

To: Inequality Working Group
From: Carolyn Sawtell
Date: October 19, 2006
Re: Working Paper

Attached is the current version of a paper I am working on concerning abuse and depression among married women. I am looking for any feedback you may provide on how to make this paper stronger for the sake of submission.

I am looking to submit it in a journal such as Violence Against Women or the Journal of Interpersonal Violence.

More specifically, I am interested in knowing if there are any other theories that I should be exploring or that might strengthen my argument. I am also interested in knowing if the paper flows or if there are any questions left unanswered and whether there are gaps in the flow of the manuscript.

Thanks,
Carolyn Sawtell

Abstract

Wife abuse is the primary cause of physical injury to women in the United States. Past studies have focused on the prevalence of wife abuse but few have concentrated on the mental health outcomes of different forms of abuse. This paper addresses the question: are physical and emotional abuse and being the victim of controlling behavior differentially linked to depression? This paper further addresses whether some women are more likely to experience wife abuse than others and which form of abuse is the strongest predictor of depression. This paper addresses these questions using the 1995-1996 National Survey of Violence Against Women (N=8,000). We limit the sample to only currently married women, ages 18-65, who do not report abuse by more than one person (N=4,087). Findings indicate (1) that there are few significant relationships between socio-demographic characteristics (e.g., race/ethnicity, age, education, income [personal and household], labor force status, parental status, and the presence of children) and each of the three forms of abuse, and (2) when these socio-demographic variables are controlled, each form of abuse is significantly related to the likelihood of depression, with emotional abuse being the strongest predictor. The analysis confirms the detrimental impact of abuse on women's psychological health.

Depression and Wife Abuse: Predicting the Impact of Physical,
Emotional, and Power/Control Abuse for Women

Intimate partner abuse is the primary cause of injury to women in the United States (Corcoran, Stephenson, Perryman, & Allen, 2001; Straus, Gelles, & Steinmetz, 1980).¹ Studies show that women are at greater risk of being harmed by an intimate partner than by a stranger (Tjaden and Thoennes, 1998) and that intimate partner violence accounts for approximately one fifth of all violence against women (Bureau of Justice Statistics, 2003). More than 960,000 incidents of violence occur against intimate partners in a given year (Bureau of Justice Statistics, 1998), and about 75 percent of victims are women (Bureau of Justice Statistics, 2005). The issue of abuse affects at least 1.5 million women where the consequences are profound and affect the well-being of entire communities (CDC, 2004). Spousal abuse is a substantial public health problem in the United States. These consequences include physical, sexual, reproductive, psychological and behavioral and extend to those children who are exposed to this abuse. The economic expense of intimate partner abuse is costly. Although underestimated, estimates range from \$1.7 billion to \$10 billion annually (Straus 1986; Gelles and Straus 1990; Meyer 1992).

Despite the increasing literature on the prevalence of wife abuse, little research has focused on the mental health consequences (e.g., depression, post-traumatic stress disorder, social anxiety, etc.). Even fewer studies have focused on the mental health impacts of non-physical forms of abuse such as emotional and controlling behaviors. There have been few investigations of the emotional changes over time in response to abuse (Crowell & Burgess, 1996). Typically, research regarding domestic violence and wife abuse is limited to the physical

aspects of abuse, which ignores the numerous other tactics abusers use to maintain control over their victim. These other tactics that are less often discussed in the literature include forms of emotional and psychological abuse. These tactics, per se, may be of consequence for women's mental health.

This study examines how depression may be related to emotional, physical, and controlling behavior in marital relationships. Specifically, the research addresses three major questions: (1) What is the prevalence of non-physical forms of abuse? (2) Is abuse in general associated with indicators of depression? and (3) Which form of abuse is more strongly associated with depression? This paper uses OLS regression to analyze data from the National Survey of Violence Against Women. Findings suggest that women who are abused are significantly more susceptible to depression. These findings especially apply to non-physical forms of abuse. Before we discuss this association, it is important to first define abuse and examine the literature concerning abuse and depression.

For the purposes of this paper, *wife abuse* is defined as a pattern of assaultive and coercive behaviors used by a husband against a wife. Wife abuse often entails a "series of repeated actions, including those of greater and lesser severity, which has a cumulative impact on the victim" (Walby 2004). *Marital Violence* "occurs between two adults in a mutually defined significant, intimate marital relationship" (Viano, 1992, p. 159). This paper examines physical, emotional, and power/control abuse. In discussing the various forms of abuse, I define these three in more detail. *Physical violence or abuse* is considered as "any use of size, strength, or presence to hurt or control someone else" (Wilson, 1997, p. 8) and refers to physical contact such as hitting, pinching, pushing, shoving, and the use of weapons designed to injure, hurt, endanger, or cause physical pain (Berry, 2000). *Emotional abuse* is defined as "any use of words,

voice, action, or lack of action meant to hurt or demean another person” (Wilson, 1997, p. 10) and refers to consistently doing things to shame, insult, embarrass or mentally hurt one’s intimate partner. It may include such acts as withholding money, calling names, withholding affection, and extreme acts of jealousy. *Power/control abuse* generally refers to controlling behaviors which one partner uses to gain domination over another. This may include limiting the partner’s contact with others, controlling all money, insisting on knowing who the partner is with at all times and other behaviors intended to control one’s partner.

Background

The fact that spousal abuse has both mental and physical consequences has only been recently recognized by researchers in the social sciences (Horowitz, McLaughlin, and White, 1998; Walby, 2004). Most of the research regarding abuse and subsequent health has focused on the physical consequences of domestic violence, however less frequently examined are the mental/emotional consequences. Also, few studies have explored the differential mental health effects of different types of intimate partner abuse. Little attention has been paid to non-physical forms of abuse. It is likely that any form of abuse results in depression, but perhaps one form of abuse is more *strongly* associated with depression. Of concern here is whether emotional forms of abuse are more likely to result in depression than physical abuse. If this association holds true, then this study may be important for both policy implications and program evaluation since most policies and interventions attend to only physical forms of abuse.

Abuse and Depression

Being a victim of domestic violence increases the likelihood of several kinds of mental disorders, the primary mental health response being depression (McCauley et al., 1995;

Saunders, Hamberger, & Hovey, 1993). "Both fear of violence and actual experience of violence are stressful, and stress is well known to be associated with mental disorders" (Golding, 1999). Battered women exhibit more depressive symptoms than other women (Jaffe, Wolfe, Wilson, & Zak, 1986; McCauley et al., 1995; Ratner, 1993). Women who report experiencing abuse also report increased levels of moderate and severe psychological distress. Being in a violent relationship contributes to the psychological distress experienced by women (Gelles and Harrop, 1989). This is consistent with feminist therapy theory, which states that victimization in general is damaging to emotional health (Rosewater, 1990).

However, there is a lack of research regarding this relationship in the sociological literature, and few of the studies in the fields of social work and psychology involve quantitative analysis of national samples (Waldrop and Resik, 2004). While this previous research is important to understand the mechanisms of abuse and depression, the findings cannot be generalized to larger populations, and the significance of the findings is unclear. Also, research on links between depression and violence tend to center on physical violence rather than emotional abuse or abuse of power and control.

One reason to focus on depression as a consequence of abuse is the fact that women in general exhibit greater levels of depression overall. Research has illustrated that women are more likely to have depressive symptoms than men, whereas men are more likely to exhibit anti-social or destructive behaviors than women. However, one may question whether the greater level of depression among women can be attributed to a greater likelihood to experience intimate partner violence in their lifetime. The overall estimated prevalence of depression in the general population estimated by the U.S. National Comorbidity Survey Replication is 6.7% (Kessler RC, Demler O, Frank RG 2005).² Campbell and Soeken (1999) found that depression in women in

general is estimated at 9.3% point prevalence with a 20% to 25% lifetime risk. The prevalence of depression in abused women has been noted as ranging from 10.2 percent (Weissman & Klerman, 1992) to 21.3 percent (Kessler et al., 1994) to 48 percent (Golding 1999). Holzworth-Munroe, Smutzler, and Sandin (1997) found that the prevalence of depression among battered women to be at least 50 percent, and sometimes as high as 83 percent. These effects may last many years after the violence has ceased (Campbell, Sullivan and Davidson 1995). This is an important rationale for studying abuse and its effects on women's mental health. Because women are the primary victims of domestic violence and are more likely to exhibit mental health problems, the analysis is limited to women.

Studies have found that spousal conflict is among the more powerful determinants of distress (Dohrenwend, Krasnoff, Askenasy, and Dohrenwend, 1978). Walker (1984), one of the foremost and original researchers on wife abuse, found that when women are repeatedly victimized, they no longer feel that they can predict the outcomes of their behavior, so they develop learned helplessness. Such helplessness and powerlessness may lead to various psychological conditions, including depression (Abramson, Metalsky, Alloy, 1989; Hankin, Abramson, & Siler, 2001).

(SHOULD THIS BE IN THE CONCLUSION INSTEAD?) Past research has sometimes questioned the causal direction between abuse and depression. While the mental health consequences of violence have been noted, it has also been suggested that people with poor mental health may be more likely to enter violent relationships. However, Horowitz, et al. (1998) found that the selection of depressed people into problematic relationships does not account for the quality of their relationships with their partners. Pre-marital mental disorders are not associated with wife abuse (Kessler, Molnar, Feurer, and Applebaum, 2001). Furthermore,

Campbell and Soeken (1999) observed that rates of depression decreased when abuse ceased, thus suggesting that wife abuse may prompt mental disorders, not the reverse.

Study Questions

I address three main questions: (1) What social characteristics of women are associated with greater risk of abuse? (2) Are indicators of depression associated with acts of wife abuse and do the associations between abuse and depression exist when socio-demographic variables are taken into account? (3) Are some forms of abuse more strongly associated with depression than others?

One of the most noted findings in stress research has been the benefits of marriage on physical and mental health and well-being. Rather conclusively, studies have found that those who are married, as compared to those who are unmarried, have less morbidity, mortality, mental illness, substance abuse, and distress (Simon, 2002; Gove 1972; Umberson, 1987; Waite, 1995; Horowitz, McLaughlin, and White, 1997). Less attention has been paid to the negative impacts of marriage on well-being as well as conflict and abuse in marital relationships. Because abuse and threats of abuse in relationships are at odds with what we consider the trustful bond of marriage, we can expect marital abuse to have a powerful impact on mental health. This research fills this void in the literature on wife abuse and mental health by examining the mental health consequences of different forms of abuse.

Based on past research, I expect that abuse will be the mechanism through which certain socio-demographic characteristics are linked to mental health. Women who experience abuse from a husband will be more likely to report depressive symptoms. Prior research has exhibited a link between certain socio-demographic characteristics and depression. While there may be some association between socio-demographic variables and depression, once the different forms

of abuse are added, these associations should shrink in magnitude, perhaps to insignificance, if indeed violence is the predictor of depression.

Based on previous psychology and social work studies, I expect that exposure to relationship abuse will be significantly associated with depression. I also expect some forms of abuse (physical, emotional, and power and control), will be more strongly associated with depression than others. Because emotional abuse is psychological in nature and affects a woman's understanding of herself, I believe that I will find a stronger association between emotional abuse and depression. Due to the nature of more physical forms of abuse I would expect to find the outcomes manifested in more physical ways (such as PTSD).

Data and Methods

I use data from a national survey to consider whether depression is associated with abuse by a current spouse. The data come from the National Violence Against Women Survey (NVAWS).³ Tjaden and Thoennes (1999) designed this cross-sectional study to document violence against women as well as women's experiences with violence. Sponsored jointly by the National Institute of Justice (NIJ), the National Center for Injury Prevention and Control (NCIPC), and Centers for Disease Control and Prevention (CDC), the survey aimed to further the understanding of violence against women. The nationally representative sample of 8,000 women were 18 years or older in the United States. The sample was obtained by U.S. census region random digit dialing for interviews conducted by telephone using a computer-assisted telephone interviewing (CATI) system. Interviews were conducted from November 1995 to May 1996. Only female interviewers surveyed female respondents (more information on the methodology can be found in Tjaden and Thoennes, 1999).⁴

The survey included questions on respondent characteristics, mental health, and history of violence in past relationships, as well as emotional abuse, sexual abuse, stalking, and threat victimization in the current relationship. Respondents who disclosed victimization were asked detailed questions about the characteristics and consequences of that victimization, including injuries, medical assistance received, and perpetrator information.⁵ Tjaden and Thoennes (2000) report a response rate of 72 percent for women participants.

Sample for Analysis

I include only women in my analysis because women are more often the victims of intimate partner abuse (Corcoran, Stephenson, Perryman, & Allen, 2001, p. 393; Bureau of Justice Statistics, 1995). Umberson, Anderson, Glick, and Shapiro (1998) argue that violence is more detrimental to the self-perceptions and well-being of women than of men. They find that experiencing violence at the hands of a partner has significant adverse effects on woman's sense of personal control, however this relationship does not hold for men. It has been argued that domestic abuse is a different phenomenon for men and women. Tjaden and Thoennes (1999) found that women experience significantly more intimate partner violence than men. They also found that 25 percent of women and 8 percent of men reported rape or physical violence by a partner.⁶

I restrict the analyses of the study to married women aged 18 to 65 who indicated that they were not abused by more than one person. In this study, I look at spousal abuse rather than abuse by intimate partners in general and therefore limit the sample to women who reported being married at the time of the survey (rather than single, divorced, separated, widowed, and never-married). Being married likely places different restrictions on the options of those in abusive relationships.⁷ Furthermore, I include respondents who have not suffered abuse at the

hands of more than one person because they would cloud the results. The total number of respondents is 4087.

Table 1 illustrates that the sub-sample appears to be similar to the total surveyed sample. For example, the percentage of Whites in the sub-sample is similar with slightly fewer Black women. The percentage of women reporting that they are of Hispanic origin does not change. The married women report similar ages with the exception of a smaller 18-24 category. Slightly more women report being a homemaker but the other employment statuses remain comparable. The education levels reported and respondent's income also remain similar. Household is also similar, except married women report higher earnings.

Insert Table 1 About Here

Measures

Depression. The first dependent variable is depression, measured using a summary index of 8 items ($\alpha = .77$). Participants were asked a series of questions from a depression inventory developed by SF-36 Health Survey.⁸ The SF-36 is a multi-purpose, short-form health survey that originally included 36 questions regarding most health outcomes. It is a generic measure, and the SF-36 has proven useful in surveys of general and specific populations (<http://www.sf-36.org/tools/sf36.shtml>). These questions asked participants how often in the past week had they experienced such things as feeling full of pep, very nervous, down in the dumps, energetic, down-hearted and blue, worn out, happy, and tired (Table 2).

Insert Table 2 About Here

Abuse. I measured abuse in terms of three dimensions: physical, emotional, and power/control abuse. Within each form of abuse, I sum the individual indicators so that a higher score indicates greater abuse and a lower score indicates less abuse (see further detailed explanation below) as it

is more important to distinguish the extent of abuse rather than just whether or not abuse has occurred.

Physical abuse. The survey asks whether the woman's current spouse has ever done any of the following: thrown something that could hurt; pushed, grabbed, or shoved; pulled hair; slapped or hit; kicked or bit; choked or attempted to drown; hit with an object; beat up; threatened with a gun; threatened with a knife or other weapon; used a gun; used a knife or other weapon (Table 4). Twenty-two percent of the women in the sample reported at least one indicator of abuse. This scale is a modified version of the Conflict Tactics Scales (Strauss, 1979). Rather than using a dummy variable which would ignore the numerous tactics abusers employ, I summed the number of tactics they employed with regard to physical assault so that the index ranges from 0 (no abuse indicators reported) to 12 (every abuse indicator reported). The expectation is that the greater number of tactics abusers employ with regard to physical assault may have a greater impact on depression. Table 3 shows the importance of this use of a summated measure of abuse as it is unlikely that a person who commits an act of violence against their spouse such as using a knife has not committed more of the milder forms of abuse such as shoving, punching, etc. For example, notice that if the respondent has been hit by an object, there is an increased likelihood that their partner has also thrown something (74%), pushed/shoved/grabbed them (88%), pulled their hair (70%), slapped/hit them (94%), kicked/bit them (47%), choked/attempted to drown them (50%). There is also a high likelihood that they beat the respondent up - the tactic that is directly above having been hit with an object (72%). Serious offenses are less likely to have been committed. Using the same illustration, if the respondent has been hit by an object there is the decreased likelihood that their threatened with a gun (28%), threatened with a knife or other weapon (32%), used a gun (16%), used a knife or

other weapon (25%). As the seriousness of offense increases, so does the likelihood that their partner has used the lesser forms of abuse, too. Furthermore, no data indicate that having a spouse use a gun once is more detrimental to well-being than constant and consistent slapping, shoving, and hitting. Cronbach's alpha for the sub-sample is .88. The most commonly reported indicators of abuse include being pushed, grabbed, or shoved and being slapped or hit. The least commonly reported indicators include using a gun, knife, or other weapon.

Insert Table 3 About Here

Insert Table 4 About Here

Emotional Abuse. Emotional abuse is also a summated measure of six items (Table 3) including: “makes them feel inadequate”; “frightens them”; “hard time seeing things from their point of view”; “tries to provoke arguments”; “shouts or swears at them”; and “calls them names or puts them down in front of others”. Twenty-nine percent of women in the sample reported having experienced at least one instance of emotional abuse. Cronbach's alpha for emotional abuse is 0.66. The most common indicator of emotional abuse reported is that their partner has a hard time seeing things from their point of view. If we remove this question from the analyses we find that the Cronbach alpha barely increases to 0.68 and the significant relationships remain. Therefore, we leave this question in the measure. The least common is that their partner frightens them.

Power/control Abuse. Power/control abuse is a summated measure of six items: “is jealous or possessive”; “tries to limit contact with family and friends”; “insists on knowing who the respondent is with at all times”; “prevents them from knowing about or having access to the family income even when they ask”; “prevents them from working outside the home”; and

“insists on changing residence even when they don’t need or want to” (Table 3). Sixteen percent of women reported at least one instance of power/control abuse. Cronbach's alpha for power/control abuse is 0.53 (item – “My partner is afraid of me” – was dropped due to the fact that it does not measure abuse by a partner). The most common indicator of control reported is that their partner is jealous or possessive followed by their partner must know who they are with at all times. The least common is that their partner insists on changing residences even when they do not need or want to.

Sociodemographic variables. Previous studies have demonstrated that educational attainment, personal income, age of respondent, race, ethnicity, number of children in the household, and marital status are associated with mental health. Heise and Garcia-Moreno (2002) found that young women and those below the poverty line are disproportionately affected by wife abuse. Ross and Huber (1985) find that financial need and the presence of children are directly associated with marital conflict and strife. Some studies have shown a relationship between employment (Shah, McNiece and Majeed, 2001) and depression. The Bureau of Justice Statistics (1999) found that Black women, those in the 16 to 24 age range, women in low income households, and women living in urban areas experience a higher rate of non-lethal violence by an intimate. Therefore, it is important to examine these variables.

Age. Age is measured as a continuous variable of women between the ages of 18 and 65. The average age of the women in sub-sample is 42 years old.

Education. Education is measured using dummy variables of the amount of schooling completed, ranging from no schooling to post-graduate education. I use six categorical variables: less than high school, high school, some college, college, and post-graduate with high school as the reference category. Nine percent reported having less than a high school diploma,

thirty-five percent of women said their highest level of education was a high school degree, 28 percent said some college, and 29 percent had at least a college degree.

Income. Household income was measured categorically. I used the mid-points for each category in order to convert the variable to continuous form. I used the same procedure for personal income (which may measure the amount of control the respondent has in the household) and divided it by household income to create a percentage of contribution to the household income. This will also alleviate any issue of collinearity between personal and household income. Sixty-five percent of women reported a household income between \$25,000 and \$80,000. The mean percentage that women reported as contributing to the household income was 65 percent.

Employment. Employment was determined by asking the respondent whether she was employed full-time, employed part-time, retired, unemployed and looking for work, student, homemaker, or "other". I created four dummy categories: employed full-time, employed part-time, homemaker, and "other" with employed full-time as the reference category. Our sub-sample included 51 percent who were employed full-time, 16 percent who were employed part-time, 21 percent home-makers, and 13 percent other.

Race/Ethnicity. Race and ethnicity were asked using two items. The first asked each respondent whether she was White, Black, Asian, Pacific Islander, American Indian, Alaskan native, or of mixed race. The second asked about Hispanic origin. The categories used are as follows: White, Black, or Other with White as the reference group. Eight-six percent of women are White, six percent are Black, and seven percent other. As to Hispanic origin, 92 percent of the sample are non-Hispanic.⁹

Parental Status. Parental status is coded as a dummy variable where 1 = Presence of Children and 0 = No Children.¹⁰ Fifty-six percent of the sub-sample reported having children under the age of 18 in the household.

Findings

Social Predictors of Abuse

Table 5 shows the frequency distribution of socio-demographic variables by type of abuse. Table 6a illustrates the bivariate relationship between the socio-demographic characteristics and type of abuse (in matrix format) and Table 6b illustrates the bivariate relationship of the independent variables. Table 7 presents findings from the regression analysis.

Insert Table 5 About Here

The data suggest several answers to the questions about who is abused. The first is that physical abuse is not easily predicted by a woman's socio-demographic characteristics. In fact, it appears to be the hardest to predict. The second answer is that particular women are more susceptible to being victims of control than are others. Emotional abuse is the most common form of abuse experience by women in this sample, with 29% reporting at least one incident (N=1168). Below I discuss the relationship between abuse and each socio-demographic characteristic.

Age. Table 6a suggests that age is significantly associated with being a victim of controlling behaviors in which as age increases, the association with abuse decreases. Age is not a significant predictor on physical or emotional abuse. Table 7 presents the OLS multivariate and supports that age is only significant with regards to controlling behaviors, as age increases, reports of being controlled decreases. Basically, young married women are more likely report

being controlled by their husbands than older women are. There is no relationship between age and physical or emotional abuse.

Insert Table 6a About Here

Insert Table 7 About Here

Race/Ethnicity. Women who report being of a race other than White or Black report higher rates of physical and emotional abuse as well as victimization from controlling behaviors, at the bivariate level. Twenty-seven percent of these women report physical abuse, 32% report emotional abuse, and 31 % report being a victim of controlling behaviors. White women report the least amount of all types of abuse. OLS multivariate regression results (Table 7) support the finding that women whose race is something other than White or Black have significantly higher levels of emotional abuse ($p<.05$) and controlling abuse ($p<.001$). Black women report more power/control abuse than White women ($p<.001$).

Income. With regards to household income, it appears that there exists only a slightly elevated risk of physical abuse for women with household incomes under \$15,000¹¹ but no clear pattern otherwise. However, there is a relationship between household income and emotional abuse and abuse of power and control where the greater one's household income, the fewer reports of controlling behaviors ($p<.001$) and emotional abuse ($p<.05$) by their husband. These findings are supported by significant OLS regression coefficients (Table 7). There appears to be no significant relationships for personal income. Women who report bringing in \$80,000 or more to the household report the least amount of physical abuse and controlling abuse. However, OLS regression shows that this relationship is insignificant when other variables are taken into consideration.

Employment. Only minor differences exist between the employment categories. Women whose response to employment was “other” (i.e. in the military, unemployed, retired, student, or something else) were more likely to report having experienced physical abuse. Twenty-two percent of women who worked full-time, 20 percent of women who worked part-time, and 20 percent of homemakers reported having experienced physical abuse in their marriage. OLS regression illustrates that women who report “other” type of employment report more physical abuse ($p < .05$) and homemakers reports less control abuse ($p < .05$), when other conditions are controlled.

Education. Table 5 indicates that only minor differences exist between the groups with regard to physical abuse. Respondents who report having some college are at slightly higher risk of physical abuse while those who report being a college graduate are at the least risk.¹² There appears to be little pattern among the different educational attainment levels for emotional abuse but a clear pattern for controlling behaviors. As women's education increases, the likelihood of them being a victim of power/control abuse decreases. In OLS multivariate regression, we see that having a college education is the only level of attainment that is significantly associated ($p < .01$) with a reduced experience of physical, emotional, and controlling abuse. Post-graduate education significantly reduces the risk of physical abuse while having some high school education increases the risk of suffering from power/control abuse ($p < .05$).

Parental Status. Women with children in the household are more likely to report being the victims of controlling behaviors ($p < .05$) than women without children in the household. No other significant differences exist.

With regards to physical abuse, there are no protective conditions other than having at least a college education. This confirms that physical abuse cannot be accurately – or easily –

predicted. With regards to emotional abuse, having greater household income and a college degree are protective. With regards to power/control abuse, being older, Hispanic, having higher household income, being a homemaker, and having a college education lessen the likelihood of suffering power/control abuse. Factors that increase the likelihood of being in a power/control abusive relationship include being non-White, completing some high school, and the presence of children in the home.

Social Antecedents of Depression

Table 8 reports the OLS regression results for depression. Data suggest that indeed some women are more susceptible to depression than others (Model 1). However, much of the significance either decreases or becomes insignificant in later models where we include abuse. Abuse becomes the mechanism through which at least some socio-demographic conditions affect depression. Namely, being Hispanic, of another race than White or Black, reporting other type of employment besides full- or part-time or homemaker, having some high-school education and having children present in the household are associated with higher levels of depression while being older, having greater household income, being a homemaker, and having a college degree are associated with lower levels of depression.

Insert Table 8 About Here

Abuse and Depression

Table 8 examines the relationships between each type of abuse and depression (Models 2 through 4) and then examines the relationship with all three forms of abuse in the same model (Model 5). I add in control variables in a stepwise fashion to show how the addition of controls affects the relationship (Models 6 through 12). These results are discussed further. Significance levels are reported at the $p < .05$ level, unless otherwise indicated.

Women who experience any form of abuse are more likely to report depressive symptoms. Table 8 (models 2 through 4) shows that women who report any form of abuse experience significantly greater depression at the bivariate level. Being the victim of physical abuse, emotional abuse, or power/control abuse increases one's risk for depression. When other forms of abuse are controlled for (Table 8, Model 5), the relationship between abuse and depression remains significant ($p < .000$). This tells us that each has a net effect on depression. All retain the significance they had when tested alone. Even as control variables are added into the model, all three forms of abuse remain significant. It is only when income is added to the model that we see any change in significance between power/control abuse and depression.

The last important question refers to which form of abuse is a stronger predictor of depression. Table 9 looks at the standardized regression coefficients. When the forms of abuse are looked at separately, emotional abuse is more strongly correlated with depression followed by power/control abuse and then physical abuse. When all three are in the same model, this arrangement continues to be true. However, when all control variables are accounted for a different pattern arises. Emotional abuse is still the strongest predictor ($p < .001$), but it is now followed by physical abuse ($p < .000$) and then controlling behaviors ($p < .007$).

Insert Table 9 here

Conclusion

Being in a physically, emotionally, or power/control abusive relationship is related to depression regardless of one's socio-demographic characteristics. When we consider physical abuse, the only significant predictor was employment other than full-time, part-time, or homemaker (students, retired women, etc.) and the only protective factor was having at least a college education. With regards to emotional abuse, having greater household income and a

college degree were somewhat protective. With regards to being controlled by a spouse, being older, Hispanic, having higher household income, being a homemaker, and having a college education may be protective. Factors associated with being more controlled are being of a race other than White, completing some high school, and the presence of children in the home. Only a few socio-demographic characteristics are protective against abuse. Older, White women with larger household incomes report both less emotional and power/control abuse. Women with higher (personal) incomes report less physical abuse. Women with either college or postgraduate education report less abuse, generally.

Emotional abuse is one of the least researched forms of abuse – and one of the strongest predictors of depression. One important finding of this research is that while all three forms of abuse are linked to depression, emotional abuse is the strongest predictor. It seems likely that due to the nature of emotional abuse, the manifest response would be emotional as well - depression.

While this study focused on only one mental health outcome (depression), another likely outcome is Post-Traumatic Stress Disorder.¹³ PTSD is a set of symptoms following a stressful event that includes re-experiencing the trauma (Walby 2004). It is important to examine whether abuse is more strongly associated with depression or PTSD and the differential outcomes of particular forms of abuse as these may manifest themselves differently. Kemp, Green, Hovanitz, and Rawlings (1995) found the rate of PTSD to be 81 percent among physically abused women and 63 percent among those who had been emotionally abused. Women are more than twice as likely to suffer from PTSD following a traumatic event and PTSD lasts longer in women than in men (Breslau et al. 1998). With the current data set, PTSD questions were only asked on participants who reported physical abuse. Thus, we must keep this

fact in mind when examining the results of OLS regression of PTSD on abuse. The results find that physical and emotional abuse are strongly associated with PTSD (see Table 10). Controlling behavior is not significantly associated with PTSD. Women who are younger or report being homemakers are more likely to report positive indicators of PTSD to begin with but the association with age becomes non-existent when abuse is added to the model. While this is a small, but important sub-sample, and the questions were not asked of all participants and further research is needed.

My results suggest that abuse affects married women's mental health and well-being. This study is limited to married women whose marriages have remained intact even in the face of domestic abuse. This may eliminate those with the most conflicted relationships from our study. However, it is probably safe to assume that if a significant relationship exists between abuse and depression, this significance is not likely to have been changed by the addition of more conflicted relationships. In fact, we might find different mental health outcomes, most likely beneficial, associated with those who have left a abusive relationship.

Future research should include women who have left violent marriages to examine whether the depressive effects continue past the termination of the relationship as well as to examine at what point the effects are no longer significant. Longitudinal analyses have shown that the majority of battered women leave the abusive relationship or manage to make the violence end (Campbell et al., 1994; Jacobson, Gottman, Gortner, Berns, & Shortt, 1996). Unfortunately, longitudinal studies of women's responses to abuse are rare. Longitudinal rather than cross-sectional analyses would go a long way in examining the long-term effects of abuse by comparing women who remain in abusive marriages versus those who leave. Future research also needs to include measures of social support. It could be argued that women with a social

support system may be more likely to leave a violent relationship which could be beneficial for their mental health.

This research documented clear mental health consequences for married women reporting abuse by their husband's abuse. Exposure to abuse affects women and children alike, leading to both physical *and* mental health consequences. Given that depression is one of the most substantial health problems facing women (Culbertson, 1997) and wife abuse is a significant predictor of depression, abuse represents a serious public health concern in the U.S. and greater efforts are needed to eliminate it.

Notes

1. Because of the secretive nature of domestic violence, it is very difficult to determine exact statistics, especially since there are many differing definitions and extensive under-reporting

(ACF, 2001). However, it is reasonable to assume that self-reported and officially-reported data underestimate the prevalence due to factors such as lack of recollection, unwillingness to acknowledge illegal or inappropriate behavior, wording of the study question, and refusal to see minor aggression as assault (Buzawa, 2003; France, 1996 in Corcoran; Corcoran, Stephenson, Perryman, & Allen, 2001).

2. The national comorbidity survey prevalence came from symptoms that occurred during a 12-month period, based on face-to-face interviews conducted during 2001—2003.

3. This study is also known in the literature as the National Violence Against Women Survey (NVAW).

4. The findings from this study are consistent with other studies in this field of research. While this topic is highly sensitive in nature, the data are high quality. The methodological rigor was such as to maximize the quality of the data. The researchers were careful to account for these issues in that female respondents were interviewed by female interviewers. Since we are dealing with the subject of spousal abuse, and recognizing that the abuser could be present during the time of the interview, interviewers were trained to recognize and respond appropriately to cues that might indicate that the respondent was concerned about being overheard. Furthermore, since respondents were chosen and the interviews were conducted by telephone, the findings do not represent the violent experiences of women in households without a phone. This may mean an under-representation of certain demographic characteristics such as households that are poor, headed by single females, located in rural or intercity areas and renters. This is not seen to be a major problem with the study as in 1994-1996 approximately 94% of the United States population resided in homes with at least one telephone.

5. Men were also surveyed but for the purposes of this paper not included in the analysis. The sample was stratified by U.S. Census region to control for differential response rates by region. If the household contained more than one eligible adult, the adult with the most recent birthday was chosen as the respondent. Participation rates were calculated using the following formula: Number of completed interviews (including those screened out as ineligible)/the total number of completed interviews, screened out interviews, refusals, and terminated interviews. When only eligible participants are considered, the completion rate is 97 percent.

6. Research has speculated that men underreport their victimization more than women. They also underreport their own aggression (Archer 1999).

7. For example, data in this study suggest that married women have more children under 18 in their household as compared to their never married counterparts ($p < .001$).

8. To date the SF-36 has been documented in nearly 4,000 publications and Tjaden and Thoennes utilized the acute (1-week) recall version designed for applications in which health status would be measured weekly. The reliability and validity of this tool have been well-established (The SF Community Website).

9. The sample under-represents minority women. This is a limitation of the study as Garfield (2005) shows how African American women's experiences with violence are different than those of their White counterparts.

10. I also ran the analyses with children coded as a continuous variable and found that a significant relationship only existed when children was coded as a dummy variable (i.e. the number of children over 1 is not important).

11. Again, those who report no income also report the lowest amount of abuse, however the number in this group was too small to consider.

12. Those with less than an eighth grade education reported the least physical abuse, however, the number is so small as to be insignificant.

13. Initially, I intended to include PTSD as the second outcome variable. However, these questions were only asked of respondents who had reported physical abuse by their partner (N=180). The final number of observations in the analysis was 137. However, the results of the analysis are interesting. The 21 items for this variable were adopted from the Impact of Event Scales (IES) developed by Mardi Horowitz, Nancy Wilner, and William Alvarez to measure current subjective distress related to a specific event (Horowitz, Wilner, & Alvarez, 1979). It is designed to evaluate experiences of avoidance and intrusion which attempts to capture intensity of the post-traumatic phenomena. The IES has displayed acceptable reliability (alpha greater than .79). Respondents were asked to rate how often they experienced these difficulties: I had trouble falling asleep; any reminder brought back feelings about it; I had trouble staying asleep; other things made me think about it; I felt irritable and angry; I thought about it when I didn't mean to; I felt it hadn't happened or wasn't real; pictures about it popped into my mind; I was jumpy and easily startled; my feelings about it were kind of numb; I found myself acting or feeling like I was back at that time; I had waves of strong feelings about it; I had trouble concentrating; reminders caused me to have physical reactions such as sweating, trouble breathing, nausea or heart pounding; I had dreams about it; and I felt watchful and on guard. The Cronbach's alpha for the PTSD of this sub-sample is .95. The results of the regression show that physical and emotional abuse are predictors of PTSD with this sample.

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