidirectional and act on the high rate of perpetration by women and the fact that dominance by the female partner is as strongly related to PV as dominance by the male partner.

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1. Introduction

This article reports the results of an empirical investigation of two of the most controversial and important issues in understanding physical violence between partners in 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 physical violence?

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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 risk factor *male* dominance or dominance by one partner, regardless of whether it is the male female partner?

For reasons explained elsewhere (Straus, 2007b), mentioning these two issues as topics for empirical investigation is often regarded as undermining efforts to end partner violence (PV from here on), and often greeted with hostility because they implicitly challenge two core principles that underlie most efforts to prevent and treat PV.

The first principle is that PV 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 PV to “the hierarchical and male-dominant nature of society...” The second core 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 PV, bit by bit, these assumptions about prevalence and etiology have been contradicted by a mass of empirical evidence from my own research and from research by many others. Consequently, there is a need for a much more multi-faceted view of PV. This would recognize 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, until recently, few have accepted this evidence, and some of those few will not publicly express their position for fear of the type of ostracism to which it will expose them (Straus, 1990c, *in press*). Instead, the evidence on gender symmetry in prevalence and etiology is typically disregarded and often explicitly denied, or withheld from publication (Straus, 2007b, *in press*). As will be suggested in the conclusion, this denial has crippled prevention and treatment efforts.

The focus of this paper is on physical assault because that is the aspect of partner maltreatment that has been the focus of the most controversy. In the context of this paper, PV refers to physical assault. Two aspects of gender symmetry in PV will be addressed: bidirectional perpetration by men and women and parallel etiology of violence. The main objectives of this article 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 the 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 article.

There are many reasons for the conceptualization of PV as a problem of violence against women, some of which will be mentioned in this article, and are presented more fully in Straus (2007b). One of the most important is that the injury rate for male perpetrated violence is much higher than the rate for physical attacks by women. For this reason and because of the lesser financial resources of women, there is a much greater need for victim services for female than for male victims of PV.

2. Previous evidence on bidirectional perpetration

The importance of data on bidirectionality is based on the assumption that violence occurs in the context of an ongoing system of family relationships (Winstok, 2007). To the extent that this is the case, research and clinical work on PV needs to take into account the behavior of both partners in the family system, including violence by both partners. 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 as or more prevalent than Male-Only violence, and that the most prevalent pattern is bidirectional violence; i.e., both partners are violent. The 1975 and the 1985 National Family Violence Surveys found that about half of the violence was bidirectional, one-quarter was male-only, and one-quarter was female-only (Gelles & Straus, 1988; Straus, Gelles, & Steinmetz, 1980, 2006). The National Comorbidity Study (Kessler, Molnar, Feurer, & Appelbaum,

2001) found similar percentages. There are many other studies showing bidirectionality (Anderson, 2002; Capaldi & Owen, 2001; McCarroll, Ursano, Fan, & Newby, 2004; Moffitt, Caspi, Rutter, & Silva, 2001; Whitaker, Haileyesus, Swahn, & Saltzman, 2007; Williams & Frieze, 2005).

A limitation of the studies cited is that the data come from general population samples rather than from “clinical” samples such as clients of shelters for battered women or men arrested for PV. At that “clinical level” of PV, male predominance may prevail or may be more common than in general population violent couples. However, because the informal rules of most organizations serving female victims forbid asking women about their own violence, data is scarce. Nevertheless, bidirectionality has been found in a number of studies, starting with the Walker’s *Battered Woman Syndrome*. Walker found that 1 out of 4 women in battering relationships had “used physical force to get something you wanted” (Walker, 1984, p. 174). Giles-Sims (1983 #509) found that in the year prior to coming to a shelter, 50% of the women reported assaulting their partner, and in the six months *after* leaving the shelter, 42% reported assaulting a partner. Moreover, Giles-Sims’s case study data suggest that these assaults were not likely to have been in self-defense. A study by Gondolf of men in four batterer treatment programs found that 69% of the female partners had also assaulted their partner (Gondolf, 2002, p. 104). Thus, although there are important differences between clinical samples and general population samples of violent couples, in respect to bidirectionality, they may not be as great as I previously thought (Straus, 1990b). Analyses of couples in the Dunedin longitudinal cohort study found that “The less severe form (of PV) involved primarily woman-to-man abuse, but the clinical form involved abuse practiced by both men and women” (Ehrensaft, Moffitt, & Caspi, 2004). Thus, although there are large numbers of women who are victims of repeated severe injury-producing violence whose only violence is in self-defense, and who urgently need assistance, the empirical evidence indicates that mutual violence (both partners violent) is the predominant pattern at all levels of violence.

3. Research on gender symmetry in dominance

3.1. Symmetry in dominance

The scholarly literature on PV contains hundreds of publications which attribute PV as a method used by men to maintain dominance in the relationship. One of my articles (Straus, 1976) is an early example. A recent and highly influential example is the World Health Organization report on violence (Krug, Dahlberg, Mercy, Zwi, & Lozano, 2002). Another recent example by an experienced and respected researcher is the assertion by Hamberger (Hamberger & Guse, 2002) that “Men in contrast {to women} appear to be motivated to use violence to dominate and control”. Their article cited about 80 studies, but none of them provided empirical evidence on gender differences in dominance and control motivation. This is not because there are no studies comparing relationship dominance by men and women. There are a number of such studies (Ehrensaft & Vivian, 1999 #10997; Felson & Outlaw, 2007; Laroche, 2005 #8553; Oswald & Russell, 2006 #11180; Stets, 1991 #10983; Stets & Hammons, 2002 #10742). All found no important difference in control or dominance by male and female partner.

3.2. Dominance and violence

As for gender differences in the link between dominance and partner violence, the study of a nationally representative sample of 2143 American couples reported in *Behind Closed Doors: Violence In The American Family* (Straus et al., 1980, 2006) found that equalitarian couples were the least violent and that dominance by either the female or male partner was associated with an increased rate of violence. Since then, several other studies have found that dominance or control by women as well as men is associated with an increased rate of violence by women (Kim & Emery, 2003; Medeiros & Straus, 2006; Stets & Pirog-Good, 1990; Straus et al., 1980, (2006); Straus & Members of the International Dating Violence Research Consortium, 2006; Sugihara & Warner, 2002; Tang, 1999). 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.

3.3. Self-defense

Articles asserting the male dominance theory of PV usually also assert that, when women are violent, it is primarily in self-defense, or in response to years of brutal violence and subjugation. This follows from the beliefs that it is men

who perpetrate PV 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 PV that needs to be clarified, and is also important for the bidirectionality data to be presented because it might explain predominance of bidirectional 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 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. (DeKesseredy, Saunders, Schwartz, & Shahid, 1997) does report data but their data shows that only 6.9% of the women acted in self-defense, and reference #38 Johnson & Ferraro (Michael P. Johnson & Ferraro, 2000) is a review article that cites references 32 and 37 and other references which also present no empirical data.

At least six other studies report data on self-defense. Like the DeKesseredy et al. study, five of the six found that only a small percentage of female violence was in self-defense (Carrado, George, Loxam, Jones, & Templar, 1996; Cascardi & Vivian, 1995; Felson & Messner, 1998; Follingstad, Wright, Lloyd, & Sebastian, 1991; Pearson, 1997; Sarantakos, 1998; Sommer, 1996). For the one study that 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, like the motivations of men, are coercion, anger, and punishing misbehavior by their partner (Cascardi & Vivian, 1995; Fiebert & Gonzalez, 1997). For example, Pearson (1997) reports that 90% 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 (1989) studied 24 female perpetrated homicides and found that 60% had a previous 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".

3.4. Conceptualization and measurement of dominance

This study used the conceptualization of dominance based on the feminist literature, and the parallel measure of dominance, developed by Hamby (Hamby, 1996). This identifies three different forms or modalities of dominance. Each represents a departure from an equalitarian relationship. *Authority* is a relationship in which one partner holds a majority of decision-making power and is "in charge". *Restrictiveness* departs from an egalitarian relationship because one partner assumes the right to intrude upon the other's behavior, even when that behavior does not directly involve the restrictive partner, as when restrictive partners prohibit their partners from spending time with certain individuals. *Disparagement* occurs when one partner fails to equally value the other partner and has an overall negative appraisal of his or her partner's worth.

4. Hypotheses

The empirical studies reviewed led to the following hypotheses:

1. The largest single category of PV is bidirectional 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.

5. Methods

5.1. 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). A cross-national study may be the most appropriate way to test the hypotheses because of the large nation-to-nation differences in the prevalence of violence against women and male dominance (García-Moreno, Jansen, Ellsberg, Heise, & Watts, 2005; Krug et al., 2002).

5.2. Sample

This article presents results for a convenience sample of 4,239 students at 68 universities in 32 nations. The data were usually obtained by administering a questionnaire during regularly scheduled classes. Most of the classes were in psychology, sociology, criminology, and family studies. The percentage of students who chose to participate and deposited a completed questionnaire ranged from 42 to 100%, with most participation rates ranging from 85 to 95%. 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. Nevertheless, there is strong evidence that the behavior and opinions of the students in this study reflect differences in the national contexts in which they are living (see Section 7.1 and Straus, 2007a).

Only students who were or had been in a relationship of a month or more were included in the analyses. The questionnaires were examined 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 in the current analyses to be presented. The national setting median sample size was 241 (range 90 to 4040).

5.3. 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 refuse to 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. They also provided contact information for area social service agencies should they need assistance.

5.4. 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, & Sugarman, 1999; Straus & Mouradian, 1999). This scale is a nine item short form of the Dominance scale developed by 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 was 1 to 3.96 (mean = 1.95, SD = 0.39).

5.5. Measures of partner violence

5.5.1. The CTS2

Physical assault was measured by the revised Conflict Tactics Scales or CTS2 (Straus, Hamby, Boney-McCoy, & Sugarman, 1996). In the past 25 years, the CTS has 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), analyses were conducted for both overall PV, and separately for severe violence.

5.5.2. Mutuality types

This article also uses the recently published “Mutuality Types” (Straus & Douglas, 2004) which classifies relationships where violence occurred into three mutually exclusive categories of perpetration: Male-Only, Female-

Only, and Both Violent. This typology enables research on an important aspect of PV that, despite its use in studies such as the National Comorbidity Study (Kessler et al., 2001), is seldom investigated: the degree to which PV is mutual (i.e., both partners are violent) 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 question 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 PV were done separately for male and female participants.

5.5.3. *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 behaviors had occurred in the past year. 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 largely overlap. To avoid this redundancy, this article omits the minor assault variable and presents results for any assault and for severe assault. Separate results are presented for mutuality of severe assaults, i.e. both severely assault.

5.6. *Limited Disclosure 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 scores on a scale which measures the tendency to avoid reporting socially undesirable behavior—the Limited Disclosure Scale of the Personal and Relationships Profile (Straus et al., 1999; Straus & Mouradian, 1999). This is a 13-item scale based on Reynolds short-form Social Desirability scale (Reynolds, 1982). It asks 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 PV. The response categories and the theoretical range of the Limited Disclosure Scale are the same as for the Dominance scale (1 through 4). The scores for students in each national context ranged from 2.38 to 2.91; the median score was 2.61.

5.7. *Gender symmetry*

Two aspects of gender symmetry will be investigated: symmetry in perpetration and symmetry in a key risk factor for PV — dominance in the relationship. The criterion of symmetry in perpetration is that the percent of women who physically assault a male partner is as high or higher than the percent of men who physically assault a female partner. In addition, this must apply to both minor and severe assaults (as defined above). The criterion for symmetry in dominance is that the mean Dominance scale scores of the women in this study are as high or higher than those of the men, and that score on the Dominance scale is significantly related to perpetration of PV by women as well as by men.

5.8. *Demographic characteristics*

5.8.1. *Gender*

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.

5.8.2. *Age*

Students' ages ranged from 18 to 40, with a median of 22.3. It is well established that younger ages are associated with higher rates of violent crime, including PV (Stets & Straus, 1989).

5.8.3. Relationship length

The length of the relationships varied greatly. Whereas only 9.7% had been in their current relationship for one month, 38% had been in the relationships 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.

6. Prevalence of partner violence

6.1. Assault rates

6.1.1. Overall assault rate

Table 1 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 based on the reports by male students, and the data on violence by women are based on the reports of female students.

Table 1

Prevalence of overall assault and severe assault, by national setting and gender, as reported by men and women (in rank order of male overall assault rate)

National Setting	Minor assault only			Severe assault		
	Males	Females	F % of M	Males	Females	F % of M
All (median)**	24.4	31.6	129	7.6	10.6	139
Iran	95.5	71.4	74	18.2	15.7	86
South Africa	42.9	39.3	91	42.9	14.0	32
Greece	38.5	25.5	66	17.6	13.9	79
India	35.5	31.0	87	7.4	13.8	186
Tanzania	31.7	43.8	138	14.8	25.7	173
Netherlands	31.3	31.8	101	8.3	4.5	54
Malta*	30.4	15.8	52	.0	5.3	?
Romania	29.2	32.2	110	8.7	10.8	124
Belgium	28.9	34.7	120	7.2	11.6	161
Mexico	26.7	47.3	177	13.3	17.2	129
Switzerland	26.7	24.2	90	6.9	5.4	78
United States	26.6	31.5	118	8.9	12.1	136
Hungary	26.5	21.0	79	12.2	10.5	86
Venezuela	25.3	23.7	93	14.5	9.6	66
Japan	24.6	18.3	74	6.6	10.2	154
Great Britain	24.6	39.7	161	7.0	15.6	222
South Korea	24.3	37.4	153	8.1	19.3	238
Germany	24.0	27.9	116	6.1	7.7	126
Russia	23.8	38.1	160	8.6	15.1	175
Hong Kong**	23.5	42.8	182	6.8	19.4	285
China**	22.4	42.3	188	8.8	20.3	230
Lithuania**	22.3	39.3	176	4.5	10.5	233
Brazil	21.8	23.3	106	6.5	5.7	87
Israel	21.4	18.0	84	8.9	7.2	80
Canada*	19.3	27.1	140	6.6	9.5	143
Sweden	18.8	17.7	94	1.3	2.0	153
Australia	18.4	20.7	112	7.9	8.7	110
Taiwan	18.4	41.9	227	15.8	25.6	162
Guatemala	17.0	32.1	188	5.7	8.6	150
New Zealand	14.3	31.7	221	3.7	12.9	348
Portugal	14.2	17.8	125	5.3	5.0	94
Singapore	10.0	28.2	282	.0	7.0	?

* and ** indicate significant difference between male and female percentages at .05 and .01 level based on X^2 for 2 by 3 cross tabulations (gender by no violence, minor violence only) for each national setting.

? Indicates that the F % of M percent for Severe Violence could not be computed because the rate for males was 0. The effect is to underestimate the median F % of M.

The first pair of columns in Table 1 under the heading Overall Assault gives the percent of male and female students that physically assaulted a dating partner. The first row of these two columns shows that, on average for all the students in the study, about one-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.

6.1.2. 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 1 show much lower, but still high, rates of “severe violence”. These are attacks such as punching, kicking, and hitting with an object, which have a higher probability of causing an injury. Overall, 8% of male students and 11% of female students in this study severely assaulted a dating partner. Again the rates obtained when students from all national contexts are combined are similar for males and females, although very 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 1 shows that the rates ranged from a high of 42.9% in South Africa to zero in Malta and Singapore.

6.1.3. Ratio of male to female assaults

The column headed “F % of M” gives the percent that the rate of assault by females is of the rate of assault by males. The row for all nations together shows that the female percent of the male rate is 129, i.e. that perpetration by the women in this study is 29% greater than the perpetration rate of the men in this study. For severe violence, the difference is somewhat greater—a 39% higher rate for women than for men. Examining the rows of Table 1 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.

6.2. Bidirectionality and asymmetry

6.2.1. Prevalence of bidirectional and asymmetric violence

Fig. 1 is based on the sub-group of 4,239 students who reported one or more incidents of violence because they are the only students for whom the question of bidirectionality is relevant. The left panel of Fig. 1 presents the results on

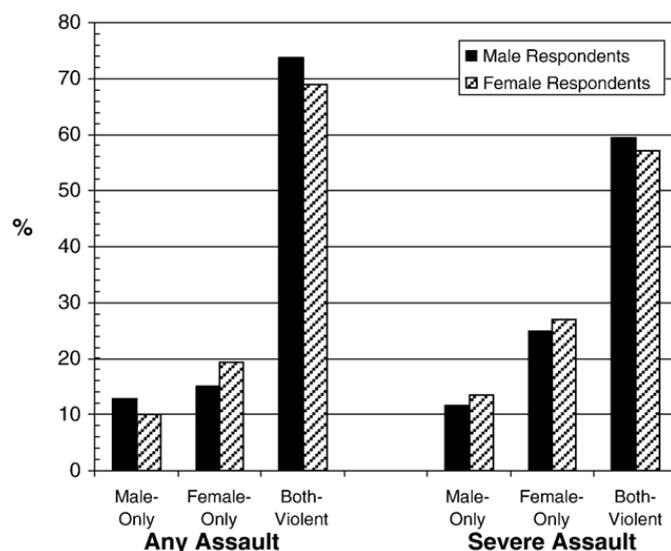


Fig. 1. Percent of violent couples in each mutuality type.

Table 2
Prevalence and bidirectionality of any physical violence

Nation	Assault rate (%)	Bidirectionality type ^a		
		Male-only %	Female-only %	Both Violent%
All (median)	31.2	9.9	21.4	68.6
Iran	77.1	4.0	1.3	94.6
Mexico	44.1	6.6	15.5	77.7
South Africa	39.5	7.6	10.2	82.0
Great Britain	37.5	4.2	19.2	76.5
Tanzania	37.4	6.9	1.7	91.3
Hong Kong**	37.0	7.7	36.9	55.2
Taiwan	36.1	6.7	25.4	67.8
China**	34.7	6.9	31.7	61.2
Lithuania**	33.9	5.6	23.5	70.7
Belgium**	33.4	11.2	19.8	68.8
India	32.3	8.3	16.6	75.0
South Korea	32.2	8.0	19.3	72.5
Russia	32.2	2.8	27.1	70.0
Romania	31.9	6.9	25.5	67.4
Netherlands*	31.7	4.6	24.2	71.0
United States	30.0	9.7	20.6	69.6
Greece	28.5	26.2	16.2	57.5
New Zealand*	27.9	8.7	28.2	63.0
Germany	26.6	12.4	24.8	62.7
Canada	24.9	9.4	22.1	68.3
Switzerland*	24.7	9.4	25.8	64.7
Venezuela	24.3	17.4	19.0	63.4
Guatemala	24.2	8.3	25.0	66.6
Hungary	22.7	12.5	17.5	70.0
Singapore	22.7	9.4	32.0	58.4
Brazil	22.0	15.2	13.5	71.1
Japan	21.4	7.6	11.5	80.7
Australia	20.2	14.0	21.0	64.9
Malta	19.1	21.7	30.4	47.8
Israel*	18.6	9.8	27.8	62.3
Sweden	17.9	11.8	28.4	59.7
Portugal*	16.6	13.6	22.7	63.6

* and ** indicate significant difference between male and female percentages at .05 and .01 level.

^a Percentages are based on the 4239 participants who reported a violent act by themselves or their partner. The *n*'s are 420 Male-Only, 908 Female-Only, and 2911 Bidirectional. The *n*'s for each row can be computed using the *n*'s in each row of Table 1 and the percentages in each mutuality type.

symmetry in PV 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 cases, and Male-Only violence was found in one out of ten couples. The right panel of Fig. 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 bidirectional violence is still the largest category by far. The least frequently occurring type is Male-Only.

6.2.2. National setting differences

Tables 2 and 3 compare national settings on bidirectionality 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 2, 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 bidirectionality 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, bidirectional violence is the largest category.

Table 3
Prevalence and bidirectionality of severe physical violence

National setting	Assault rate (%)	Bidirectionality type		
		Male-Only %	Female-Only %	Both Violent%
All (median)	10.8	15.7	29.4	54.8
Taiwan	23.2	2.7	37.8	59.4
Tanzania	19.8	21.2	12.1	66.6
Mexico	16.5	16.2	18.9	64.8
Iran	16.3	16.6	16.6	66.6
South Africa	16.1	18.7	25.0	56.2
China	15.9	19.7	41.3	38.8
Hong Kong	15.5	9.0	43.4	47.4
Greece	14.8	24.3	17.0	58.5
South Korea	14.8	6.4	22.5	70.9
Great Britain	14.4	11.2	28.1	60.5
Russia*	12.4	7.5	30.1	62.2
India	11.9	15.3	23.0	61.5
Venezuela	11.4	21.8	15.6	62.5
Hungary	11.0	15.7	42.1	42.1
United States	11.0	15.2	28.1	56.6
New Zealand	10.9	0.0	60.0	40.0
Belgium	10.6	18.3	33.3	48.2
Romania	10.5	21.2	36.3	42.4
Canada	8.6	12.1	25.2	62.6
Australia	8.5	20.0	28.0	52.0
Lithuania*	8.5	15.1	36.3	48.4
Japan	8.3	10.0	10.0	80.0
Israel	7.5	15.3	23.0	61.5
Germany	7.2	17.3	28.2	54.3
Guatemala	7.1	16.6	27.7	55.5
Brazil	5.9	11.7	17.6	70.5
Switzerland	5.7	9.5	28.5	61.9
Portugal	5.0	21.7	8.7	69.5
Netherlands	4.9	8.7	43.4	47.8
Singapore	4.9	7.6	46.1	46.1
Malta	4.0	37.5	50.0	12.5
Sweden	1.7	37.5	37.5	25.0

* and ** indicate significant difference between male and female percentages at .05 and .01 level.

For severe Violence, the results in Table 3 parallel those for overall assaults. In none of the 32 National settings is Male-Only the largest category. Moreover, for the two national settings that 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.

6.2.3. Age and partner violence

The results on bidirectionality for university student dating couples are similar in some respects to that found in research on married couples, and different in other respects. The results are similar in that the most frequent pattern is bidirectional violence. However, they differ in that previous studies of married couples have found about 50% bidirectional compared to 69% in this study. In addition, with married couples, the Male-Only and Female-Only types are about equally prevalent. The differences are probably the result of the age of the sample. PV, like other types of violence, decreases rapidly with age, from the 30–40% rate typically found for all couples (married or dating) 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; Sutor, Pillemer, & Straus, 1990).

6.2.4. Symmetry in severity

Although the results just presented show that symmetry in prevalence applies to severe as well as minor assaults, the analysis did not take into account whether one partner engaged in severe and the other in only minor assaults. This possibility was investigated by cross tabulating the severity level of the violence the student perpetrated by the severity of the violence of the partner. For students in the minor-only level category, the percent whose partners engaged in severe assaults was 13.4% of the partners of men and 9.9% of the partners of women. For male students who engaged in severe assault on a partner, the female partner restricted the attacks to the minor assaults in 14% of the cases, whereas male partners of women restricted their violence to the minor level in 25% of the cases. Of students who perpetrated severe assaults, 85% of the partners of men, and 74% of the partners of women, also engaged in severe assaults. Thus, reciprocity in severity is predominant in bidirectional violence, but when the partner engages in more severe violence than the student reported for him or herself, it was more often the female partners of men. Therefore, to the extent that the previously presented results misrepresent the degree of symmetry because the category Both Violent does not take into account differences in severity level, the misrepresentation is in failing to bring out that when both partners are violent, more women than men tend to engage in violence that is more severe than that of their partner. In evaluating these results, it is important to keep in mind that although there may be symmetry in perpetration, at both the minor and severe levels, men inflict more physical injury than women.

Table 4
Dominance scale (in rank order of mean male Dominance score)

Nation	Mean score of:	
	Males	Females
ALL(median)	1.98	1.99
Tanzania	2.38	2.38
Russia**	2.37	2.21
Iran	2.27	2.32
Taiwan	2.23	2.28
China**	2.22	2.15
Greece	2.17	1.98
South Korea	2.17	2.25
Lithuania**	2.11	2.20
Hong Kong	2.10	2.16
India	2.10	2.18
Hungary*	2.08	1.93
Mexico	2.03	2.10
Venezuela*	2.03	1.93
South Africa	2.01	2.08
Romania	2.00	2.01
Guatemala	1.97	1.98
Brazil	1.96	1.94
Singapore	1.96	2.03
United States	1.93	1.91
Japan	1.90	1.97
Portugal	1.89	1.89
Germany	1.82	1.90
Israel	1.81	1.86
Australia	1.80	1.83
Great Britain	1.80	1.87
Belgium	1.77	1.80
Malta**	1.75	1.95
New Zealand	1.75	1.82
Canada**	1.73	1.81
Switzerland	1.73	1.76
Netherlands	1.67	1.70
Sweden	1.65	1.68

* and ** indicate significant difference between mean scores for males and females at .05 and .01 level.

7. 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, respectively. 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 almost the same as 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 et al., 2005; Sugarman & Straus, 1988).

7.1. 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 Limited Disclosure Scale, were computed. The partial correlation of $-.69$ indicates that the more Gender Empowerment, 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.

8. Relation of dominance to partner violence

A previous article tested the idea that the etiology of PV by women is different than violence by men (Medeiros & Straus, 2006). 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 article 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 PV.

The results of the multinomial logistic regression analysis to investigate the degree to which dominance is part of the etiology of PV 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 PV, the regression coefficients were converted to estimated probabilities for each type of violence and those estimates are graphed in Figs. 2–4.

Table 5 uses the dependent variable whether there had been *any* violence in the relationship during the previous 12 months. Most of the violent acts in that overall measure of violence are relatively minor, for example, slapping and throwing things at a partner. Table 6 presents the results using *severe* violence such as punching, choking, and attacks

Table 5
Logistic regression of relation of dominance by one partner to violence bidirectionality types, by gender (all violence)

Dependent variable	Independent variables	B	Standard error	Wald	Significance	Odds ratio	95% confidence interval	
							Lower bound	Upper bound
<i>A. Male respondents</i>								
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
	Limited Disclosure 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
	Limited Disclosure 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	.039	.043	.679	.410	1.036	.238	.399
	Limited Disclosure Scale	1.177	.131	80.343	.000	.308	.238	.399
<i>B. Female respondents</i>								
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
	Limited Disclosure 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
	Limited Disclosure 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
	Limited Disclosure Scale	-1.042	.079	175.321	.000	.353	.302	.412

with an object. It is necessary to consider severe violence separately because it is often claimed that male predominance in partner violence is particularly great for this level of violence, and that the etiology of severe violence is different for severe violence.

8.1. Dominance and overall violence

8.1.1. 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 of 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.

Table 6
Logistic regression of relation of dominance by one partner to violence bidirectionality types, by gender (severe violence)

Dependent variable	Independent variables	B	Standard error	Wald	Significance	Odds ratio	95% confidence interval	
							Lower bound	Upper bound
<i>A. Male respondents</i>								
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
	Limited Disclosure 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
	Limited Disclosure 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
	Limited Disclosure Scale	-.908	.216	17.697	.000	.403	.264	.616
<i>B. Female respondents</i>								
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
	Limited Disclosure 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
	Limited Disclosure 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
	Limited Disclosure Scale	-.981	.125	61.379	.000	.375	.293	.479

8.1.2. Dominance by men and Female-Only violence

Moving down to the panel for Female-Only violence (as reported by *male* students), shows similar results. Dominance by males in this study is associated with an average 1.96 times increase in the probability of Female-Only violence 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.

8.1.3. Dominance by men and bidirectional 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 bidirectional 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 Limited Disclosure Scale indicates that increase of one point on this four point scale reduces the probability of both being violent by 69% ($1.00 - 0.31 = .69$ or 69%). In short, students identified by the Limited Disclosure Scale as being unwilling to disclose minor types of socially undesirable behavior are also much less likely to disclose a pattern of bidirectional violence in their dating relationships. This illustrates why it was necessary to

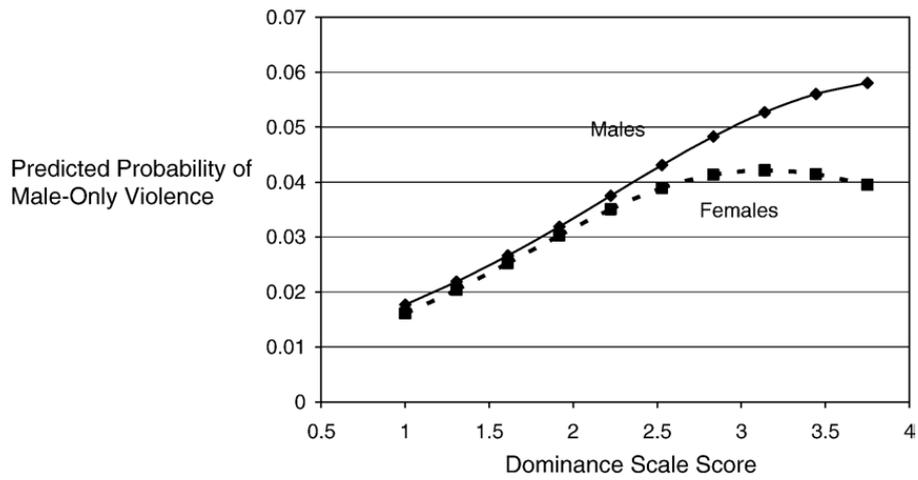


Fig. 2. Relationship between dominance scale score and probability of Male-Only violence, as reported by males and females.

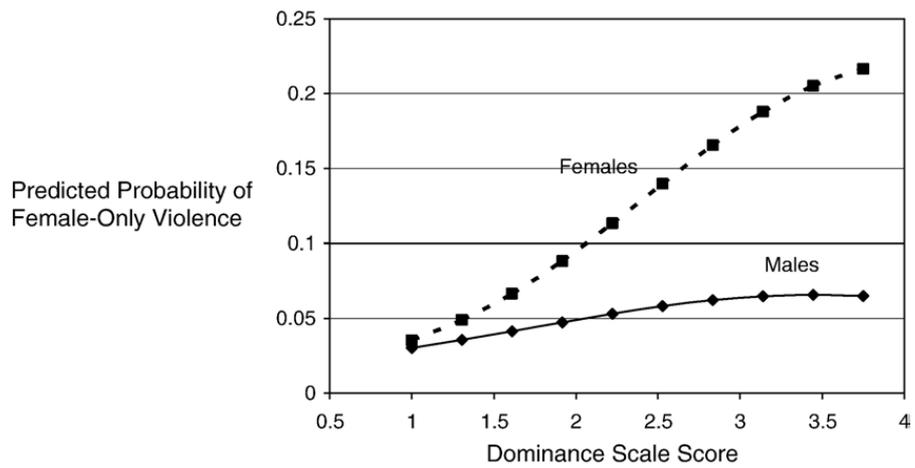


Fig. 3. Relationship between dominance scale score and probability of Female-Only violence, as reported by males and females.

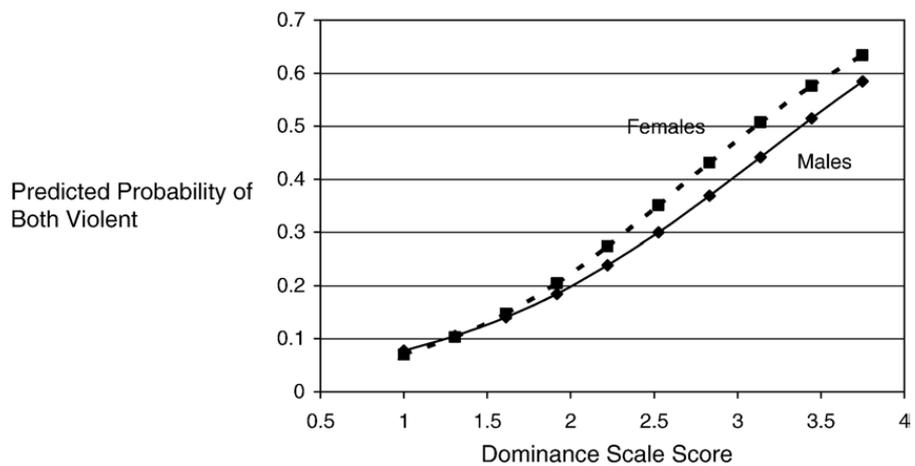


Fig. 4. Relationship between dominance scale score and probability of violence by both partners, as reported by males and females.

control for score on the Limited Disclosure Scale by including the score on the Limited Disclosure Scale as one of the independent variables in all the models tested. Consequently, all the odds ratios in Tables 5 and 6 are adjusted to control for score on the Limited Disclosure Scale.

8.1.4. Dominance by women and Male-Only violence

Part B of Table 5 gives the results for the behavior of female participants as reported by the female students. The odds ratio of 2.629 in the Male-Only panel 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 PV. 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 the relationship has been in effect.

8.1.5. Dominance by women and Female-Only violence

The odds ratio in the 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 the Dominance By Females panel of Table 5 are also statistically significant.

8.1.6. Dominance by women and bidirectional 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 bidirectional 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 bidirectional violence, and that the longer the relationship the greater the odds of bidirectional violence. Finally, as was found for male bidirectional violence as reported by males, the higher the score on the Limited Disclosure Scale, the lower the odds of reporting bidirectional violence.

8.2. Predicted probability graphs

Figs. 1–3 provide a visual means for understanding the relationship between the Dominance scale and the probability of PV, and also show the predicted probability of each of the three bidirectionality types. The upper line in Fig. 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 his partner during the previous year. 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.

Fig. 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).

Fig. 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 bidirectional 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 scores.

8.3. Dominance and severe violence

Table 6 presents the results using the Severe Violence scale of the CTS as the dependent variable. As is 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 bidirectional violence, and the lower panel in Table 6B shows that female dominance is associated with an even greater increase in the probability of severe bidirectional 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 bidirectional violence, even more strongly than does dominance by the male partner.

9. Discussion

The results reported in this article are consistent with the first hypotheses—that bidirectional 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 toward 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. This applies to severe as well as minor violence. In a number of the national contexts it was found in less than 10% of violent couples.

The results showing the predominance of bidirectional violence even in traditionally male-dominant societies may seem implausible to many readers. However, they are consistent with results from the ongoing Global School-based Health Survey conducted by the World Health Organization (WHO) among students 13 to 15 years old. The students were asked if they had been hit, slapped or hurt on purpose by a boyfriend or girlfriend in the past 12 months. Results for the first few countries show 15% of girls and 29% of boys in Jordan responded “yes”, as did 9% of girls and 16% of boys in Namibia, 6% of girls and 8% of boys in Swaziland, and 18% of girls and 23% of boys in Zambia. In all five countries, more girls hit partners than boys. Perhaps the results from both the International Dating Violence Study and the WHO school study occurred because both studies are of dating relationships. The WHO could have answered that question in another survey it conducted of married and cohabiting violence, but the organizers of that study followed the usual practice of restricting the study to the victimization of women and refused requests to include questions on perpetration by the women in the study.

Important as is the finding that the predominant pattern was one in which both partners were violent, the finding that the second largest category was couples where the *female* partner was the only one to physically attack may be even more important. Moreover, the predominance of bidirectional 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 PV is predominantly a crime committed by men. Indeed, almost every treatment and preventive effort is based on that assumption, which these results suggest is false.

What explains the predominance of bidirectional violence? No doubt many factors contribute, as they do for other aspects of PV. Self-defense is one of those factors, but as the studies reviewed earlier indicate, self-defense explains only a small percentage of violence by either men or women. 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 (2002) has shown, the concept of chivalry did not go down with the Titanic. 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 retaliate or follow her example when they have a grievance. To the extent that this scenario occurs, it provides an additional part of the explanation for the predominance of bidirectional PV. The process by which an escalation to violence takes place has been described for cases of male perpetration (Eisikovits, Winstok, & Gelles, 2002; Winstok, Eisikovits, & Gelles, 2002), and a parallel process may apply to violence by female partners.

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, using data provided by women themselves, 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 PV. Thus, the results for this hypothesis call into question another basic assumption of most prevention and treatment programs. Unfortunately, bidirectional violence is the pattern of violence which is least likely to cease and most likely to escalate (Feld & Straus, 1989). In addition, it is the type of PV that is most likely to result in physical injury (Straus & Gozjolko, 2007; Whitaker et al., 2007), probably because it is the type with the greatest risk of escalation.

9.1. Limitations

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

9.1.1. 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. Even if it were a representative sample, they would not be representative of the nation because of their age and because university students tend to come from high education families. Therefore, the results apply to this sample and it remains unknown whether they also apply more broadly. The descriptive statistics are the results most likely to differ from those of the general population. For example, a representative sample of married couples is unlikely to have much lower rates of PV than those reported because their average age would be much older (about 40 rather than 20). The high rates of dating PV found by many studies stem from their youthfulness (Stets & Straus, 1989). On the other hand, there is voluminous research on risk factors for dating PV. With rare exception, the results are parallel to those found for general population samples. Thus the results on the relation of Dominance to PV may have more general applicability than the students who participated in this study.

This possible generality of the results is also indicated by the fact that, as reported in the Methods section, the Dominance scale scores for each nation are highly correlated with the Gender Empowerment Index for each nation. Other examples of congruence between nation-to-nation differences as measured in the International Dating Violence Study and as measured by data from other sources are in Straus (2007a). These correlations suggest that, although the students in this study are not representative samples, the differences between nations in student behavior reflect the national context in which they are living.

9.1.2. Clinical versus community sample

A related sample issue is that a sample of a general population (such as a community or student survey) can differ importantly from a “clinical” sample of men and women arrested for PV or men and women who seek assistance because of PV. This difference is both a strength and a limitation. It is a strength because research with non-clinical population samples is 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 example, but one which has important implications for treatment, is the widely held belief that once PV starts, it may escalate, but is not likely to cease without a strong intervention. That is correct for clients of shelters for battered women. They would not be there if it had ceased. On the other hand, general population studies such as in Feld and Straus (1989) consistently find high rates of cessation. Thus, policies and practices based on a clinical sample 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 1%) who have had violence progress to the point of police intervention (Kaufman Kantor, & Straus, 1990). However, the five studies of clinical populations reviewed earlier show that bidirectional violence also characterizes “clinical level” cases. The most important difference between general population samples and clinical samples may not be in bidirectionality, but in the high rates of social and psychological problems such as alcoholism, antisocial personality, and prior non-family crime (Ehrensaft et al., 2004;

Straus & Scott, in press) that characterize one or both partners. The title and content of a recent article epitomizes the current situation: “Treatment for partner abuse: Time for a paradigm shift” (Stuart, 2005).

9.1.3. 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 PV. 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.

9.1.4. 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 bidirectional. However, the results of this study, and those reviewed earlier, have found that dominance *by women* is associated with bidirectional violence. This makes 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 PV.

9.2. Theoretical and methodological implications

9.2.1. Theoretical implications

The results showing that bidirectional violence is the most prevalent form of PV in this sample; 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 PV—all call for a basic reorientation of the way PV is conceptualized, especially because these results are consistent with results from other studies, including nationally representative samples of the general population and studies of clinical level cases. It is the injustices and power struggles that are associated with inequality, and the psychological problems of the partners that give rise to violence, not just inequality in the form of male dominance. This study and other studies have found that male dominance in couple relationships is not more prevalent than female dominance. This is not to deny the existence of male-dominant oppressive relationships—or at the societal level, the fact that some societies are extremely male-dominant. But at the individual couple level, such relationships are not typical among the students in the 32 nations studied.

9.2.2. 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 PV. For example, the probability of the participants in this study assaulting a partner went from about 10% for those with the 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 & Yodanis, 1996). Binge-drinkers and those who were spanked a lot have much higher probability of assaulting a partner, but most do not physically assault their partner.

9.2.3. 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 PV. 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, 2006), and Johnson (1995) 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—a pattern that

characterizes the experiences of many women who use services for female victims. However, those cases are only a small fraction of cases revealed by 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, & Stuart, 1999; Holtzworth-Munroe & Stuart, 1994) who distinguishes between Family Only, Borderline/Dysphoric, and Generally Violent/Antisocial types; and by Johnson (1995), who identifies what he originally identified as “patriarchal terrorism” and has renamed as “terroristic” violence (Johnson & Ferraro, 2000). Still another aspect are the simple but crucial differences between Male-Only, Female-Only, and Both Violent types used for this article.

The varying patterns of PV 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 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.

9.3. Policy and practice implications

This study and those cited in the introduction revealed an overwhelming body of evidence that bidirectional violence is the predominant pattern of perpetration; and this study, along with evidence from many other studies (Medeiros & Straus, 2007), indicates that the etiology of PV is mostly parallel for men and women. The fact that dominance by women as well as men was found to be a risk factor for violence is crucial for effective prevention and treatment. Male dominance does need to be addressed, but so does female dominance, and many other family system problems. In short, PV is more a gender-inclusive family system problem than it is a problem of a patriarchal social system which enforces male dominance by violence. The fact that these results apply even in nations with an established and pervasive patriarchal system is even a stronger indication of the need for prevention and treatment programs to go beyond the feminist conceptualization of PV.

Unfortunately, going beyond the feminist model will be difficult because the organization, funding and staffing of current prevention and treatment efforts are wedded to the patriarchal dominance theory as embodied, for example, in the “Duluth” treatment program (Rosenbaum & Price, 2007), and use many methods to block deviation from that model (Straus, 2006). If researchers or service providers do not declare allegiance to these articles of faith, they risk being denied funding and ostracized, as documented in Straus (1990c, *in press*) and Holtzworth-Munroe (2005). 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. A set of nine articles that provide 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. Treatments with individuals or couples (e.g., anger control programs, couple treatment) are specifically excluded from state standards for batterer intervention programs in 43% of US states.

As stated earlier, the refusal to recognize the family system nature of PV and the multiple causes of PV have hampered efforts to end domestic violence. This has resulted in deliberately ignoring half the perpetrators. The domestic violence service system, including services for female victims, needs to replace the default-assumption that PV is primarily the product of male dominance. Instead, the results from this study and those reviewed indicate that the default-assumption needs to be that PV is predominantly bidirectional both in respect to physical assaults and in respect to other kinds of bidirectional mistreatment by a partner; and that the risk factors are mostly the same for males and females. Despite these obstacles, the situation is slowly changing, as evidenced by the two special issues of this journal and by three recent books, all of which go beyond the “men defending patriarchy” conception of PV (Dutton, 2006; Hamel & Nicholls, 2007; Whitaker et al., 2007). 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 into 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.

A number of changes in prevention and offender treatment programs follow from recognizing the predominance of bidirectional PV, the family system nature of PV, and the parallel etiology of PV by male and female partners. These include:

Replace the assumption that almost all PV is male-only, with the assumption that it could be bidirectional 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 which recognizes the prevalence of psychological and social problems of both partners.

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 as well as to men and boys.

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)

Two recent books and a forthcoming book provide more specific implementation principles and guidelines for putting into practice suggestions such as those listed above (Dutton, 2006; Hamel & Nicholls, 2007; Lutzker & Whitaker, in press; Potter-Efron, 2007).

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,b). Therefore, efforts to end PV by women will contribute to protecting women. It is time to make the prevention and treatment effort one that is aimed at ending all family violence, starting with spanking children (Straus & Yodanis, 1996), not just violence against women. Only then will women, as well as all other human beings, be safe in their own homes.

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