THE AFFECT OF COPING ON THE PHYSICAL AND MENTAL HEALTH OF ABUSED WOMEN

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Abstract

This study examined the role of coping on the physical and mental health symptoms of women in abusive relationships. This study included 835 low-income African American (N=303), Euro-American (N=272), and Mexican American (N=260) women. The purpose of this study was twofold. First, I hypothesize that sustaining partner abuse will be associated with physical and mental health symptoms. Second, I hypothesize that coping will mediate the effects of partner abuse on mental and physical health. Regression analyses revealed three key findings. Physical violence, sexual aggression, and psychological abuse appear to affect mental health more significantly than physical health. Among those three, psychological abuse had the strongest impact on women’s physical and mental health. Finally, coping seemed to lessen the impact of abuse on mental health, but did not buffer the effects of abuse on physical health.
TABLE OF CONTENTS

LIST OF TABLES.................................................................................................#

SECTION

1. INTRODUCTION.................................................................................................#

Intimate Partner Abuse Effects on Physical Health and Mental Health
Coping
Ethnicity
Hypotheses

2. METHOD..............................................................................................................#

Participants
Procedure
Measures
Data Analysis

3. RESULTS.............................................................................................................#

Regression Analysis

4. DISCUSSION.......................................................................................................#

Partner Abuse
Physical and Mental Health Symptoms
Coping
Limitations
Clinical Implications

APPENDICES.........................................................................................................#

REFERENCE LIST.................................................................................................#
# LIST OF TABLES

<table>
<thead>
<tr>
<th>Table</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Means and standard deviations</td>
<td>#</td>
</tr>
<tr>
<td>2a. Regression analysis for sample, global distress</td>
<td>#</td>
</tr>
<tr>
<td>2b. Regression analysis for sample, health conditions</td>
<td>#</td>
</tr>
<tr>
<td>3a. Regression analysis for African Americans, global distress</td>
<td>#</td>
</tr>
<tr>
<td>3b. Regression analysis for African Americans, health conditions</td>
<td>#</td>
</tr>
<tr>
<td>4a. Regression analysis for Euro-Americans, global distress</td>
<td>#</td>
</tr>
<tr>
<td>4b. Regression analysis for Euro-Americans, health conditions</td>
<td>#</td>
</tr>
<tr>
<td>5a. Regression analysis for Mexican Americans, global distress</td>
<td>#</td>
</tr>
<tr>
<td>5b. Regression analysis for Mexican Americans, health conditions</td>
<td>#</td>
</tr>
</tbody>
</table>
The Affect of Coping on the Physical and Mental Health
Of Abused Women

Intimate partner violence (IPV) is a serious social issue and a major public health concern. The National Family Violence Survey found that 11.6% of women in the United States have experienced IPV (National Research Council, 1996). A larger percentage was found in the National Violence Against Women Survey (NVAWS), in which 25% of women reported being raped or physically assaulted by an intimate partner since the age of eighteen (Tjaden & Thoennes, 2000b). Numerous studies have demonstrated the negative effects of IPV on the physical and mental health of women (Bailey, Freedenfeld, Kiser, Sanford, & Gatchel, 2003; Coker, Davis, Arias, Desai, Sanderson, & Brant et al., 2002), which may be long term and debilitating (Lemon, Verhoek-Oftehda, & Donnelly, 2002; National Research Council, 1996). However, few studies have considered the distinct effects of physical, sexual, and psychological abuse on the physical and mental health of women (Cascardi, Langhinrichsen, & Vivian, 1992; Coker, Smith, Thompson, McKeown, Bethea, & Davis, 2002; Goodman, Koss, & Russo, 1993). In fact, many studies combine sexual aggression and psychological abuse with physical violence (Testa, Livingston, & Leonard, 2003). This may be because physical violence rarely occurs independently from psychological abuse (Smith, Thornton, DeVellis, Earp, & Coker, 2002) and psychological abuse has been found to precede physical violence (Henning & Klesges, 2003).

IPV and Health

*Physical violence.* Physical violence has been associated with overt injuries such as cuts, scrapes, bruises, broken bones, and fractures (Sutherland et al., 2002). Additionally, women experiencing physical violence are more likely to suffer from concussions (Rennison &
Partner Abuse and Health Outcomes

Welchans, 2000), chronic pain (Smith et al., 2002), and chronic disease (Coker, Davis et al., 2002) compared to women in non-battering relationships. Moreover, physical health has been shown to decrease as the incidence of physical violence increases. For example, women who experience a higher incidence of sustained violence report a greater number of physical and mental health problems than women with lower rates of abuse (Sutherland et al.).

Women in physically violent relationships are also at an increased risk for psychological health problems (Coker, Davis et al., 2002), likely a result of the acute and chronic stress associated with intimate partner violence (Smith et al., 2002). In a study by Tolman and Rosen (2001), women who suffered severe violence within the past twelve months experienced three times as many psychiatric disorders as women in nonviolent relationships, including major depression, generalized anxiety disorder, and post-traumatic stress disorder (PTSD). The women who sustained violence in the past year were twice as likely to seek mental health care services than other abused women who experienced partner violence in their lifetime but not in the last year.

Sexual aggression. Sexual aggression is a distinct and traumatizing form of violence that has been associated with numerous negative physical and mental health problems as well as debilitating health behaviors (Lang, Rodgers, Laffaye, Satz, Dresselhaus, & Stein, 2003). Furthermore, women who are sexually assaulted face a greater risk for subsequent physical and sexual assault compared to women who are not assaulted (Monnier, Resnick, Kilpatrick, Seals, & Holmes, 2002). Yet, sexual aggression as a separate form of IPV is usually ignored or combined with general physical violence. This is unfortunate because a majority of physically abused women are also sexually assaulted (Monnier et al., 2002; Smith et al., 2002), thus, making the consequences for each type of abuse difficult to disentangle. Women experiencing
both physical and sexual abuse have reported lower perceptions of life control, greater pain-related disruptions in their lives (Bailey et al., 2003), headaches, panic, depression, urinary, skin and respiratory problems (Leserman, Li, Drossman, & Hu, 1998). Many IPV health measurement instruments neglect these and other various health problems commonly reported by women experiencing sexual aggression, limiting the scope of IPV screening (Campbell & Soeken, 1999a). Accurate screening measures for sexual aggression are essential because more than one third of women raped by an intimate partner suffered an injury independent from the isolated rape (Tjaden & Thoennes, 2000a).

Women experiencing sexual aggression suffer from numerous physical health problems including minor physical injuries like scratches, bruises, and welts (Tjaden & Thoennes, 2000a), to more severe consequences like gynecological problems (Campbell & Soeken, 1999a), vaginal and perineal trauma (Geist, 1988), and STDs (Smith et al., 2002). Sexual aggression has also been shown to negatively effect psychological health. For example, sexual aggression has been associated with significantly more PTSD symptoms (Lang et al., 2003), increased levels of stress (Smith et al., 2002), and affective distress (Bailey et al., 2003). A study about African American women who were interviewed about intimate partner rape demonstrated that women who were sexually assaulted were more likely to be depressed and have lower self-esteem than women who had not experienced sexual aggression (Campbell & Soeken, 1999a).

*Psychological abuse.* Marshall (1999) proposed three different types of abuse that are harmful to women: obvious, overt and subtle acts of abuse. Obvious acts include verbal aggression and controlling behaviors, whereas overt acts include dominating and discrediting behaviors, and subtle acts include isolating and undermining behaviors. Psychological abuse may result in an imbalance of power and control in the relationship which may cause a woman who is
abused to feel distressed, trapped, isolated, and without value (Coker, Watkins, Smith, & Brant, 2003; Fry & Barker, 2001; Smith et al., 2002; Straight et al., 2003).

Psychological abuse has been associated with many negative physical health problems. Smith and colleagues (2002) found that psychologically abused women have more reproductive problems and a higher risk of contracting sexually transmitted diseases. Furthermore, psychological abuse exacts continual negative physical health consequences that affect all areas of a woman's life. Stress associated with psychological abuse has been shown to decrease the functioning of the immune system (Smith et al.), cause physical health maladies that limit physical and work related behavior (Straight et al., 2003), and place psychologically abused women at a high risk for alcohol abuse (Lemon et al., 2002).

Women's mental health is also negatively affected by psychological abuse, independent from other types of abuse (Henning & Klesges, 2003). For example, emotional distress, PTSD (Vitanza, Vogel, & Marshall, 1995), negative perceptions of health, and cognitive difficulties (Straight et al., 2003) are all positively related to psychological abuse. Additionally, psychologically abused women are at an increased risk for developing depressive symptomology (Coker, Davis et al., 2002). Coker and Davis also noted that psychological abuse is more strongly correlated with health symptoms than physical violence.

Coping

Because not all abused women experience the same degree of health consequences, there must be various factors that make some women more resilient than others. Coping is likely one such factor. In a study that examined the effects of psychological abuse on the health status and behaviors of 151 college students, different coping strategies determined the level of adjustment and ability to deal with stress. Whereas increased levels of active, emotion-focused coping
strategies (e.g. seeking solutions for the problem, expressing emotions) helped to moderate perceptions of negative health caused by psychological abuse, lower levels of these coping strategies were associated with alcohol use (Straight et al., 2003).

Passive, pain-focused coping strategies (e.g. avoiding the problem, accepting that nothing can be done) have been shown to further injure an abused woman’s health above and beyond the abuse. Increased levels of these strategies are associated with health factors that limit an abused woman’s ability to work as well as with negative health behaviors such as smoking and drinking problems (Straight et al., 2003). Physical and psychological abuse has additionally been shown to increase the risk factors for negative health behaviors like smoking, drinking alcohol, and drug use among women (Caetano, Cunradi, Schafer, & Clark, 2000; Coker, Davis et al., 2002; Lang et al., 2003; Lemon et al., 2002, Smith et al., 2002; Testa et al., 2003). As a supplement to or as a substitute for seeking health care, some abused women attempt to self medicate their symptoms with drugs (Coker, Smith et al., 2002) in order to escape the violence and cope with distress associated with abuse (Raphael, 2000). These coping strategies further exacerbate a woman’s health. In a sample of 100 battered women seeking shelter services, the coping strategies of self-blame, drug use, denial, and behavioral disengagement lowered self-esteem and were related to increased levels of dysphoria and hopelessness (Clements, Sabourin, & Spiby, 2004).

Social support as a coping mechanism has been found to improve the physical and mental health of abused women (Coker, Smith et al., 2002) and moderate the effect of abuse on health (Coker et al., 2003). Abused women with stronger perceived social support were significantly less likely to report current poor mental health, including anxiety, depression, PTSD symptoms, and suicidal ideation when compared to women with weaker support (Coker et al.; Coker, Smith et al.). However, when the severity of the abuse increases, the buffering effects of social support
decrease (Hamilton & Coates, 1993) resulting in further isolation of the abused woman and weaker perceived social support (Smith et al., 2002).

Religion is a resource that has been found to offer social support (Weaver, Koenig, & Larson, 1997). Perceptions of poor physical and mental health among battered women diminish significantly with higher levels of social support (Coker, Smith et al., 2002). Though research includes clergy among the network of an abused women’s support system (Weaver et al., 1997), the effectiveness of the clergy’s efforts to help women experiencing IPV has not been clearly demonstrated (Bowker & Maurer, 1987; Martin, 1989; Weaver et al.). One qualitative study found that most clergy express tendencies to blame the woman who is abused by adhering to rape myths, especially among more fundamental and sexist clergy (Sheldon & Parent, 2002).

Women who experience IPV have used religion as a technique to cope with the negative health effects of abuse. Research demonstrates that spiritual support helps people in coping with stressful life events such as abuse (George, Ellison, & Larson, 2002). Qualitative reports have demonstrated that religion helps women cope with stress because religion helps women to confront, accept and make meaning of reality providing them with psychological resources (Mattis, 2002). One study cites that some men may also benefit from religion showing that men who attended religious services weekly were less likely to engage in IPV (Cunradi et al., 2002). Furthermore, the healthy behaviors that are encouraged by religious institutions (e.g., abstaining from smoking, premarital and extramarital sexual relations, and excessive drinking) may buffer the negative health effects of IPV (Ransom, Fisher, & Terry, 1992). However, it may be that religious people are just more likely to live healthy lifestyles. With high levels of religiosity, abused women have been found to be less likely to abuse alcohol, but negative mental and physical health symptoms have not been shown to decrease without social support (Coker, Smith
et al., 2003; George et al., 2002). Aspects of religion may also encourage negative coping techniques. Forms of negative religious coping have been shown to have negative effects on health (George et al.). Negative religious coping (e.g., feeling that an illness is the result of being punished for one’s sins) has been associated with increased depressive symptoms and higher levels of anxiety (Koenig, Cohen, Blazer, Pieper, Meador, & Shelp, 1992).

Ethnicity

In order to accurately understand and generalize the health consequences related to sustaining abuse, it is important to study ethnic groups distinctly. By combining different minority groups, dichotomizing the sample into Whites and non-Whites, the differences between the groups may appear inaccurately greater. Similarly, by grouping different minority groups (e.g., grouping Mexicans, Puerto Ricans, and Cubans as Hispanics), significant distinctions between the groups may be overlooked (Tjaden & Thonnes, 2000a).

*Partner abuse.* The relationships between socioeconomic status (SES), ethnicity, and education have been documented extensively. When these variables interact with partner abuse, some studies have found that SES is a stronger indicator of risk for partner abuse than ethnicity (Rennison & Planty, 2003). According to the National Crime Victimization Survey, an increased prevalence of IPV is associated with minority, low-income women (Rennison & Welchans, 2000). Other studies have found that ethnic minorities still face a higher risk of experiencing IPV even when controlling for SES (O'Donnell, Smith, & Madison, 2002). For example, Black and Hispanic women were three times more likely to experience partner violence than their White counterparts when controlling for socio-demographic variables (Field & Caetano, 2003).
According to the NVAWS, Hispanic women are more likely to be raped by an intimate partner, rather than a non-intimate, and are more likely to suffer an injury from the rape compared with women who are raped of other ethnic backgrounds (Tjaden & Thonnes, 2000a). Similarly, in Campbell and Soeken's study (1999a) 50.4% of the African American women were sexually assaulted whereas a smaller percentage, 30.6%, of non-African American women were sexually assaulted.

The literature rarely mentions demographic and environmental variables when considering the variation and incidence of IPV among different groups (Tjaden & Thonnes, 2000a). For example, some ethnic groups may have different cultural definitions of violence or feel that disclosing partner violence to help agencies is culturally unacceptable (Thomas, 2000) resulting in underreporting. In a study surveying attitudes about domestic violence, the participants of the study issued less blame on African-American husbands who abused their wives than on Euro-American husbands (Locke & Richman, 1999).

**Health Symptoms.** Some ethnic groups face more health problems than other ethnic groups. The National Center for Health Statistics lists several health problems that Black Americans face. When compared to White Americans, Black Americans fare worse in infant mortality, life expectancy, homicide rates, and overall mortality. For example, Black Americans confront higher rates of infant mortality and shorter life expectancies when compared to whites. The homicide rate among young White males has been found to be eight times less that of young Black males. Additionally, the mortality rates for Black Americans exceed fifty percent that of White Americans, being 78% more likely to have a stroke, 50% for heart disease, 33% for cancer and nearly 700% for HIV (U.S. Department of Health and Human Services, 2000). Other studies
have found similar results. Lower reported health and higher rates of mortality has been found to be associated with being Black and having a lower socioeconomic status whereas greater income, more education, and being White has been associated with better health (Franks, Gold, & Fiscella, 2003).

*Coping.* Research on the coping strategies of different ethnic groups have found a variety of results. Some studies have found differences in coping strategies between African Americans and Euro-Americans (Brantley, O’Hea, Jones, & Mehan, 2002). For example, one study found that African Americans are less likely to turn to a friend, family member, or religious figure for assistance with mental health problems (Snowden, 1998). Other studies have found that SES and education are greater predictors of coping styles when compared to ethnicity. For instance, women with less education living in neighborhoods with high violence were more likely to use prayer and safety practices while the better educated women living in low violence communities used activism as their main coping strategy (Hill, Hawkins, Raposo, & Carr, 1995). Another study comparing the coping strategies of abused Mexican and Anglo women also found no support for the hypothesis that ethnicity influences coping, but rather that higher SES predicted internal focus coping (e.g. processing the meaning of the events, expressing emotions, psychologically removing oneself from the situation) over external focus coping (e.g. using religion, social support, problem solving with partner) (Fernandez, Eugenia, & McCloskey, 1999).
Method

Participants

African American, Euro-American, and Mexican American women in the southwest area of Dallas County participated in a 7-year, 6-wave longitudinal study, Project HOW: Health Outcomes of Women. To qualify for the study, women had to meet the following criteria: in a dating, cohabitating or marital heterosexual relationship for at least one year, between the ages of twenty-one and forty-eight, and living within 200% of the poverty level and/or receiving public aid. Of the 998 women initially screened, further interviews narrowed the sample to women who met the income and relationship requirements. Of the remaining 835 women, 303 were African American, 272 were Euro-American and 260 were Mexican American.

Only Mexican American women who were born and/or educated in the United States were selected for the study. Whereas, a larger group of Hispanics from different areas (e.g., Cuba, Central America, South America) may have diverse socialization and acculturation patterns, these Mexican Americans are likely to share more characteristics with women born and educated in the United States. Additionally, the rating scales are likely to be unfamiliar to women acculturated outside of the United States.

Procedure

Recruitment. Volunteers were recruited for a longitudinal study with flyers distributed in businesses, health care facilities, community centers and on cars. The community was also made aware of the study in church announcements, at their homes, churches, laundromats, and by other participants. Additionally, 18,000 flyers were mailed to women from the low income census tract asking women who were interested to call the office. Newspapers and local radio stations also broadcasted information about the study in public service announcements. Trained interviewers
recruited participants in stores, clinics, laundromats, social service agencies, and health fairs. Contact sheets included only the woman’s first name and phone number to maintain anonymity. Women expressing interest in the study were given the opportunity to provide the names of friends and family members whom they felt would be interested in the study. These contact sheets were then delivered to one of two Oak Cliff offices. The interviews were conducted in rented office space in a centrally located and ethnically diverse area. Women were compensated for their participation with a membership card, fifteen dollars in cash, a “Project HOW” canvas tote bag and shirt.

**Screening.** Office workers made follow-up calls to those interested in the study and answered telephone calls from prospective participants. The workers told the volunteers the guidelines for participation. The volunteers had to commit to four interviews over two years, each interview lasting approximately three hours, covering many things that could affect women’s health.

Elements involved in the screening included length of most recent relationship, household income, the number of dependents, and ethnicity. Federal tables matched poverty levels of the participants. Women who reporting greater than 175% of poverty were dropped from the study, which accounted for women’s tendency to initially underreport their income. The poverty threshold was chosen two separate times because some forms of public aid available at this income level have been shown to alleviate the effects of poverty, though receipt of federal assistance in itself is considered verification of poverty status. Prior to scheduling the initial interview, women who agreed to participate and met the requirements were asked their full name and address.
**Interviewers.** Only female students were allowed to participate in the interviewing process due to the sensitive information within the interview. Undergraduate and graduate student interviewers were trained to develop rapport among participants while using a structured interview process for collecting data. Some students were paid $17 per completed interview and/or awarded course credit. Other students volunteered their time, without financial reimbursements or course credit. Students who wished to be paid or receive course credit were required to participate in a greater number of interviews.

Under the supervision of faculty advisors (i.e., Guarnaccia and Marshall), three doctoral students in the Clinical and Counseling Psychology Training program trained the undergraduate and graduate interviewers. The training involved dissecting the interview, item by item, and explaining the techniques of asking questions. Furthermore, the doctoral students emphasized relevant issues such as standardization, confidentiality, and response bias. Then, trainees individually practiced giving the interview to other trainees, friends and/or family.

When a student felt prepared to begin interviewing, an assessment of the student’s performance was given by the doctoral students. In front of a video camera, the student role-played the interview process with a doctoral student who was acting as a difficult participant. The doctoral student evaluated the interviewer’s familiarity with the interview questions, consideration in asking conditional questions, ability to appropriately react to questions and comments, and pacing of the interview.

Prospective interviewers practiced this part of the training until their performance met all of the above criteria. The doctoral students gave interviewers frequent advice and criticism on their performance throughout the study to ensure accuracy. Sixty-two students participated in Wave 1, each interviewing between one and fifty-seven participants.
Confidentiality. Confidentiality was maintained by enforcing strict procedures for interviewing. The Public Health Service provided a Certificate of Confidentiality to ensure the women’s anonymity and the integrity of the data. The certificate ensured that not even a court of law could obtain the women’s name or her answers.

The participants’ answers were not discussed with anyone except other interviewers, the principal investigator and the graduate students in charge of data. Even office workers were excluded from this sensitive information. The interviewers did not know the participants’ last names, addresses, the purpose of the study, the hypotheses or partner violence related research questions.

Upon a participant’s arrival for her interview, she completed an informed consent form and a registration form designed to match the subject to her data. Two versions of the informed consent information were given to the participant. Informed consent was described in technical terms and hand signed by the principal investigator and also summarized in simple English. Women additionally filled out Permission to Contact forms for later waves of the study which made contacting subjects for future interviews more efficient. While participants completed the registration and permission to contact forms, interviewers were not allowed in the waiting area in order to maintain the confidentiality of the participant’s full name and address.

The membership numbers assigned to each participant did not correspond to subject numbers used with the data. These numbers, designed to facilitate tracking, were assigned by office workers after the interviews were taken to the University of North Texas (UNT). Information that allowed matching across the waves included the participant’s mother’s first name, their birth date, birthplace, and the name of their mother’s oldest child. The identifying information was not released to anyone except one doctoral student and the principal
investigator. All master lists, membership numbers, subject numbers, forms of identity, and registration forms were locked in a storage room at UNT.

**Measures**

Interviews consisted of three hour, one-on-one structured interviews with closed and open-ended response questions. After each question was read, the interviewer recorded the response. The questionnaire was designed to be easily understood by someone with less than a high school education and frequently used the 7-point rating scale for simplicity. The measures used in this study are described below.

*Partner Abuse.* Twenty-one items from the Severity of Violence Against Women Scales (SVAWS; Marshall, 1992) appraised how often the participant’s partner committed acts of physical violence. In totality, the SVAWS makes up forty-six items that measure threats and acts of physical violence and sexual aggression by a male partner towards the female partner. Acts of physical violence range from minor, mild, moderate, to severe (Appendix C). Community women in the scale development study ordered these items by perceived severity from least severe to most severe. The interviewer began this section, explaining that, “unpleasant acts may happen in a great many relationships,” and that the responses do not indicate the “kind of person you are or your partner is.”

The last six items of SVAWS measured sexual aggression. Participants responded with a six-point scale ranging from never (0) to a great many times (5).

The sum of the 21 acts of physical violence ($\alpha = .95$, ranging from .94 for African Americans and Mexican Americans to .95 for Euro Americans) and 6 acts of sexual aggression ($\alpha = .85$, ranging from .77 for Mexican Americans to .86 for African Americans) were calculated.
Finally, psychological abuse was measured with an abbreviated version of the Subtle and Overt Psychological Abuse Scale (Marshall, 1999). These 35 items are shown in Appendix D. Psychologically abusive acts may be obvious (verbal aggression and controlling behaviors), overt (dominating and discrediting behaviors), or subtle (isolating and undermining behaviors) acts (Marshall, 1999). Interviewers introduced this section explaining that your partner “may do these acts in a loving way, a joking way, or a serious way.” Women responded to the question, “How often does he,” using a 10-point scale ranging from never (0) to almost daily (9). The sum of these items (α = .98, .98 for African Americans and .99 for Euro and Mexican Americans) measured psychological abuse.

Coping: Coping was measured with a modified version of Stone and Neale’s (1984) daily coping scale. The eight item scale was used to evaluate how women cope with their health problems. Participants were asked eight items relating to cognitive behavioral forms of coping (Appendix G). Women responded to the question with 7-point scales ranging from never (0) to always (7). The mean of these items represented coping (α = .81, from .79 for Euro-Americans to .83 for Mexican Americans).

Physical and Mental Health Symptoms. The indicators used to measure health symptoms include health complaints for physical health and a health symptoms checklist measuring global distress for mental health. Health complaints were measured with 46 items (Chatters, 1991) listed in Appendix E. Women responded, “yes,” if she had any of the symptoms. The Hopkins Symptom Checklist-90 (SCL90; Derogatis, Lipman & Covi, 1973) items are listed in Appendix F. Women rated their responses to the question, “in the past month how much have you been bothered by” on 5-point scales ranging from not at all (0) to extremely (5). The mean of these items represent global distress (α = .98 for the sample and all three groups).
Results

Table 1 shows the means and standard deviations for the sample and each ethnic group for each of the six items: physical violence, sexual aggression, psychological abuse, coping, health complaints and global distress. ANOVAs were conducted to identify differences in the number of health conditions reported and abuse that vary by ethnicity. Although no ethnic differences existed for physical violence, African American women reported more sexual aggression than Euro-American or Mexican American women, $F(2, 832) = 4.98, p < .05$, and Euro-American women reported sustaining more psychological abuse than did Mexican American women, $F(2, 832) = 3.67, p < .05$. Although no differences were found for mental health problems, Euro-American women reported more physical health problems than Mexican American women, $F(2, 817) = 23.65, p < .05$.

As shown in Table 2a, physical violence ($beta = .312$), sexual aggression ($beta = .320$), and psychological abuse ($beta = .509$) significantly predicted women’s mental health, $R = .31, p < .001$ for the sample. The direct effects remained significant with the interaction of coping, but with smaller betas ($betas = .288, .304, and .491$, respectively). This coupled with significant interactions between physical violence and coping ($beta = -.143$), sexual aggression and coping ($beta = -.164$), and psychological abuse and coping ($beta = -.105$) was suggestive of some moderation, $R^2$chg = .02, $p < .001$. That is, coping seemed to lessen the impact of abuse on women’s mental health.

Similar to the results for women’s mental health, physical violence ($beta = .177$), sexual aggression ($beta = .230$), and psychological abuse ($beta = .271$), all significantly affected women’s physical health, $R = .18, p < .001$ (Table 2b). However, coping did not moderate the
relationship, with direct effects of physical violence \((\beta = .169)\), sexual aggression \((\beta = .225)\), and psychological abuse \((\beta = .264)\) remaining.

For African Americans, physical violence \((\beta = .356)\), sexual aggression \((\beta = .379)\), and psychological abuse \((\beta = .503)\) significantly predicted women’s mental health, \(R = .36, p < .001\) (Table 3a). When coping was added to the equation, abuse still exacted significant effects on mental health, yet with slightly lesser betas \((\beta\text{etas} = .340, .365, \text{and } .487, \text{respectively})\). The interactions with coping and physical violence \((\beta = -.143)\), sexual aggression \((\beta = -.164)\), and psychological abuse \((\beta = -.105)\) suggested that coping acted as a buffer for mental health symptoms, \(R^2\text{chg} = .03, p < .004\).

Physical violence \((\beta = .154)\) and sexual aggression \((\beta = .231)\) yielded similar physical health outcomes when African American women are compared with the sample, and even stronger health outcomes for psychological abuse \((\beta = .229)\), \(R = .15, p < .009\) (Table 3b). Coping did not seem to lessen the impact of abuse on African American women’s physical health as the direct effects remained significant with no change in variance.

For Euro-American women, physical violence \((\beta = .334)\), sexual aggression \((\beta = .359)\), and psychological abuse \((\beta = .526)\) impacted women’s mental health significantly, \(R = .33, p < .001\) (Table 4a). With the inclusion of coping, the direct effects remained, but with reduced betas \((\beta\text{etas} = .288, .321, \text{and } .499, \text{respectively})\). Additionally, the significant betas with physical violence and coping \((\beta = -.155)\) as well as with sexual aggression and coping \((\beta = -.166)\) suggested that coping slightly moderated the effect of violence on mental health, \(R^2\text{chg} = .02\). Physical violence \((\beta = .180)\), sexual aggression \((\beta = .285)\), and psychological abuse \((\beta = .321)\) directly affected Euro-American women’s physical health, \(R = .18, p < .004\).
(Table 4b). These direct effects remained significant with the introduction of coping ($\text{betas} = .167, .278, \text{ and } .318$, respectively).

For Mexican American women, physical violence ($\text{beta} = .228$), sexual aggression ($\text{beta} = .163$), and psychological abuse ($\text{beta} = .500$) significantly affected women's mental health, with psychological abuse having the most impact, $R = .23, p < .001$ (Table 5a). The direct effects remained significant ($\text{betas} = .213, .162, \text{ and } .490$, respectively), and coping appeared to slightly moderate the effects of physical violence on health ($\text{beta} = -.124$) and sexual aggression on health ($\text{beta} = -.148$), $R^2\text{chg} = .02, p < .043$. Thus, coping seemed to lessen the impact of physical violence and sexual aggression on women's mental health. Physical violence ($\text{beta} = .175$), sexual aggression ($\text{beta} = .113$), and psychological abuse ($\text{beta} = .219$), all significantly impacted Mexican American women's physical health, $R = .18, p < .04$ (Table 5b). Coping did not appear to moderate these relationships.
Discussion

Partner abuse. One of the key findings was that psychological abuse had the strongest impact on women’s physical and mental health. This is consistent with previous research that examined psychological abuse independent from other forms of abuse (Coker, Davis et al, 2002). This is also similar to the literature that describes the pervasive nature of psychological abuse, which affects all areas of a woman’s life and has been associated with PTSD (Vitanza, Vogel, & Marshall, 1995), cognitive difficulties (Straight et al., 2003) and depression (Coker, Davis et al.). It is also important to remember that physical violence rarely occurs independently from psychological abuse (Smith et al., 2002) and psychological abuse has been found to precede physical violence (Henning & Klesges, 2003).

Mental and physical health symptoms. According to the data, physical violence, sexual aggression, and psychological abuse appear to affect mental health more significantly than physical health. It could be that the women may have only reported physical health symptoms that have been diagnosed by a physician, yet has self-diagnosed many items on the symptoms checklist for mental health.

Coping. The moderating effect of coping was not as significant in several of the regressions as was expected. Whereas, in the sample, coping slightly moderated the relationship between abuse and mental health, in the relationship between abuse and physical health, coping did not play as strong of a role. In all groups, coping seemed to lessen the impact of abuse on mental health, but did not buffer the effects of abuse on physical health. Perhaps, certain types of adaptive coping strategies supply psychological resources that lessen the negative impact on mental health. Even the most sophisticated coping strategies may not decrease negative physical
health consequences in the presence of severe physical violence or protect the immune system as it weakens under the stress associated with severe psychological abuse.

**Limitations.** Several stressors may confound the causal relationship of abuse on health symptoms. For example, maladaptive coping techniques may have spurred these negative health effects (Straight et al., 2003). Coping mechanisms that may further injure health include using drugs, drinking alcohol, avoiding the problem, or accepting that nothing can be done (Caetano et al., 2000). Perhaps two coping items that identify both positive and negative coping strategies rather than one general coping measure would help to better determine the moderating or exacerbating effects of coping on health. It should also be considered that other stressors such as poverty have been found to have a negative effect on health. Therefore, an advantage of this study is that only low-income women were used, thus, controlling for Socio-Economic Status.

A few limitations concerning self-report data should be considered when interpreting the results. Self-report data differs from medically verified data. For example, the self-report data on health complaints cannot be verified using medical records. However, by using a community based sample rather than a clinic based sample, the results may more accurately represent the community. Community based samples reduce selection bias and increase the representation of those who cannot afford health care (Higgs et al., 2001; Thomas, 2000) and those who are reluctant to seek health care for a variety of reasons (Eisikovits & Buchbinder, 1996; Higgs et al., 2001). It should also be noted that physicians often rely on self-report in making medical decisions. Lastly, self-report data may be biased by social desirability effect. Women in poverty already experience several forms of discrimination and may not want to feel judged in yet another setting (Mattis, 2002), therefore leading to underreporting.

**Implications and Clinical Applications.** The affects of partner abuse on physical and
mental health shown by this and countless other studies emphasize not only the disruptive, dangerous, and debilitating consequences of abuse but also the vital role that health care providers should play in intervention and screening. Emergency rooms, hospitals, physicians and mental health care professionals in the United States treat millions of cases of intimate partner rapes and physical assaults every year (Tjaden & Thoennes, 2000a). Partner violence alone contributes to 99,800 days of hospitalization, 28,700 visits to emergency rooms and 39,900 meetings with physicians per year (McLeer & Anwar, 1987). The Centers for Disease Control report that medical and mental health services cost $4.1 billion each year in treating the negative health effects of intimate partner physical assault and intimate partner rape. Over eighty percent of women experiencing rape who seek health care for their injuries are hospitalized (Tjaden & Thoennes, 2000b). Compared to women who do not experience IPV, abused women are more likely to be admitted to an emergency room (Bailey et al., 2003). Not only is this utilization of health care services representative of the negative effects of IPV, but also illustrates the importance of medical staff screening for IPV.

Most training on violence against women has been voluntary or elective in the past (Campbell, Soeken, & Grining, 1999b). As a result, some providers are not aware of IPV health consequences (Davidson, Grisso, Garcia-Moreno, Garcia, King, & Marchant, 2001) and consequently may not ask about the abuse, causing the abused woman to feel isolated (Loue, 2001). Even when physicians were recommended to screen for domestic abuse, 68% of pediatric residents and 73% of practicing pediatricians never or hardly ever screened for domestic violence in one study (Zink & Jacobson, 2003). However, a recent increase of literature on the relationships between women dealing with IPV and their health symptoms has encouraged IPV
education for health care practitioners and emphasized IPV screening (Campbell et al.; Coker et al., 2003).

Because of this recent emphasis on screening procedures, many researchers have studied the symptoms of abused women who utilize health care so that providers will be better prepared to screen for IPV. For example, Sutherland, Bybee, & Sullivan (1998) found that women who sought health care in one study checked into the health provider reporting pain from headaches, gastrointestinal, menstrual, and respiratory problems. Another study found that women in violent relationships were significantly more likely to report PTSD, anxiety, a history of drug use, and suicide attempts (Coker, Smith et al., 2002). Additionally, screening is important in the health care setting because abused women are more likely to seek help for the abuse from health professionals compared to other help agencies such as the clergy, police and rape crisis centers (Campbell et al., 1999b).

An adequate use of preventive health care allows physicians the opportunity to screen for IPV during routine, non-emergency checkups (Coker et al., 2003; Lang et al., 2003; Lemon et al., 2002) and make referrals (Goodman et al., 1993). Unfortunately, some studies have found that many abused women do not adequately use health care services. In a report by the National Crime Victimization Survey, most IPV related injuries were not treated by medical care. Reports provide several explanations for abused women's utilization of health care. For example, abused women may not utilize health care until the severity of the abuse escalates (Follingstad, Hause, Rutledge, & Polek, 1992; Leserman et al., 1998). Other studies describe barriers to adequate utilization of health care for abuse related injuries including cultural constructs that discourage disclosing the abuse (Tjaden & Thoennes, 2000b) or because the abused woman fears that her children will be taken away from her (Loue, 2001; Zink & Jacobson, 2003). Many studies cite
the barriers that minority women face in seeking health care (Eisikovits & Buchbinder, 1996; Higgs, Bayne, & Murphy, 2001) which include the availability (Chow, Jaffee, & Snowden, 2003), quality (Fiscella, Franks, Gold, & Clancy, 2000; Lillie, Brodie, Rowland, Altman, & McIntosh, 2000), and affordability (Higgs et al., 2001; Thomas, 2000) of health care for themselves and their families. For example, Keenan, Marshall & Eve (2002) list many barriers to Mexican American women utilizing health care which include not being familiar with the available prevention and screening programs or knowing how to communicate health concerns to healthcare professionals. Other studies have noted problems such as language barriers (Thomas, 2000; Fiscella, Franks, Doescher, & Saver, 2002), poor experiences with help agencies (Davidson et al., 2001; Eisikovits & Buchbinder, 1996), lack of comfort with health care providers (Higgs et al.), and perceptions of lower quality care given to minorities compared the quality given to Whites (Lillie et al.). Many low-income women lack insurance, childcare and transportation that increases the barriers to health care use (Keenan et al., 2002). Additionally, IPV has been shown to interfere with a poor woman’s ability to maintain work (Browne, Salomon, & Bassuk, 1999), which may be her source of insurance.

Low-income women who are involved in abusive relationships face these barriers to health care throughout their lives. On top of the abusive behavior, the physically and mentally debilitating health consequences, the additionally stressing effects poverty, unemployment, and discrimination, many low-income women simply cannot access health care. Health care providers are in an opportune position to serve as advocates for abused women by screening for each kind of abuse, advising on intervention strategies and helpful coping techniques, as well as being part of an abused woman’s support network.
In conclusion, each type of partner abuse distinctly contributes to many harmful effects on health. This study showed that psychological abuse most strongly impacted physical and mental health. For this reason, it is important that health care screening measures include items for all types of partner abuse and that health care providers are familiar with the symptoms of each.
APPENDIX A

TABLES
Table 1

*Means and standard deviations.*

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APPENDIX B

FIGURES
Figure 1. Conceptual Structural Model.
APPENDIX C

SEVERITY OF VIOLENCE AGAINST WOMEN SCALE
Appendix C
Severity of Violence Against Women Scale (SVAWS)

How many times did he...

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<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
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<tr>
<td>Never</td>
<td>Once</td>
<td>A Few Times</td>
<td>Several Times</td>
<td>Many Times</td>
<td>A Great Many Times</td>
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Threats of Violence

Symbolic violence
- Hit or kicked a wall, door or furniture
- Throw smash or break an object
- Drive dangerously with you in the car
- Throw an object at you

Threats of mild violence
- Shake a finger at you
- Make threatening gestures or faces at you
- Shake a fist at you
- Act like a bully toward you

Threats of moderate violence
- Destroy something belonging to you
- Threaten to harm or damage things you care about
- Threaten to destroy property
- Threaten someone you care about

Threats of serious violence
- Threaten to hurt you
- Threaten to kill himself
- Threaten to kill you
- Threaten you with a weapon
- Threaten you with a club-like object
- Act like he wanted to kill you
- Threaten you with a knife or gun

Acts of Violence

Mild violence
- Hold you down pinning you in place
- Push or shove you
- Grab you suddenly or forcefully
- Shake or roughly handle you

Minor violence
- Scratch you
- Pull your hair
• Twist your arm
• Spank you
• Bite you

Moderate violence
• Slap you with the palm of his hand
• Slap you with the back of his hand
• Slap you repeatedly around your face and head

Serious violence
• Hit you with an object
• Punch you
• Kick you
• Stomp on you
• Choke you
• Burn you with something
• Use a club-like object on you
• Beat you up
• Use a knife or gun on you

Sexual aggression
• Demand sex whether you wanted it or not
• Make you have oral/mouth sex against your will
• Make you have sexual intercourse against your will
• Physically force you to have sex
• Make you have anal/bottom sex against your will
• Use an object on you in a sexual way
APPENDIX D

SUBTLE AND OVERT PSYCHOLOGICAL ABUSE SCALE
Appendix D
Subtle and Overt Psychological Abuse of Women

Remember, he may do these things in a loving, joking or serious way.

How Often Does He...

Never 0 2 3 4 5 6 7 8 9 Almost Daily
0 = Never
1 = Once
2 = A couple of times
3 = Every few months
4 = About every other month
5 = About once a month
6 = About twice a month
7 = About every week
8 = A few times a week
9 = Almost daily

- Try to make you feel like you should be submissive, like you should yield or give in
- Accuse you of being against him
- Play games with your head
- Act like he doesn’t believe you
- Act like there’s something wrong with you mentally or emotionally
- Act like he’s more important or better than you
- Act like he knows what you did when he wasn’t around
- Ignore your needs or what you want
- Belittle you or put you down
- Blame you for him being angry or upset
- Change his mind but not tell you until it’s too late
- Criticize something you did well or discount it
- Do something that makes you feel small or less than what you were (like less smart, less competent, less attractive, less moral)
- Discourage you from having your own friends
- Try to keep you from seeing your friends or family
- Do or say something that harms your self-respect or your pride in yourself
- Encourage you to do something then somehow make it difficult to do it
- Belittle, find fault or put down something you were pleased with or felt good about
- Get angry or hurt if you talk to someone about him or your relationship
- Get more upset than you are when you tell him how you feel
- Make you feel like it’s useless to disagree with him
- Make you feel bad when you did something he didn’t want you to do
- Make you feel like nothing you say will have an effect on him
- Make other plans when you want to do something
- Make you choose between something he wants and something you want or need
- Make you feel frustrated trying to talk to him
• Say or do something that makes you feel unloved or unlovable
• Make you worry about whether you could take care of yourself
• Make you feel guilt about something you have done or have not done
• Use things you’ve said against you (like if you say you made a mistake, how often does he use that against you later)
• Make you feel ashamed of yourself
• Make you worry about your emotional health and well-being
• Make you feel like you have to fix something he did that turned out badly
• Make you feel like you can’t keep up with changes in what he wants
• Were you out, make you feel drained or empty
• Put himself first, not seeming to care what you want
• Get you to question yourself, making you feel insecure or less confident
• Remind you of times he was right and you were wrong
• Say his actions (which hurt you) are good for you or will make you a better person
• Say something that makes you worry about whether you’re going crazy
• Say or do something that makes you feel guilty
• Act like he owns you
• Somehow make you feel worried or scared even if you’re not sure why
• Somehow make it difficult for you to go somewhere or talk to someone
• Somehow keep you from having time for yourself
• Act like you over-react or get too upset
• Continue to talk when you’re tired or don’t feel will
• Talk about how you couldn’t take care of yourself without him
• Tease you in a way that embarrasses you
• Get upset when you did something he didn’t know about
• Tell you the problems in your relationship are your fault
• Tell you that something he did was your fault
• Interrupt or sidetrack you when you’re doing something important
• Blame you for his problems
• Discourage you from making new friends
• Try to keep you from showing what you feel
• Try to keep you from doing something you want to do or have to do
• Try to tell you what you can and cannot do
• Try to get you to apologize for something that wasn’t your fault
• Try to find out things you don’t want to tell him
• Try to convince you something was like he said when you know that isn’t true
• Try to get you to say you were wrong even if you think you were right
• Use an offensive or hurtful tone of voice with you
• Wear you down emotionally (like keep at you about something until you feel worn out)
APPENDIX E

HEALTH COMPLAINTS
Appendix E
Health Complaints

Tell me which of these conditions you’ve had

- Hepatitis A
- Hepatitis B
- Hepatitis C
- Breast cancer
- Uterine (womb) cancer
- Skin cancer
- Sickle cell anemia
- Another type of anemia
- Any kind of allergy
- Asthma
- Cancer other than breast, uterine or skin
- Diabetes or sugar
- Problems with your periods
- Ulcers
- Liver problems
- Skin problems (rashes, growths, blemishes)
- Problems with your vision, trouble seeing
- Eye problems (discharge, itching, swelling)
- Heartburn
- Muscle pain or cramps
- Blackouts or fainting spells
- Hysterectomy (uterus removed)
- Change in or problems with bowel movements
- Blood circulation problems, hardening of arteries
- Sexually transmitted disease
- Nerves
- Urinary or bladder infections
- Vaginal infections
- Emphysema
- Epilepsy
- Heart disease
- High blood pressure
- Kidney problems
- Thyroid trouble or goiter
- Tuberculosis (TB)
- Hemorrhoids or piles
- Stroke
- Hearing problems
- Swelling in your legs or ankles
• Difficulty breathing
• Bleeding or bruising easily
• Back problems
• Balance problems/trouble walking
• Hot flashes
• Problems with your teeth
• Lupus
APPENDIX F

GLOBAL DISTRESS
Appendix F
Global Distress

In the past month, how much have you been bothered by

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<td>1 = A little bit</td>
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- Headaches
- Nervousness or shakiness inside
- Unpleasant feelings that won’t leave your mind
- Faintness or dizziness
- Loss of sexual interest or pleasure
- Feeling critical of others
- The idea that someone else can control your thoughts
- Feeling others are to blame for most of your troubles
- Feeling afraid to go out of your house alone
- Trouble remembering things
- Feeling easily annoyed or irritated
- Pains in heart or chest
- Feeling afraid in open spaces or in the streets
- Thoughts of ending your life
- Hearing voices that other people do not hear
- Trembling
- Feeling that most people cannot be trusted
- Crying easily
- Feeling shy or uneasy with men
- Feelings of being trapped or caught
- Suddenly scared for no reason
- Temper outbursts you cannot control
- Blaming yourself for things
- Pains in lower back
- Feeling blocked in getting things done
- Feeling lonely
- Feeling blue
- Worrying too much about things
- Feeling no interest in things
- Feeling fearful
- Your feelings being easily hurt
- Having to repeat the same actions like touching, counting, washing
• Other people being aware of your private thoughts
• Feeling others do not understand you or are unsympathetic
• Feeling that people are unfriendly or dislike you
• Feeling afraid to travel on buses, subways or trains
• Having to do things very slowly to insure correctness
• Heart pounding or racing
• Nausea or upset stomach
• Feeling inferior to others
• Soreness of your muscles
• Feeling that you are watched or talked about by others
• Having to check and double-check what you do
• Difficulty making decisions
• Trouble getting your breath
• Having to avoid certain things because they frighten you
• Hot or cold spells
• Your mind going blank
• Numbness or tingling in parts of your body
• A lump in your throat
• Feeling hopeless about the future
• Trouble concentrating
• Weakness in parts of your body
• Feeling tense or keyed up
• Heavy feelings in your arms or legs
• Feeling uneasy when people are watching you or talking about you
• Having thoughts that are not your own
• Having urges to beat, injure, or harm someone
• Having urges to break or smash things
• Having ideas or beliefs that others do not share
• Feeling very self-conscious with others
• Feeling uneasy in crowds, such as shopping or at a movie
• Feeling everything is an effort
• Spells of panic or terror
• Feeling uncomfortable about eating or drinking in public
• Feeling nervous when you’re left alone
• Getting into frequent arguments
• Others not giving you proper credit for your achievements
• Feeling lonely even when you are with people
• Feeling so restless you couldn’t sit still
• Feelings of worthlessness
• The feeling that something bad is going to happen to you
• Shouting or throwing things
• Feeling afraid you will faint in public
• Feeling that people will take advantage of you if you let them
• Having thoughts about sex that bother you a lot
- The idea that you should be punished for your sins
- Thoughts and images of a frightening nature
- The idea that something serious is wrong with your body
- Never feeling close to another person
- The idea that something is wrong with your mind
APPENDIX G

DAILY COPING SCALE
Appendix G
Daily Coping Scale

Thinking about how you handle problems and worries with your health, how often do you

Never 0 1 2 3 4 5 6 7 Always

0 = Never
4 = About half the time
7 = Always

- Distract yourself, divert attention away from the problem by thinking about other things or engaging in some activity
- Try to see the problem in a different light that makes it seem more bearable
- Think about solutions to the problem, gather information about it, or actually do something to try to solve it
- Express emotions in response to health problems to reduce tension, anxiety, or frustration
- Accept that the problem occurs, but that nothing can be done about it
- Look for or find emotional support from loved ones, friends, or professionals
- Try to relax, do something with the intention of relaxing
- Look for or find spiritual comfort or support
- Drink alcohol or use drugs
- Eat more food than usual
REFERENCES


