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### The Cross-Cultural Association Between Marital Status and Physical Aggression Between Intimate Partners

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#### Abstract

Some research suggests that the risk of physical aggression by an intimate partner is related to marital status, but this relationship may vary across cultures and by gender. In the present study, we systematically examine the relationship between marital status and physical partner aggression by gender across 19 countries. Logistic and multilevel regression confirmed previous findings of lower rates of physical aggression for legally married versus cohabiting and separated/divorced women and men across most, but notably, not all countries. Single status was associated with higher risk in some countries and lower in others reflecting possible cultural differences in risk for different marital statuses. For example, single women had significantly lower rates of victimization than did married women in India where violence against wives is often accepted. The variation in the cross-cultural findings highlights the importance of examining both men and women and considering the cultural context when interpreting the relationship between partner aggression and marital status.

#### Keywords

IPV; cohabit; divorce; single; country; gender; victimization; perpetration

Aggression between intimate partners occurs worldwide (Archer, 2000, 2006) with violence against women being a serious problem that affects women everywhere. However, rates of violence vary considerably across different cultures (Johnson, Ollus, & Nevala, 2008; Krahe, Bieneck, & Moller, 2005; World Health Organization [WHO], 2002). Although intimate partner violence can take many forms including emotional and financial abuse as well as physical aggression (Centers for Disease Control and Prevention [CDC], 2012; WHO, 2002), physical aggression by intimate partners is of particular importance because it can result in physical injury or even death, especially to the female partner (WHO, 2002). Physical aggression can also lead to a variety of harms to the couple, family members, and society including social and economic costs related to medical care, counseling and missed work, psychological effects (e.g., depression, post-traumatic stress disorder), and negative impacts on children (WHO, 2002). In addition, physical aggression is often accompanied by psychological and sexual aggression and abuse (WHO, 2002). For these reasons, most general population studies to date have focused on physical aggression (Archer, 2000, 2006; Johnson, 2006; Strauss, 2004; Tjaden & Thoennes, 2000). In addition, behavioral measures of physical aggression allow for cross-cultural comparisons (CDC, 2012; WHO, 2002).

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The main goal of population level surveys on intimate partner aggression is to gain insight into the various forms of physical aggression that occur between intimate couples in the general population. That is, general population surveys primarily measure "situational couple aggression" (i.e., aggression that is usually of minor severity and done by either partner without systematic control by one partner; see Johnson & Leone, 2005). Although population surveys also include some cases of severe abuse including "intimate terrorism" (i.e., one-sided violence involving systematic assertion of power usually by a man toward a female partner; Johnson & Leone, 2005), their main focus is on developing a better understanding of factors that are linked to increased risk of physical harm in intimate partner relationships generally.

Marital status may partially determine risk of physical aggression and associated harms (Brownridge, 2008; Statistics Canada, 2005). However, marital status has different implications in different cultures; therefore, the link between marital status and partner aggression is likely to differ by culture, depending on the social structures that define each status. In particular, in some cultures, being legally married involves institutionalized patriarchal dominance and even ownership of the wife by the husband, including the right of the husband to physically abuse his wife (Koenig et al., 2003; Koenig, Stephenson, Ahmed, Jejeebhoy, & Campbell, 2006). For these cultures, married women may be more at risk than separated or single women of aggression by a male partner, while the reverse may be true for married women in cultures where patriarchal dominance by husbands toward wives is less prevalent. For example, as discussed later in this section, in less patriarchal societies, separation and divorce may increase risk of aggression (compared to being married) due to relationship problems that led to the separation and persist even after the couple is separated. In other cultures, separation from the patriarchal control of the husband may reduce a wife's exposure to physical violence (Johnson et al., 2008). Therefore, examining the relationship between marital status and physical aggression by intimate partners in different countries can help to identify the key features of marital status in each culture that may be influencing risk of partner physical aggression.

There is relatively little systematic research on the relationship between marital status and intimate partner aggression, and most of the research is from North America. This research has generally found higher risk of physical and sexual aggression by an intimate partner for *cohabiting versus married women*. For example, Canadian studies have found that rates of physical and sexual aggression in the past 12 months reported by women in common law relationships were higher than rates reported by married women (Brownridge, 2008; Brownridge & Halli, 2002; Statistics Canada, 2005). A study in Latin American countries found that cohabiting women were more likely than married women to report ever experiencing physical violence by an intimate partner (Flake & Forste, 2006). One study compared data from the USA and Australia on rates of women killed by their male romantic partners as well as rates of men who killed their female romantic partners (Shackelford & Mouzos, 2005). Their analyses indicated that cohabiting women in both countries were more likely than married women in both countries were more likely than married women in both countries were more likely than married women in both countries were more likely than married women in both countries were more likely than married women in both countries were more likely than married women in both countries were more likely than married women in both countries were more likely than married women in both countries were more likely than married women in both countries were more likely than married women to be killed by a male partner.

*Separated or divorced* women have also been found to be more likely than married women (or, in some comparisons, married and cohabiting women) to report being the victim of physical or sexual aggression by an intimate partner. For example, a Canadian study found that rates of victimization from physical or sexual aggression by a partner during the previous year were 9 times higher for separated women and 4 times higher for divorced women, compared to married women (Brownridge et al., 2008). Another Canadian study found that over 20% of women in a previous married or common law relationship reported physical or sexual aggression by a partner in the previous 5 years, while the rate among women in current relationships (married or common law) was 3% (Statistics Canada, 2005).

Studies in the USA have also found a higher risk of victimization in the past year by a male partner for women who were separated or divorced compared to married women (Hazen & Soriano, 2007) and compared to women who were married or living with their partner (Vest, Catlin, Chen, & Brownson, 2002). Overall, existing research suggests higher rates of physical aggression for (a) cohabiting compared to married women and (b) separated/ divorced compared to married women and, in some studies, compared to cohabiting women.

A number of explanations have been proposed to account for why cohabiting and separated/ divorced women have greater risk of aggression by an intimate partner than do married women. In the case of "intimate terrorism," a male partner may be more likely to be aggressive toward his ex-partner than a current married partner because he views the woman's departure from the relationship as a public challenge to his right to control her (Brownridge, 2008, 2010; Johnson et al., 2008). However, it has also been suggested that factors such as poorer socioeconomic conditions of separated/divorced women might also partly explain their increased risk (Walker, Logan, Jordan, & Campbell, 2004). Younger age and riskier lifestyles of separated/divorced (Brownridge et al., 2008; Spiwak & Brownridge, 2005; Walker et al., 2004) and cohabiting women (Li, Wilsnack, Wilsnack, & Kristjanson, 2010) might also explain the increased risk for situational couple forms of aggression. In addition, higher rates of aggression between partners in cohabiting relationships may be attributable to the lower social status and the less permanent nature of cohabitation compared to marriage (Brownridge, 2008; Brownridge & Halli, 2000, 2002; Flake & Forste, 2006).

In terms of the relative risk of cohabiting, divorced and separated status in other cultures, Johnson et al. (2008) examined cross-cultural differences in the relationship between marital status and physical aggression by male partners toward women across a broad range of countries. They found that rates of past year physical and sexual partner aggression were higher for cohabiting than for married women in Australia, Costa Rica, and the Philippines, but higher for married compared to cohabiting women in Mozambique. This study also compared women who were in a current relationship to women who had no current partner but had previously been in a relationship (either married, cohabiting, or a dating relationship). They found that women with a previous partner (but no current partner), were more likely than women with a current partner to have experienced physical aggression in Switzerland, Poland, Australia, Costa Rica, the Czech Republic, and the Philippines. By contrast, previously partnered women in Mozambique reported lower rates of aggression than did women with current partners. Johnson et al. attributed the greater rate of victimization experienced by married versus cohabiting and previously partnered women in Mozambique to the greater acceptance of violence by husbands toward their wives in that country. Thus, a similar pattern might be expected in other countries where wife abuse is common or acceptable such as India (Koenig et al., 2006) and Uganda (Koenig et al., 2003).

There has been less research on relative risk of physical aggression by intimate partners for women who are single (i.e., dating) and widowed. A USA study (Vest et al., 2002) found that widowed women had the lowest rates of all marital statuses. This finding is not surprising given that conflict and physical aggression between intimate partners tends to decline with age (Bookwala, Sobin, & Zdaniuk, 2005); therefore, widowed women who are dating would be less likely to experience aggression from an intimate partner than would previously married women who are younger. Vest et al. (2002) also found that single women had higher victimization rates than did married women, but had lower rates than those found for separated and divorced women. However, in another USA sample, Hazen and Soriano (2007) found no difference between never married women and women in other marital statuses in rates of physical and sexual aggression by an intimate partner. And Johnson and colleagues' (2008) cross-national study found that rates for women with dating

partners were generally lower compared to women who were married or cohabiting. These conflicting findings might be related to the different terminology used (e.g., dating versus never married), or to the variety and complexity of relationship characteristics among single individuals. Shorey, Cornelius, and Bell (2008) noted that dating relationships differ from married relationships in ways that are likely to increase risk of partner aggression (e.g., younger age, risk-taking tendencies, less commitment to the relationship, etc.), but in other ways are likely to reduce risk (e.g., less time spent together, no children).

While physical aggression can be perpetrated by both male and female partners, there are considerable differences among countries in relative rates for men and women of perpetrating physical aggression (Archer, 2000; Hou, Yu, Ting, Sze, & Fang, 2011; Krahe et al., 2005). For example, one study found similar rates of partner physical aggression reported by men and women in Germany, New Zealand, and the United Kingdom, but higher rates by men than by women in Australia, Hong Kong, India, and Korea (Krahe et al., 2005).

These cross-national gender differences in physical aggression toward an intimate partner might be better understood by examining gender differences in the relationship between marital status and partner aggression. For example, gender differences in the relationship between marital status and intimate partner aggression may vary by country depending on norms regarding the degree of patriarchal attitudes and male dominance in relationships. Specifically, as noted above, in countries with high rates of abuse by men toward their wives, married women may be more likely than unmarried women to be the victims of physical aggression by an intimate partner (as was found for Mozambique; Johnson et al., 2008). However, married men may experience no increased risk or even lower risk compared to unmarried men in such countries. There are also likely to be gender differences in the relationship between marital status and partner aggression in countries such as Uganda where men have multiple partners while women have only one (Koenig et al., 2004).

There are few studies of the relationship between marital status and partner aggression among men on which to assess whether this relationship is the same for men and women. One Canadian study (Statistics Canada, 2005) found that physical aggression was more likely to be experienced by separated/divorced than by married men (as was found for women); however, the difference between separated/divorced and married status was greater for women than for men. This is consistent with the interpretations discussed previously in this paper that at least some of the victimization among separated/divorced women relates to the male partner's feeling that his control and dominance has been challenged by the female partner's departure from the relationship (Brownridge, 2008; Johnson et al., 2008), as well as to factors that would affect both men and women, such as increased riskier lifestyle and relationship problems associated with separated/divorced status.

In terms of gender differences in risk of aggression for cohabiting and single persons, the Statistics Canada (2005) study found no gender difference in the increased risk of partner aggression among cohabiting compared to married individuals. Also a study of *perpetration* of intimate partner aggression among dating, cohabiting, and married 21-year-olds in New Zealand found higher rates of perpetration among participants who were cohabiting compared to those who were dating, with the relative difference between cohabiting and dating similar for men and women (Magdol, Moffitt, Caspi, & Silva, 1998). Further Brownridge (2010) found that the risk of victimization for cohabiting men and women compared to their married counterparts was higher for both intimate terrorism (defined as having a high score on a measure of controlling tactics) and situational couple (defined as having a low score on the controlling tactics measure) types of violence for both men and women. Other factors were found to account for the increased risk of victimization for

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cohabitors such as young age, partner abused alcohol, a previous relationship, education, and for women only, having children in the home. These findings suggest little difference between men and women in the relationship between cohabiting status and intimate partner aggression.

There may also be differences in the relationship between marital status and partner aggression depending on whether marital status refers to the victim or the perpetrator. For example, if as previous research suggests, separated/divorced women are at higher risk of victimization from an intimate partner aggression than are separated/divorced men (Statistics Canada, 2005), this should be reflected in a higher rate of self-reported victimization by separated/divorced women and lower rate of self-reported perpetration, while the converse would be true for separated/divorced men. Such a pattern would provide additional insight into the relationship between marital status and partner aggression and how it may vary by gender, yet previous research has focused on victimization or perpetration but not both.

Despite the potential importance of marital status in determining risk of partner aggression, few studies have examined systematically the links between each marital status and partner aggression. Most previous research has been limited to comparing two statuses (e.g., cohabiting versus married or separated/divorced versus married). Further, no studies have examined gender differences across different marital statuses and different countries, even though there are reasons to believe that some marital statuses pose differential risks for men and women and this risk is also likely to vary by country and culture. The Gender, Alcohol, and Culture: An International Study (GENACIS; see http://genacis.org/5) collaboration, although focused primarily on gender and cultural differences in alcohol use, provides a unique data set that permits examination of the relationship between marital status and physical aggression by intimate partners by gender and across a wide range of cultures. In the present paper we use data from 19 countries in the GENACIS collaboration to address the following overarching questions:

- **1.** Is the relationship between marital status and physical aggression by intimate partners the same for men and women?
- 2. Is the relationship between gender, marital status, and intimate partner physical aggression similar across different cultures?

#### Method

GENACIS involved the collaboration of researchers in over 40 countries or large regions within countries to develop and deliver a survey in order to examine gender and cultural differences related to alcohol use and other health issues (see http://genacis.org/5). A common core set of 128 questions was administered in each country covering a number of areas including alcohol consumption and consequences and other health issues.

Questionnaires in 20 of the collaborating countries included a common set of 24 questions relating to physical aggression by an intimate partner. In order to include as many countries as possible without compromising the integrity of the results, we limited cell sizes to a minimum of 20 in at least two marital status categories. This resulted in one country (Sri Lanka) being excluded from the present analyses. Thus, the 19 countries included in the present analyses are Argentina, Australia, Belize, Brazil, Canada, Costa Rica, the Czech Republic, India, Isle of Man, Japan, Kazakhstan, New Zealand, Nicaragua, Nigeria, Peru, Uganda, United Kingdom, USA, and Uruguay). Of these, three countries included questions on victimization only (the Czech Republic, Belize, and the USA). One country (the USA) included only female respondents because the GENACIS survey in USA was conducted as

part of a longitudinal study of American women (Wilsnack, Kristjanson, Wilsnack, & Crosby, 2006). The total sample from these countries was 16,111 men and 21,209 women. Table 1 shows the year of the survey, sampling region (if not national) in each country and sample sizes within each marital status group for each country and overall. Countries are grouped by regions defined for the 2005 Global Burden of Diseases (GBD), Injuries, and Risk Factors Study (http://www.globalburden.org/).

Surveys were conducted face-to-face in all countries except Australia and Canada where Computer-Assisted Telephone Interviewing was used, Japan where surveys were mailed to respondents, the USA where 21% of surveys were conducted by telephone and the rest faceto-face, and the Isle of Man where 57.5% were conducted by telephone and 42.5% face-toface. Random probability respondent selection methods were used in all countries except the United Kingdom where a quota sampling method was used. Information required to calculate response rates was not collected in some countries, but where available response rates ranged from 38% (Australia) to 96% (Kazakhstan). In each country, procedures were followed to protect human research subjects according to the required ethical considerations in that country. Further details regarding study methods can be found in Wilsnack, Wilsnack, Kristjanson, Vogeltanz-Holm, & Gmel (2009) and Graham, Bernards, Munné, & Wilsnack (2008).

#### Measures

Victimization and perpetration—Respondents were asked about both victimization and perpetration. These questions are based on the approach used by Harris (1992) in which the respondent is asked to describe "the most aggressive thing that has ever been done to you," but have been adapted to apply to someone in an intimate relationship with the respondent during the 2-year period preceding the survey. A 2-year time frame was chosen for the present study to maximize the period of time covered in order to capture as many incidents as possible while ensuring that the incident was sufficiently recent to be remembered accurately and be relevant to the respondent's current circumstances. The following question (with slight variations to make the question culturally appropriate for each country) was used to address victimization: People can be physically aggressive in many ways, for example, pushing, punching, or slapping, or physically aggressive in some other way. What is the most physically aggressive thing done to you during the last 2 years by someone who is or was in a close romantic relationship with you such as a spouse/partner, lover, or someone you are or were dating or going out with? They were asked the same question regarding most aggressive act toward a partner. From these, we created two dichotomous measures, whether there was physical aggression by a partner toward the respondent, and whether there was physical aggression by the respondent toward a partner.

**Marital status**—Respondents identified their marital status at the time of the survey as married, living with a partner, divorced, separated, widowed, or never married. We combined the divorced and separated categories for the present analyses because there were insufficient numbers for separate analyses of these groups in many countries. We use the term "single" (instead of never married) in the present paper to clarify that while these respondents were never legally married it is possible that they could have previously been in a cohabiting relationship. All respondents except those who indicated they were never married, were asked how long they had been in their current marital status. Most (87%) had been in their current marital status for more than 2 years, with 13% percent in their current status for 2 years or less (8% of married, 25% of cohabiting, and 26% of separated/divorced respondents). Thus, for the majority of respondents (but not necessarily all), findings relate to partner aggression experienced while in their current marital status.

#### **Exclusion Criteria**

Surveys in each country varied in the age range they included. For the present analyses, we restricted the age range for each country to 18–59 (except for the USA sample where the youngest age sampled was 21 years) to make the ages of respondents more consistent and comparable across countries. We also excluded widowed persons because numbers in this age range (less than 1% of respondents in most countries) were too small for separate analysis. We also excluded respondents with same-sex partners for surveys where this information was available because the focus of the analyses was on differences between men and women and because the number of same-sex partners (less than 2% in most countries with the largest being 4% in Nigeria) was not sufficient for separate analyses. However, information about the gender of partners was not available for Brazil, Czech Republic, Japan, Uganda, and Uruguay. Therefore, it is possible that a small portion of the aggression reported in these countries was by or toward a same-sex partner.

#### Analyses

Separate analyses were conducted for whether aggression was perpetrated by an intimate partner toward the respondent or toward an intimate partner by the respondent and by gender and country. Descriptive statistics include the percent of respondents reporting partner aggression by gender and by marital status in each country. Logistic regression of partner aggression on marital status with married status as the base category was conducted separately for each country by gender of respondent. Similar regressions were conducted comparing responses from single, cohabiting, and separated/divorced respondents. To examine the overall associations (i.e., across all countries), two-level (individual and country) Hierarchical Linear Modeling (HLM; version 6.2) Bernoulli regression (Raudenbush, Bryk, Cheong, Congdon, & du Toit, 2002) was performed regressing partner aggression on respondent's marital status. Also we examined patterns in odds ratios across countries because consistent patterns in odds ratios across countries can be indicative of meaningful relationships, even when not all within-country odds ratios are statistically significant (Rothman, 2002). Thus, such patterns are worth noting particularly when they are also consistent with findings from other studies. We controlled for age of the respondent in all regression analyses to account for the relationship between partner aggression and age (Bookwala et al., 2005; Statistics Canada, 2005) as well as country differences in the average age of respondents.

#### Results

Table 1 shows the number of men and women in each marital status in each country and the percent in each marital status who reported aggression by and toward a partner. For ease of discussion in the following, we refer to aggression by a partner as "victimization" and self-reported aggression toward a partner as "perpetration" even though in some instances these terms may not reflect the true nature of the aggression that occurred (e.g., aggression done toward a partner in self-defense is a different kind of perpetration from one-sided aggression toward a partner). We have organized the results in the tables to show percent of "male-to-female aggression" in each country as reported by male perpetrators and female victims as well as "female-to-male aggression" as reported by female perpetrators and male victims. Results are suppressed if the number of respondents in that marital status was less than 20.

Table 2 shows odds ratios for each country for cohabiting (Part A of the table), separated/ divorced (Part B), and single (Part C) compared to married status based on logistic regression of partner aggression on marital status as well as overall odds ratios which are based on HLM Bernoulli regression of partner aggression on marital status in all countries. We also conducted comparisons involving other marital status combinations (i.e., cohabiting

and separated/divorced compared to single, and cohabiting compared to separated/divorced). These odds ratios are shown in Parts D, E, and F of Table 2. Although marital status was modeled as three dummy variables, e.g., cohabiting, separated/divorced, and single compared to the married reference category in the first logistic and HLM regressions, for ease in examining patterns across countries, all odds ratios pertaining to each marital status (compared to the reference category) were grouped together. To test for significant gender differences, we repeated all analyses including gender and a gender by marital status interaction term. Significant gender by marital status interactions are shown using superscripts in Table 2.

#### **Cohabiting Versus Other Statuses**

The HLM analyses indicated significantly higher overall rates of partner aggression for cohabiting compared to married men and women (Table 2, Part A) regardless of whether the respondent was reporting victimization or perpetration. This trend was consistent across most countries and regions, with no countries where cohabiting persons had significantly *lower rates* compared to married persons. However, analyses were not possible for the three Asian countries (i.e., Japan, Kazakhstan, and India) and for women from Nigeria due to the small numbers of cohabiting men and women.

Across all countries, cohabiting men and women reported greater rates of victimization and perpetration than did single respondents (Table 2, Part D). Although there were some within-country exceptions to this overall pattern, again, no odds ratios that were less than one were statistically significant. However, a significant gender-by-marital status interaction was found for Costa Rica and Peru, with the higher rates of victimization for cohabiting versus single status being greater for women than for men. On the other hand, a significant interaction for Canada showed the opposite, with increased risk associated with cohabiting versus single status greater for men than for women; in fact, the odds ratio for cohabiting versus single status was not significantly different from one for women.

Across countries, there were no overall significant differences in comparison of cohabiting to separated/divorced respondents (Table 2, Part F); however, there were considerable variations by country. In Australia and Canada and for women in the USA, cohabiting respondents reported lower rates than separated/divorced respondents across all regression models (significant only for female respondents' reports of victimization). On the other hand, cohabiting respondents in New Zealand and Uganda reported consistently higher rates than separated/divorced respondents (significant only for female perpetration in New Zealand). A significant gender-by-marital status interaction was found for Canada with the relative rates of victimization among cohabiting compared to separated/divorced respondents being lower for females than males.

Overall, the findings suggest a general pattern of higher rates of partner aggression for cohabiting persons when compared to married and single respondents but no overall pattern for cohabiting versus separated/divorced respondents across countries, and some significant differences between genders within countries.

#### Separated/Divorced Versus Other Statuses

There was a significant overall pattern across all countries (Table 2, Part B) for separated/ divorced men and women to be more likely than married respondents to report aggression *by* a partner (i.e., victimization). Only in two countries (India and Uganda) were separated/ divorced female respondents less likely than married respondents to report being the victim of partner aggression and this difference was not significant in either country. Separated/ divorced male respondents from Uganda were also slightly less likely than married respondents to report being the victim of partner aggression and this difference was also not significant.

There was no significant overall relationship between separated/divorced versus married status for perpetration of aggression *toward* an intimate partner and no consistent regional patterns. In terms of individual country results, separated/divorced participants were significantly more likely than married participants to report perpetration of aggression in Australia, Canada, and the USA (significant for all odds ratios except one) as well as the United Kingdom and Nigeria (significant only for self-reported aggression by women toward men in both countries). However, in some countries odds ratios were less than one for separated/divorced compared to married respondents (significant for self-reported perpetration by female respondents from New Zealand). There was also a significant gender interaction found for Canada for both victimization and perpetration with higher rates for separated/divorced respondents (compared to married) for females than for males.

As shown in Part E of Table 2, across all countries separated/divorced men and women reported significantly higher rates of victimization and perpetration than did single respondents. This pattern was consistent across all countries for victimization (significant in seven countries). For perpetration, the general pattern of higher odds ratios for separated/ divorced versus single persons was evident, but the difference was not significant in all countries including a few countries where the odds ratios were less than one. Significant gender-by-marital status interactions were found for Canada with relative rates of perpetration higher for separated/divorced versus single men than for women. As noted above in the discussion of cohabiting status, no clear pattern emerged across all countries for separated/divorced versus cohabiting respondents, although some significant differences were found within countries.

#### Single Versus Other Statuses

Overall across countries, there were lower rates of partner aggression for single versus married respondents, statistically significant only for self-reported perpetration by male respondents (Table 2, Part C). However, there was considerable variation among countries and there were a number of significant gender-by-single/married status interactions. Countries that reflected the general overall pattern of lower rates for single respondents for both men and women in all regression models included Japan, India, Czech Republic, Nicaragua, Belize, and Uganda. Countries that mostly reflected this pattern of lower rates were: Argentina (except female victims) and Isle of Man, Brazil, Costa Rica, and Peru (except for male victims for all four countries). In Australia and Canada, on the other hand, single female respondents reported significantly higher rates of victimization than did married females.

There were significant gender by marital status interactions for Kazakhstan and Peru with single female respondents significantly less likely than married respondents to report aggression by a male partner (i.e., victimization) while single male respondents more likely to report aggression by a female partner (although the main effects for males were not significant). There was also a significant interaction for Nigeria reflecting that single female respondents were significantly more likely than married respondents to report aggression *toward* a partner (i.e., perpetration) and male respondents significantly less likely. For Canada significant interactions reflected that the relative rates (compared to married status) for both victimization and perpetration were higher for single women than for single men. As shown in Table 2, Parts D and E, and described above, across countries, single respondents reported generally lower rates for partner aggression than did cohabiting and separated/divorced respondents.

#### Discussion

Overall, the findings from these analyses relating to cohabiting and separated/divorced men and women are mostly consistent with previous research suggesting that individuals in these marital status groups report higher rates of partner aggression than do married and single persons although these patterns showed some variability across countries. Single persons reported generally lower rates than did cohabiting and separated/divorced persons, but findings relating to single versus married persons varied considerably across countries. Cross country variability was also found with respect to gender differences and victimization versus perpetration rates, particularly for separated/divorced and single statuses.

The results suggest that previous findings from Canada, Latin America, the USA, and Australia (Brownridge, 2008; Brownridge & Hali, 2002; Flake & Forste, 2006; Shackelford & Mouzos, 2005; Statistics Canada, 2005) regarding increased risk for cohabiting status apply generally to most other countries. This perhaps reflects differences between cohabiting and married couples in factors such as risky behavior, social status, or relationship structure (Brownridge, 2008; Brownridge & Halli, 2000, 2002; Flake & Forste, 2006; Johnson et al., 2008; Li et al., 2010). This finding has important implications for prevention, screening, and treatment. Specifically, prevention and screening programs in most countries need to focus not only on legally married couples, but also, and perhaps especially, on cohabiting couples. There also needs to be more research on why cohabiting is so risky and how risks can be reduced. Our analyses controlled for age; therefore, the findings cannot be attributed to age differences between cohabiting and legally married persons. In addition to the analyses presented here, we conducted exploratory analyses controlling for respondent's alcohol consumption pattern, education, employment status, and number of social contacts (the findings from these analyses are available from the authors upon request). Adding these variables to the models resulted in no substantial changes to the associations found between marital status and partner aggression, and thus, the findings suggest that these variables do not explain the higher rates associated with cohabiting status. In addition, it is important to note that there were too few cohabiting respondents in some countries for comparisons (women and men from Japan, Kazakhstan, and India; women from Nigeria). Given that these countries differed from others in some comparisons, especially India, additional research is needed to explore whether this general pattern of higher rates for cohabiting men and women applies to these countries.

Although there was a general pattern of higher rates for separated/divorced respondents, separated/divorced women from India and Uganda reported lower rates of victimization than did married women. While this difference was not statistically significant for India or Uganda, it suggests a similar pattern to findings from Mozambique (Johnson et al., 2008) where partner aggression was more likely among women with a current spouse or intimate partner than among those with previous partners. Thus, the present findings could be considered consistent with the interpretation by Johnson et al. (2008) that married women are at increased risk in countries where wife abuse is more common or acceptable as was the case in India and Uganda (as shown in Table 1, 25.7% of married women in India and 29.6% in Uganda reported victimization).

Separated/divorced respondents were significantly more likely than married respondents to report victimization by an intimate partner, but not significantly more likely to report perpetration overall. This may reflect the possibility that the aggression for some separated/ divorced victims happened while they were still married. In addition, a significant gender interaction for Canada showing a higher rate for separated/divorced women than for men confirmed previous findings from a survey by Statistics Canada (2005). This finding

supports the argument that being separated/divorced is especially risky for women in some countries, perhaps reflecting separation as a particular challenge to the control of male partners in cases of intimate terrorism (Johnson et al., 2008). Thus, public education and prevention programming needs to address the special risk of intimate partner violence towards separated/divorced women in countries where they are at higher risk.

Across countries, single men and women were significantly less likely than cohabiting and separated/divorced persons to report partner aggression controlling for age. Single respondents were also generally less likely than married respondents to report partner aggression (significant for male perpetration); however, differences between single and married respondents varied among countries, by gender and victimization versus perpetration. For example, in several countries, single respondents were significantly more likely than married respondents to report physical aggression by an intimate partner. On the other hand, married women in India and Uganda and some other countries (Japan, Kazakhstan, and Peru) reported significantly higher rates of victimization than did single women in those countries. There were also gender-by-marital status interactions in some countries, as discussed below. Thus, the risk of partner violence for single individuals appears to vary by both gender and culture. This means that findings related to partner violence among single persons in one country will not necessarily apply to single persons in other countries. Although violence among dating couples has been examined and is known to occur at high rates (Shorey et al., 2008), much of previous research on the relationship between marital status and partner aggression has excluded single respondents who had never lived with a partner (Flake & Forste, 2006; Koenig et al., 2003, 2006; Shakelford & Mouzos, 2006; Statistics Canada, 2005). Our findings suggest that single persons should also be included in studies of intimate partner aggression. In addition, prevention programming should be directed toward single as well as married/cohabiting adults in countries where single persons are at particularly high risk of intimate partner aggression.

Although there were no consistent cross-country patterns found for gender differences in rates of physical partner aggression by marital status, some significant gender by marital status interactions were found within countries. This was especially the case among single respondents. For example, in Kazakhstan and Peru (as well as for Brazil and Costa Rica, although these relationships were not significant) single males reported more victimization (than did married males) while single females reported less victimization (than did married females). Conversely, in Canada, single females were more likely than married females to be perpetrators while the reverse was true for single males. Such differences might be related to more restrictive dating practices in some Latin American countries and Kazakhstan compared to Canada, particularly for young women, or greater acceptance of violence by men toward their wives. However, given the heterogeneity of findings across all countries, the most important conclusion is that the risk of dating violence among unmarried individuals is likely to vary by culture.

Generally similar results were found for victimization and perpetration; however, there was an overall pattern for separated/divorced men and women to be more likely than married persons to report victimization but no more likely to report perpetration. Full exploration of this issue, however, was hampered by the small number of separated/divorced respondents, especially male respondents, in many countries. Previous research has mostly focused on self-reported victimization by women. These results underscore the importance of examining both male-to-female and female-to-male partner aggression and from the perspective of both perpetrators and victims.

While the cross-cultural analyses provide important new insight into the relationship between marital status and intimate partner aggression, a number of limitations need to be

recognized. First, 13% of respondents had been in their current marital status for less than 2 years and may have been in a different marital status when the aggression occurred. Thus, especially for separated/divorced respondents, the aggression may have occurred while they were still married. This could result in an over-estimation of the difference between separated/divorced and married persons in some countries. Second, we measured only physical aggression. That is, it is unknown whether these findings would apply to other forms of intimate partner aggression such as verbal, psychological, sexual, and financial abuse and aggression. In addition, it was not possible to determine whether aggressive acts were done in self-defense. Therefore, while we found some gender differences and similarities in the relationship of marital status with partner aggression by gender, there may exist other gender differences in the nature of aggression (e.g., whether done in self-defense) not measured as part of this study. Third, the USA survey included only women, and the number of respondents from some countries was too low in some gender-by-marital status groupings for inclusion of both men and women in selected analyses. Fourth, sample sizes for each country varied considerably and the overall results would have been more strongly influenced by some countries than by others. In addition, even where numbers in specific countries were deemed sufficient for the present analyses, the lack of significant findings within some countries, particularly for aggression toward a partner, might be due to insufficient power to detect statistical significance. Finally, the possibility of Type I error should be considered, particularly for comparisons between individual countries, due to the large number of statistical tests conducted.

The study also had a number of notable strengths. One strength of the present study is that it was able to compare patterns across a wide range of cultures using the same set of core questions. Although the measure of intimate partner aggression excluded nonphysical forms of aggression, the measure of physical aggression allowed a consistent approach to assessing the relationship of marital status with partner aggression across a wider variety of cultures than has previously been possible. Another strength of the GENACIS surveys is that in most countries both male and female respondents were asked not only about aggression by a partner but also aggression toward a partner, allowing for comparison of self-reported perpetration as well as victimization by gender and marital status.

In summary, the findings from the present analyses give us a better understanding of how the link between marital status and partner aggression is sometimes consistent and sometimes variable across a wide range of countries for men and women. While previous findings from research in some countries were confirmed, there were some notable exceptions in other countries. Thus, from a theoretical perspective, it is clearly not only the marital status, but also the cultural context in which intimate partner aggression occurs that influences risk of partner aggression and violence. From a practical perspective, it cannot be assumed that findings from a single country are necessarily generalizable to other countries. Thus more comprehensive and comparable examinations by researchers are needed within and across a wide range of countries, by gender and by victimization and perpetration, including determining which factors apply universally and which are culture specific to inform policy makers and work towards appropriate programming to prevent intimate partner aggression.

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#### References

- Archer J. Sex differences in aggression between heterosexual partners: A meta-analytic review. Psychological Bulletin. 2000; 126:651–680.10.1037/0033-2909.126.5.651 [PubMed: 10989615]
- Archer J. Cross-cultural differences in physical aggression between partners: A social-role analysis. Personality and Social Psychology Reviewv. 2006; 10(2):133–153.10.1207/s15327957pspr1002\_3
- Bookwala J, Sobin J, Zdaniuk B. Gender and aggression in marital relationships: A life-span perspective. Sex Roles. 2005; 52:797–806.10.1007/s11199-005-4200-1
- Brownridge DA. The elevated risk for violence against cohabiting women: A comparison of three nationally representative surveys of Canada. Violence Against Women. 2008; 14:809–832.10.1177/1077801208320368 [PubMed: 18559868]

- Brownridge DA. Does the situational couple violence- intimate terrorism typology explain cohabitors' high risk of intimate partner violence? Journal of Interpersonal Violence. 2010; 25:1264–1283.10.1177/0886260509340544 [PubMed: 19729674]
- Brownridge DA, Chan KL, Hiebert-Murphy D, Ristock J, Tiwari A, Leung W, Santos SS. The elevated risk for non-lethal post-separation violence in Canada: A comparison of separated, divorced, and married women. Journal of Interpersonal Violence. 2008; 23:117–135.10.1177/0886260507307914 [PubMed: 18087035]
- Brownridge DA, Halli SS. "Living in sin" and sinful living: Toward filling a gap in the explanation of violence against women. Aggression and Violent Behavior. 2000; 5:565–583.10.1016/S1359-1789(99)00003-8
- Brownridge DA, Halli SS. Understanding male partner violence against cohabiting and married women: An empirical investigation with a synthesized model. Journal of Family Violence. 2002; 17:341–361.10.1023/A:1020370516420
- Centers for Disease Control and Prevention (CDC). Understanding intimate partner violence: Fact sheet. 2012. Retrieved from http://www.cdc.gov/ViolencePrevention/pdf/IPV\_Factsheet2012-a.pdf
- Flake DF, Forste R. Fighting families: Family characteristics associated with domestic violence in five Latin American countries. Journal of Family Violence. 2006; 21:19–29.10.1007/ s10896-005-9002-2
- Graham, K.; Bernards, S.; Munné, M.; Wilsnack, SC., editors. Unhappy hours: Alcohol and physical partner aggression in the Americas. Washington, DC: Pan American Health Organization; 2008.
- Harris MB. Sex and ethnic differences in past aggressive behaviors. Journal of Family Violence. 1992; 7:85–102.10.1007/BF00978699
- Hazen AL, Soriano FI. Experiences with intimate partner violence among Latina women. Violence Against Women. 2007; 13:562–582.10.1177/1077801207301558 [PubMed: 17515406]
- Hou J, Yu L, Ting S-MR, Sze YT, Fang X. The status and characteristics of couple violence in China. Journal of Family Violence. 2011; 26:81–92.10.1007/s10896-010-9343-3
- Johnson, H. Measuring violence against women: Statistical trends 2006. 2006. Retrieved from http:// www.statcan.gc.ca/pub/85-570-x/85-570-x2006001-eng.pdf
- Johnson, H.; Ollus, N.; Nevala, S. Violence against women: An international perspective. New York, NY: Springer; 2008.
- Johnson MP, Leone JM. The differential effects of intimate terrorism and situational couple violence: Findings from the National Violence Against Women Survey. Journal of Family Issues. 2005; 26:322–349.10.1177/0192513X04270345
- Koenig MA, Lutalo T, Zhao F, Nalugoda F, Kiwanuka N, Wabwire-Mangen F, Gray R. Coercive sex in rural Uganda: Prevalence and associated risk factors. Social Science & Medicine. 2004; 58:787–798.10.1016/S0277-9536(03)00244-2 [PubMed: 14672593]
- Koenig MA, Lutalo T, Zhao F, Nalugoda F, Wabwire-Mangen F, Kiwanuka N, Gray R. Domestic violence in rural Uganda: Evidence from a community-based study. Bulletin of the World Health Organization. 2003; 81(1):53–60. Retrieved from http://www.ncbi.nlm.nih.gov/pmc/articles/ PMC2572313/pdf/12640477.pdf. [PubMed: 12640477]
- Koenig MA, Stephenson R, Ahmed S, Jejeebhoy SJ, Campbell J. Individual and contextual determinants of domestic violence in North India. American Journal of Public Health. 2006; 96(1): 132–138.10.2105/AJPH.2004.050872 [PubMed: 16317213]
- Krahe B, Bieneck S, Moller I. Understanding gender and intimate partner violence from an international perspective. Sex Roles. 2005; 52:807–827. doi.org/10.1007/s11199-005-4201-0.
- Li Q, Wilsnack R, Wilsnack S, Kristjanson. Cohabitation, gender, and alcohol consumption in 19 countries: A multilevel analysis. Substance Use & Misuse. 2010; 45:2481– 2502.10.3109/10826081003692106 [PubMed: 20397870]
- Magdol L, Moffitt TE, Caspi A, Silva PA. Hitting without a license: Testing explanations for differences in partner abuse between young adult daters and cohabitors. Journal of Marriage and Family. 1998; 60(1):41–55. doi.org/10.2307/353440.
- Raudenbush, S.; Bryk, A.; Cheong, Y.; Congdon, R.; du Toit, M. HLM 6: Hierarchical linear and nonlinear modeling. Lincolnwood, IL: Scientific Software International; 2002.
- Rothman, KJ. Epidemiology An introduction. Oxford, England: Oxford University Press; 2002.

- Shackelford TK, Mouzos J. Partner killing by men in cohabiting and marital relationships: A comparative, cross-national analysis of data from Australia and the United States. Journal of Interpersonal Violence. 2005; 20:1310–1324.10.1177/0886260505278606 [PubMed: 16162491]
- Shorey RC, Cornelius TL, Bell KM. A critical review of theoretical frameworks for dating violence: Comparing the dating and marital fields. Aggression and Violent Behavior. 2008; 13(3):185– 194.10.1016/j.avb.2008.03.003
- Spiwak R, Brownridge DA. Separated women's risk for violence: An analysis of the Canadian situation. Journal of Divorce and Remarriage. 2005; 43(3/4):105–117.10.1300/J087v43n03\_06
- Statistics Canada. Family violence in Canada: A statistical profile 2005. 2005. Retrieved from http:// www.statcan.gc.ca/pub/85-224-x/85-224-x2005000-eng.pdf
- Strauss MA. Cross-cultural reliability and validity of the revised conflict tactics scales: A study of university of student dating couples in 17 nations. Cross-Cultural Research. 2004; 38:407– 432.10.1177/1069397104269543
- Tjaden, P.; Thoennes, N. Full report of the prevalence, incidence, and consequences of violence against women: Findings from the National Violence Against Women Survey. Washington, DC: U.S. Department of Justice; 2000. Retrieved from http://www.ncjrs.gov/pdffiles1/nij/183781.pdf
- Vest JR, Catlin TK, Chen JJ, Brownson RC. Multistate analysis of factors associated with intimate partner violence. American Journal of Preventive Medicine. 2002; 22(3):156–164.10.1016/ S0749-3797(01)00431-7 [PubMed: 11897459]
- Walker R, Logan T, Jordan CE, Campbell JC. An integrative review of separation in the context of victimization: Consequences and implications for women. Trauma, Violence & Abuse. 2004; 5(2): 143–193.10.1177/1524838003262333
- Wilsnack RW, Kristjanson AF, Wilsnack SC, Crosby RD. Are U.S. women drinking less (or more)? Historical and aging trends, 1981–2001. Journal of Studies on Alcohol. 2006; 67:341–348. Retrieved from http://www.jsad.com/. [PubMed: 16608142]
- Wilsnack RW, Wilsnack SC, Kristjanson AF, Vogeltanz-Holm ND, Gmel G. Gender and alcohol consumption: Patterns from the multinational GENACIS project. Addiction. 2009; 104:1487– 500.10.1111/j.1360-0443.2009.02696.x [PubMed: 19686518]
- Krug, EG.; Dahlberg, LL.; Mercy, JA.; Zwi, AB.; Lozano, R., editors. World Health Organization (WHO). Chapter 4: Violence by intimate partners; World report on violence and health. 2002. p. 88-121.Retrieved from http://www.who.int/violence\_injury\_prevention/violence/ global\_campaign/en/chap4.pdf

## Table 1

Number of Respondents in Each Country Survey<sup>a</sup> and Percent in Each Marital Status Reporting Aggression by and Toward an Intimate Partner<sup>b</sup> by

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(Jane 1997 - 1915 - 1917 - 191	Ma	Married	Coha	Cohabiting	Divorced	Divorced/separated	Sii	Single	<sup>A</sup> O	Overall
Country and year of survey (area sampled it not nauonal)	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women
Asia Pacific, high income										
Japan - 2001										
Z	640	676	0	0	6	10	75	85	724	171
% male to female aggression $^{\mathcal{C}}$	12.7%	11.8%	I	ł	ł	I	8.5%	10.6%	12.2%	11.9%
% female to male aggression $d$	9.5%	11.1%	I	ł	ł	I	12.0%	12.5%	9.8%	11.2%
Asia other										
<b>Kazakhstan – 2003</b> (East Kazakhstan)										
z	304	300	12	11	18	42	95	80	429	433
% male to female aggression $^{\mathcal{C}}$	7.6%	8.3%	I	ł	ł	11.9%	10.5%	1.3%	8.7%	7.4%
% female to male aggression <sup>d</sup>	5.3%	4.6%	I	ł	1	4.8%	10.5%	6.2%	6.8%	5.3%
India – 2003 (State of Karnataka)										
Z	744	957	1	5	2	34	441	06	1188	1086
% male to female aggression $^{\mathcal{C}}$	10.5%	25.7%	ł	1	ł	11.8%	0.5%	5.6%	6.7%	23.5%
% female to male aggression $^d$	6.0%	2.8%	I	ł	ł	2.9%	0.2%	1.1%	3.9%	2.7%
Australasia										
Australia – 2007 (State of Victoria)										
Z	368	553	81	118	47	68	102	144	598	883
% male to female aggression $^{\mathcal{C}}$	5.4%	4.9%	3.7%	9.3%	8.5%	20.6%	8.7%	19.4%	6.0%	9.1%
% female to male aggression <sup>d</sup>	6.0%	4.5%	12.3%	9.3%	14.9%	11.8%	16.7%	15.9%	9.4%	7.5%
New Zealand - 2007										
Z	368	486	86	122	32	76	113	135	599	819
$\%$ male to female aggression $^{\mathcal{C}}$	11.0%	8.4%	19.5%	20.5%	6.5%	11.8%	14.5%	16.3%	12.7%	11.8%
% female to male aggression <sup>d</sup>	12.0%	14.9%	27.9%	29.7%	18.8%	4.1%	16.8%	21.7%	15.5%	17.3%
Europe, Central										
Czech Republic -2002										

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	Married	ried	Coha	Cohabiting	Divorced/separated	separated	Sin	Single	Overall	rall
Country and year of survey (area sampled if not national)	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women
N	555	620	75	75	125	161	321	255	1076	1111
% male to female aggression $^{\mathcal{C}}$	ł	13.5%	I	18.7%	ł	21.7%	ł	11.4%	ł	14.6%
% female to male aggression $d$	11.0%	I	21.3%	1	16.0%	I	9.0%	ł	11.7%	I
Europe, Western										
Isle of Man - 2005										
Ν	197	237	21	37	18	36	62	54	298	364
% male to female aggression $^{\mathcal{C}}$	8.2%	4.6%	9.5%	5.4%	;	5.6%	6.3%	5.6%	<i>T.T</i>	4.9%
% female to male aggression <sup>d</sup>	9.6%	6.7%	19.0%	13.9%	ł	8.1%	14.5%	3.8%	11.4%	7.2%
UK (England, Scotland, Wales) -										
2000 N	338	397	76	81	70	100	206	147	711	725
$\%$ male to female aggression $^{\mathcal{C}}$	13.0%	12.8%	21.4%	28.4%	12.9%	19.0%	16.6%	21.8%	15.2%	17.2%
% female to male aggression <sup>d</sup>	17.2%	15.1%	25.8%	30.0%	21.4%	25.3%	25.7%	25.9%	21.2%	20.3%
Central America and Caribbean										
<b>Costa Rica – 2003</b> (Metro San José)										
Ν	140	339	52	103	19	79	139	194	350	715
% male to female aggression $^{\mathcal{C}}$	4.3%	6.8%	7.7%	19.4%	1	8.9%	7.2%	4.6%	5.7%	8.3%
$\%$ female to male aggression $^d$	5.7%	5.0%	1.9%	5.8%	ł	7.6%	11.5%	7.2%	7.4%	6.0%
Nicaragua – 2005 (Cities of Bluefields, Esteli, Juigalpa, Leon & Rivas)										
Ν	167	432	155	378	14	53	209	431	545	1294
% male to female aggression $^{\mathcal{C}}$	4.2%	5.8%	9.7%	9.8%	1	7.5%	6.2%	3.9%	6.4%	6.4%
% female to male aggression <sup>d</sup>	5.4%	6.7%	7.7%	9.8%	1	3.8%	7.2%	5.1%	6.6%	6.9%
Belize - 2005										
Ν	643	725	375	436	32	62	563	543	1613	1764
% male to female aggression $^{\mathcal{C}}$	1	3.9%	I	7.6%	1	9.7%	;	3.7%	ł	4.9%
% female to male aggression <sup>d</sup>	2.6%	I	6.4%	ł	6.3%	ł	2.8%	:	3.7%	ł
South America and Tropical										
Peru – 2005 (Cities of Ayacucho, Lima)										
Z	127	325	127	253	10	87	209	277	473	942

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	Married	ried	Coha	Cohabiting	Divorced/separated	separated	Sin	Single	0v6	Overall
Country and year of survey (area sampled if not national)	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women
$\%$ male to female aggression $^{\mathcal{C}}$	5.5%	12.3%	13.4%	18.6%	1	13.8%	8.1%	5.8%	8.9%	12.2%
% female to male aggression <sup>d</sup>	3.9%	6.2%	9.4%	16.6%	ł	5.7%	11.5%	11.2%	8.9%	10.4%
Argentina – 2003 (City and province of Buenos Aires)										
Ν	131	237	53	98	35	69	144	111	363	515
% male to female aggression <sup>C</sup>	6.9%	5.9%	22.6%	18.4%	0.0	15.9%	8.3%	10.8%	9.1%	10.7%
% female to male aggression d	7.6%	6.3%	28.3%	16.3%	14.3%	8.7%	18.8%	11.7%	15.7%	9.7%
<b>Uruguay – 2004</b> (Several cities primarily Montevideo (54% of interviews) and Canelones (12%))										
N	143	237	49	79	27	88	116	119	335	523
$\%$ male to female aggression <sup><math>\mathcal{C}</math></sup>	0.7%	3.4%	12.2%	10.1%	3.7%	9.1%	7.8%	10.9%	5.1%	7.1%
% female to male aggression <sup>d</sup>	2.1%	3.4%	20.4%	15.2%	3.7%	5.7%	10.3%	10.1%	7.8%	7.1%
<b>Brazil – 2006–2007</b> (Metro São Paulo)										
Ν	287	381	133	178	35	62	238	277	693	915
$\%$ male to female aggression <sup><math>\mathcal{C}</math></sup>	3.5%	5.8%	6.8%	9.6%	5.7%	6.3%	4.6%	5.4%	4.6%	6.4%
% female to male aggression <sup>d</sup>	2.4%	4.7%	6.8%	9.6%	5.7%	3.8%	5.0%	4.3%	4.3%	5.5%
North America, high income										
Canada – 2004–2005										
Ν	2184	3009	642	832	447	822	1354	1372	4627	6035
% male to female aggression <sup><math>c</math></sup>	3.1% <sup>e</sup>	3.2% <sup>e</sup>	5.5% e	7.0% e	4.6% <sup>e</sup>	11.0% e	4.8% e	10.6% <sup>e</sup>	4.1% e	6.5% <sup>e</sup>
% female to male aggression <sup>d</sup>	5.3% e	4.4% e	11.7% e	9.3% e	10.5% <sup>e</sup>	6.7% e	11.5% e	10.9% e	8.5% e	<i>e</i> %6.9
United States - 2001										
Ν	ł	522	I	100	ł	147	ł	164	0	933
% male to female aggression <sup>c</sup>	ł	5.2% <sup>e</sup>	I	9 %6.6	ł	16.0% <sup>e</sup>	ł	9.8% e	ł	8.0% e
% female to male aggression <sup>d</sup>	1	I	I	ł	1	I	ł	1	1	I
Sub-Saharan Africa										
Uganda – 2003 (Regions of Kabale, Tororo, Lira, Wakiso)										
Ν	336	355	25	40	24	44	204	160	589	599
% male to female aggression $^{\mathcal{C}}$	18.7%	29.6%	45.5%	40.0%	31.8%	15.9%	16.1%	10.6%	19.4%	24.2%

	Ma	Married	Coha	Cohabiting	Divorced	Divorced/separated	Sir	Single	0v	Overall
Country and year of survey (area sampled if not national)	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women
$\%$ female to male aggression $^d$	14.3%	11.5%	28.0%	18.4%	12.5%	5.1%	6.4%	4.4%	12.1%	9.7%
Nigeria – 2003 (Federal Capital Territory and 5 states: Benue, Nasarawa, Plateau, Akwa Ibom, Rivers)										
Z	660	586	20	19	20	34	200	142	006	782
$\%$ male to female aggression $^{\mathcal{C}}$	12.6%	11.6%	15.0%	ł	15.0%	26.5%	8.3%	12.0%	11.8%	12.4%
% female to male aggression <sup>d</sup>	10.5%	7.4%	10.0%	ł	20.0%	21.9%	8.5%	12.7%	10.2%	9.0%
All countries (N)	8332	11375	2004	2963	984	2091	4791	4780	16111	21209
$\%$ male to female aggression $^{\mathcal{C}}$	7.8%	<b>%0.6</b>	10.1%	11.6%	6.5%	13.0%	6.9%	8.9%	7.7%	9.7%
% female to male aggression $^d$	7.4%	6.4%	12.4%	12.5%	12.0%	7.9%	9.5%	10.2%	8.9%	8.2%

Number of respondents in specific analyses vary slightly due to missing values.

b Percentages not reported for cells with less than 20 cases.

 $c^{c}$ Aggression *toward* a female partner reported by male respondents and aggression *by* a male partner reported by female respondents.

 $d_{\rm Aggression \ toward}$  a male partner reported by female respondents and aggression by a female partner reported by male respondents.

e Data were weighted for Canada to control for survey design and oversampling from smaller provinces and for the USA to control for survey design and oversampling of heavier drinkers

# Table 2

Odds Ratios from Logistic Regression by Country and From Hierarchical Linear Modeling Bernoulli Regression Including all Countries of Partner Aggression on Marital Status

Bernards and Graham

	Male-to-female ag	Male-to-female aggression reported by:	Female-to-male aggression reported by:	ession reported by:
Country	Males	Females	Males	Females
		<u>A. Cohabiting (compared to Married)</u>	pared to Married)	
Asia Pacific, high income				
Japan	1	1	1	ł
Asia other				
Kazakhstan	1		ł	ł
India	1	:	1	1
Australasia				
Australia	$0.54\ (0.15,1.92)$	1.79 (0.84, 3.81)	1.72 (0.76, 3.90)	1.50 (0.69, 3.27)
New Zealand	1.75 (0.91, 3.36)	$1.95 \left( 1.09,  3.48  ight)^{*}$	$2.12^{*}(1.17, 3.87)$	$1.69 \left( 1.03, 2.79  ight)^{*}$
Europe, Central				
Czech Republic	1	1.25 (0.66, 2.40)	$1.94\left(1.03, 3.64 ight)^{*}$	-
Europe, Western				
Isle of Man	$0.67\ (0.13,\ 3.37)$	0.88 (0.17, 4.49)	1.79 (0.52, 6.10)	1.42 (0.45, 4.52)
United Kingdom	$1.12\ (0.60,\ 2.10)$	$1.68\ (0.90,\ 3.13)$	$0.89\ (0.50,1.60)$	1.39 (0.76, 2.54)
<b>Central America and Caribbean</b>				
Costa Rica	1.51 (0.40, 5.71)	$2.96(1.53,5,73)^{**a}$	0.29 (0.04, 2.43) <sup>a</sup>	0.85 (0.32, 2.27)
Nicaragua	2.09 (0.82, 5.35)	1.49 (0.87, 2.55)	1.31 (0.53, 3.24)	1.35 (0.81, 2.26)
Belize		$1.90\left(1.11, 3.25 ight)^{*}$	$2.29~(1.19, 4.40)^{*}$	-
South America and Tropical				
Peru	$1.55\ (0.58, 4.14)$	$0.90\ (0.54,1.49)$	$1.56\ (0.50,4.84)$	$1.80\ (0.99,\ 3.30)$
Argentina	2.20 (0.79, 6.11)	2.75 (1.27, 5.95)*	2.82 (1.10, 7.22)*	$1.78\ (0.80,\ 3.93)$
Uruguay	7.56 (0.79, 72.43)	1.61 (0.53, 4.84)	$7.14\left(1.74, 29.24 ight)^{**}$	2.10 (0.75, 5.87)
Brazil	1.47 (0.57, 3.81)	1.53 (0.78, 3.03)	2.26 (0.80, 6.38)	1.65 (0.81, 3.36)
North America, high income				
Canada	1.40 (0.92, 2.15)	1.81 (1.28, 2.56) <sup>**</sup>	$1.70 \left( 1.25, 2.32  ight)^{**}$	$1.53 \left( 1.13, 2.08  ight)^{*}$

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	Male-to-female agg	Male-to-female aggression reported by:	Female-to-male aggression reported by:	ession reported by:
Country	Males	Females	Males	Females
United States		1.83 (0.88, 3.81)	1	
Sub-Saharan Africa				
Uganda	3.68 (1.51, 8.97) **	1.41 (0.71, 2.78)	$2.67 \left( 1.04, 6.85  ight)^{*}$	$1.98\ (0.80,4.88)$
Nigeria	1.22 (0.35, 4.31)	I	0.99 (0.22, 4.42)	
Across all countries	$1.46 (1.14, 1.90)^{**}$	$1.55 (1.30, 1.86)^{***}$	<b>1.</b> 7 ( <b>1.43</b> , <b>2.1</b> 7) ***	$1.59 (1.32, 1.91)^{***}$
		B. Separated/divorced (compared to Married)	compared to Married)	
Asia Pacific, high income				
Japan	I	1	1	ł
Asia other				
Kazakhstan		$1.39\ (0.50,\ 3.90)$	I	$0.98\ (0.21, 4.48)$
India		$0.41 \ (0.14, 1.19)$	1	1.10(0.14, 8.34)
Australasia				
Australia	1.94 (0.62, 6.08)	5.19 (2.56, 10.52) ***	3.48 (1.36, 8.92) <sup>**</sup>	$3.18(1.36,7.46)^{**}$
New Zealand	0.57 (0.13, 2.48)	1.78 (0.82, 3.90)	1.86 (0.72, 4.81)	$0.29~(0.09,0.96)^{*}$
Europe, Central				
Czech Republic		$1.83\left(1.18, 2.85 ight)^{**}$	1.60 (0.92, 2.77)	
Europe, Western				
Isle of Man		1.15 (0.24, 5.47)	1	1.13(0.31, 4.14)
United Kingdom	1.16(0.53,2.53)	1.55 (087, 2.79)	$1.66\ (0.86,\ 3.21)$	$1.86\left(1.09,3.19 ight)^{*}$
Central America and Caribbean				
Costa Rica		1.39 (0.57, 3.38)	I	1.75 (0.66, 4.66)
Nicaragua		1.64 (0.54, 4.97)	1	0.62 (0.14, 2.69)
Belize		$2.77^{*}(1.10, 7.00)$	2.55 (0.56, 11.57)	
South America and Tropical				
Peru		1.03 (0.51, 2.09)	ł	0.84 (0.30, 2.34)
Argentina	$\mathcal{O}(0)$	3.17 (1.36, 7.42) <sup>**</sup>	2.33 (0.72, 7.53)	$1.48\ (0.54, 4.09)$
Uruguay	7.10 (0.41, 123.37)	3.27 (1.17, 9.17)*	2.08 (0.20, 21.24)	2.06 (0.64, 6.64)
Brazil	1.80 (0.37, 8.70)	1.20 (0.44, 3.28)	2.56 (051, 12.97)	0.96 (0.27, 3.38)
North America, high income				

	age among of anti-		199n Amili A Amilia I	
Country	Males	Females	Males	Females
Canada	$1.63\ (0.98,\ 2.71)^{*}$	4.48 (3.28, 6.13) <sup>***a</sup>	2.39(1.67,3.42) ***a	1.79 (1.25,2.55) ***
United States	1	4.45 (2.49, 7.97) <sup>***</sup>	I	
Sub-Saharan Africa				
Uganda	2.03 (0.79, 5.21)	0.51 (0.22, 1.19)	$0.89\ (0.25,\ 3.10)$	$0.39\ (0.09,1.68)$
Nigeria	1.22 (0.35, 4.26)	2.76*(1.22, 6.21)	2.15 (0.70, 6.60)	3.47 (1.40, 8.57)**
Across all countries	1.02 (0.67, 1.56)	$1.87^{**}(1.34, 2.61)$	<b>1.81 (1.38, 2.37</b> ) <sup>***</sup>	1.18 (0.79, 1.75)
		C. Single (compared to Married)	red to Married)	
Asia Pacific, high income				
Japan	0.29 (0.12, 0.71) **	$0.38\ (0.17,0.85)^{*}$	0.44~(0.19, 1.03)	$0.39\ (0.18,0.83)^{*}$
Asia other				
Kazakhstan	1.05 (0.40, 2.76)	$0.10~(0.01, 0.84) \ ^{*a}$	1.67 (0.59, 4.77) <sup>a</sup>	1.07 (0.31, 3.66)
India	$0.03 \ (0.01, \ 0.11)^{***}$	$0.14\ (0.05, 0.34)^{***}$	$0.02\ (0.00,\ 0.19)^{***}$	0.34 (0.04, 2.58)
Australasia				
Australia	0.93 (0.33, 2.63)	3.67 (1.83, 7.39) <sup>***</sup>	1.57 (0.67, 3.68)	1.82 (0.86, 3.84)
New Zealand	1.10 (0.53, 2.25)	1.05 (0.54, 2.02)	$0.81 \ (0.40, 1.64)$	$0.80\ (0.45,1.41)$
Europe, Central				
Czech Republic		0.63 (0.37, 1.08)	$0.60\ (0.34,\ 1.07)$	
Europe, Western				
Isle of Man	$0.22\ (0.05,\ 0.93)^{*}$	0.73 (0.15, 3.48)	1.02 (0.35, 2.95)	0.24 (0.04, 1.27)
United Kingdom	0.68 (0.38, 1.23)	1.10 (0.62, 1.96)	0.73 (0.43, 1.22)	1.05 (0.61, 1.81)
Central America and Caribbean				
Costa Rica	$0.84\ (0.24,\ 3.01)$	0.52 (0.23, 1.22)	1.56 (0.52, 4.72)	0.78 (0.34, 1.76)
Nicaragua	0.70 (0.24, 2.02)	0.54 (0.28, 1.03)	0.78 (0.30, 2.09)	0.66 (0.37, 1.17)
Belize		$0.84\ (0.45,1.58)$	$0.86\ (0.39,1.87)$	
South America and Tropical				
Peru	0.51 (0.16, 1.58)	$0.16(0.08,0.33)^{***a}$	1.18 (0.36, 3.94) <sup>a</sup>	0.82 (0.41, 1.65)
Argentina	0.32 (0.10, 1.06)	1.11 (0.45, 2.73)	$0.80\ (0.30,\ 2.15)$	0.71 (0.29, 1.76)
Uruguay	1.88 (0.18, 19.89)	1.50 (0.52, 4.32)	1.78 (0.39, 8.12)	1.03 (0.35, 3.05)

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Female-to-male aggression reported by:

Male-to-female aggression reported by:

	Male-to-female agg	Male-to-female aggression reported by:	Female-to-male aggression reported by:	ession reported by:
Country	Males	Females	Males	Females
Brazil	0.69 (0.25, 1.87)	$0.75\ (0.36,1.59)$	1.25 (0.43, 3.65)	0.56 (0.25, 1.28)
North America, high income				
Canada	0.94(0.63,1.41)b	2.09 (1.54, 2.83) <sup>***a</sup>	1.12 (0.83, 1.50) <sup><i>a</i></sup>	1.26(0.94,1.68)b
United States		1.40 (0.72, 2.72)	-	
Sub-Saharan Africa				
Uganda	0.88 (0.50, 1.55)	$0.22 (0.12, 0.39)^{***}$	0.58 (0.28, 1.22)	0.45 (0.18, 1.15)
Nigeria	0.63 (0.33, 1.21) b	1.03 (0.55, 1.93)	0.88 (0.45, 1.72)	$1.90(0.98,3.70)^{*b}$
Across all countries	$0.57\ (0.38,\ 0.87)\ ^{*}$	0.69 (0.45, 1.05)	$0.80\ (0.59,1.10)$	0.86 (0.66, 1.12)
		D. Cohabiting (compared to Single)	<u> npared to Single)</u>	
Asia Pacific, high income				
Japan	I	ł	ł	ł
Asia other				
Kazakhstan	I	;	1	I
India	I	1	1	ł
Australasia				
Australia	0.58 (0.14, 2.35)	0.49 (0.22, 1.06)	1.10 (0.44, 2.72)	0.82 (0.37, 1.83)
New Zealand	1.60 (0.74, 3.43)	$1.86\ (0.96,\ 3.61)$	2.62 (1.27, 5.39) <sup>**</sup>	2.12 (1.17, 3.85)*
Europe, Central				
Czech Republic		$1.99\ (0.98, 4.05)$	$3.20\left(1.60, 6.44 ight)^{**}$	
Europe, Western				
Isle of Man	3.04 (0.47, 19.62)	1.22 (0.19, 7.98)	$1.76\ (0.46,\ 6.78)$	$6.02~(1.05, 34.47)^{*}$
United Kingdom	1.64 (0.88, 3.06)	$1.52\ (0.81, 2.86)$	1.23 (0.69, 2.17)	1.32 (0.71, 2.44)
Central America and Caribbean				
Costa Rica	1.80 (0.48, 6.79)	5.65(2.42, 13.16)	0.19 (0.02, 1.52) <sup>a</sup>	1.09 (0.40, 3.00)
Nicaragua	2.98 (1.26, 7.07)*	2.77 (1.52, 5.02) **	1.67 (0.70, 4.00)	$2.06\left(1.19, 3.57 ight)^{*}$
Belize	1	$2.25\left(1.26,4.01 ight)^{**}$	$2.67^{**}(1.35, 5.28)$	
South America and Tropical				
Peru	3.06 (1.38, 6.82) <sup>**</sup>	5.53 (2.96,10.31) ***a	1.32 (0.59, 2.97) <sup>a</sup>	2.20 (1.29, 3.75) **

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	Male-to-female aggression reported by:	ression reported by:	Female-to-male aggression reported by:	ession reported by:
Country	Males	Females	Males	Females
Argentina	$6.88$ $(2.52, 18.79)^{***}$	2.49 (1.09, 5.67) <sup>*</sup>	3.51 (1.51, 8.15) <sup>**</sup>	$2.51 (1.08, 5.83)^{*}$
Uruguay	$4.03 \ (1.18, \ 13.79)^{*}$	1.07 (0.42, 2.77)	4.02 (1.44, 11.20) <sup>**</sup>	2.03 (0.84, 4.92)
Brazil	2.13 (0.83, 5.52)	2.03 (0.97, 4.25)	1.81 (0.71, 4.60)	2.94 (1.34, 6.45) <sup>**</sup>
North America, high income				
Canada	1.49 (0.97, 2.28)	0.87 (0.63, 1.20) <sup>a</sup>	$1.52 (1.13, 2.06)^{**a}$	1.22 (0.90, 1.64)
United States	-	1.31 (0.61, 2.83)	1	
Sub-Saharan Africa				
Uganda	$4.21 (1.63, 10.85)^{**}$	6.43 (2.84, 14.58) ***	4.58 (1.58, 13.29) <sup>**</sup>	$4.38 \left(1.36, 14.10\right)^{*}$
Nigeria	1.94 (0.51, 7.39)	;	1.13 (0.24, 5.38)	
Across all countries	2.57 (1.74, 3.79) ***	2.26 (1.57, 3.24) ***	2.19 (1.50, 3.19) ***	<b>1.85</b> ( <b>1.39, 2.47</b> ) ***
		E. Separated/divorced (compared to Single)	(compared to Single)	
Asia Pacific, high income				
Japan	I	ł	ł	ł
Asia other				
Kazakhstan	-	13.37(1.45, 123.55)*	-	0.91 (0.16, 5.28)
India		3.02 (0.75, 12.13)	I	3.24 (0.19, 55.17)
Australasia				
Australia	2.08 (0.46, 9.35)	1.41 (0.60, 3.32)	2.23 (0.67, 7.42)	1.75 (0.63, 4.86)
New Zealand	0.52 (0.11, 2.52)	$1.70\ (0.66, 4.41)$	2.29 (0.75, 6.99)	0.36 (0.10, 1.32)
Europe, Central				
Czech Republic	-	2.91 (1.54, 5.48) **	2.65 (1.29, 5.44) **	
Europe, Western				
Isle of Man	1	1.59 (0.22, 11.73)	I	4.79 (0.67, 34.36)
United Kingdom	1.70 (0.69, 4.16)	1.41 (0.70, 2.84)	$2.28\left(1.06,4.91 ight)^{*}$	1.77 (0.92, 3.42)
Central America and Caribbean				
Costa Rica	1	2.65 (0.90, 7.82)	I	2.25 (0.75, 6.73)
Nicaragua		$3.03\ (0.95,9.70)$	1	0.95 (0.21, 4.21)
Belize	1	$3.29 \left( 1.21, 8.92  ight)^{*}$	2.98 (0.62, 14.39)	-

	Male-to-female age	Male-to-female aggression reported by:	Female-to-male aggression reported by:	ession reported by:
Country	Males	Females	Males	Females
South America and Tropical				
Peru	ł	6.35 (2.66, 15.13) <sup>***</sup>	ł	1.03 (0.36, 2.91)
Argentina	(0)	2.87 (1.06, 7.75) <sup>*</sup>	2.90 (0.81, 10.34)	2.09 (0.67, 6.53)
Uruguay	3.78 (0.31, 46.24)	2.19 (0.70, 6.85)	1.17 (0.12, 11.52)	2.00 (0.55, 7.22)
Brazil	2.62 (0.50, 13.67)	$1.58\ (0.51, 4.90)$	2.05 (0.40, 10.62)	1.71 (0.43, 6.79)
North America, high income				
Canada	$1.73\ (0.97,\ 3.06)\ b$	$2.15(1.53, 3.01)^{***}$	2.15 (1.44, 3.18) ***	$1.42\ (0.96,\ 2.11)\ b$
United States	I	$3.19(1.61,6.31)^{***}$	ł	
Sub-Saharan Africa				
Uganda	2.32 (0.84, 6.45)	2.33 (0.86, 6.28)	1.52 (0.38, 6.04)	$0.86\ (0.16, 4.63)$
Nigeria	$1.94\ (0.49, 7.60)$	2.67 (0.99, 7.22)	2.44 (0.69, 8.61)	1.82 (0.62, 5.33)
Across all countries	1.77 (1.18, 2.67)*	2.71 (2.14, 3.44) ***	2.25 (1.67, 3.03) ***	$1.37\ (1.02,1.84)^{*}$
	Ŧ	F. Cohabiting (compared to Separated/divorced)	to Separated/divorced	0
Asia Pacific, high income				
Japan	I	I	ł	ł
Asia other				
Kazakhstan	I	I	ł	ł
India	I	I	ł	ł
Australasia				
Australia	0.28 (0.06, 1.41)	$0.34\ (0.14,0.84)^{*}$	$0.49\ (0.16,1.51)$	0.47 (0.17, 1.31)
New Zealand	3.08 (0.66, 14.43)	1.09 (0.45, 2.64)	1.14 (0.40, 3.24)	5.82 (1.67, 20.30) <sup>**</sup>
Europe, Central				
Czech Republic	I	$0.69\ (0.33,1.41)$	1.21 (0.57, 2.58)	;
Europe, Western				
Isle of Man	I	0.77 (0.10, 6.01)	1	1.26 (0.26, 6.00)
United Kingdom	0.97 (0.39, 2.41)	1.08 (0.52, 2.27)	0.54 (0.24, 1.21)	0.74 (0.37, 1.51)
Central America and Caribbean				
Costa Rica	I	2.13 (0.84, 5.43)	ł	$0.49\ (0.14,1.63)$
Nicaragua	-	0.91 (0.30, 2.74)	1	2.18 (0.50, 9.48)

	Male-to-female agg	Male-to-female aggression reported by:	Female-to-male aggression reported by:	ession reported by:
Country	Males	Females	Males	Females
Belize	:	0.69 (2.68, 1.75)	0.90 (0.20, 4.05)	:
South America and Tropical				
Peru	:	0.87 (0.42, 1.79)	;	2.14 (0.80, 5.72)
Argentina	$\mathcal{O}(0)$	0.87 (0.37, 2.06)	1.21 (0.36, 4.05)	1.20 (0.42, 3.43)
Uruguay	1.07 (0.10, 11.48)	$0.49\ (0.15,1.58)$	3.43 (0.38, 30.74)	1.02 (0.30, 3.47)
Brazil	$0.81 \ (0.16, 4.10)$	1.28 (0.44, 3.76)	$0.88\ (0.18, 4.42)$	1.72 (0.47, 6.30)
North America, high income				
Canada	0.86 (0.48, 1.54)	$0.40 \ (0.28, 0.58)$ *** $a$	0.71 (0.48, 1.06) <sup>21</sup>	0.86 (0.57, 1.28)
United States	ł	$0.41\ (0.19,0.87)^{*}$	ł	I
Sub-Saharan Africa				
Uganda	1.81 (0.53, 6.20)	2.76 (0.97, 7.86)	3.01 (0.67, 13.54)	5.10(0.97, 26.88)
Nigeria	1.00 (0.18, 5.72)	;	0.46 (0.07, 2.90)	ł
Across all countries	1.45 (0.91, 2.30)	0.83 (0.62, 1.11)	$0.97\ (0.70, 1.35)$	1.35 (0.88, 2.08)

Note. 95% confidence intervals shown in brackets. A constant was included in all models and all analyses controlled for age (results not shown); respondents were not asked about aggression toward a partner (perpetration) in Belize, Czech Republic, or the USA.

<sup>a</sup>Significant (p < .05) gender-by-marital status interaction for victimization.

 $b_{\rm Significant} \, (p < .05)$  gender-by-marital status interaction for perpetration.

cSeparated/divorced men from Argentina reported no aggression toward an intimate partner.

 $_{p < .05;}^{*}$ 

p < .01;

p < .001.