

## The Effect of Coping on the Physical and Mental Health of Abused Women<sup>1</sup>

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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 mechanisms did not seem to lessen the impact of abuse on physical health or mental health. The interaction of abuse with coping mechanisms did increase the explained variance in mental health status.

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 et al., 2002), which may be long-term and debilitating (Lemon, Verhoek-Oftedahl, & 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, Bethea, King, McKeown, 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).

In this study, the effects of physical violence, sexual aggression, and psychological abuse on physical and mental health in a sample of low-income women will be examined. Further, I will examine the mediating effects of positive and negative coping mechanisms on the relationship between violence and health among women in three different ethnic groups – African Americans, European Americans, and Mexican Americans. I will first review the literature relevant to the focus of the study. Second, I will discuss the methodology of this project, which involves a secondary analysis of an interview survey. Third, I will present the

results of the study using regression analysis. Finally, I will discuss the conclusions and implications of the results for clinical practice with abused women.

### *IPV and Health*

*Physical violence.* Physical violence has been associated with overt injuries such as cuts, scrapes, bruises, broken bones, and fractures (Sutherland, Bybee, & Sullivan, 2002).

Additionally, women experiencing physical violence are more likely to suffer from concussions (Rennison & 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., 2002).

Women in physically violent relationships are also at an increased risk for psychological health problems (Coker, Davis et al., 2002) as 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 as 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 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 also has been shown to negatively affect 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. 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, Harper & Arias, 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, Davis, and their colleagues also noted that psychological abuse, when compared with physical violence, is more strongly correlated with health symptoms.

### *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. For example, 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 have 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).

### *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 person, and are more likely to suffer an injury from the rape compared with women of other ethnic backgrounds who are raped (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.

*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 (U.S. Department of Health and Human Services, 2000). Other studies have found similar results. Lower reported health and higher rates of mortality have been found to be associated with being Black and having a lower

socioeconomic status whereas greater income, more education, and being White have been associated with better health (Franks, Gold, & Fiscella, 2003).

*Coping.* Research studies 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).

### *Hypotheses*

Based on the literature reviewed above, the research model that I will test is shown in Figure 1 below. From this model, I have derived the following two hypotheses:

Hypothesis 1a. Intimate partner violence, whether physical, sexual or psychological, will have a negative effect on physical health.

Hypothesis 1b. Intimate partner violence, whether physical, sexual or psychological, will have a negative effect on mental health.

Hypothesis 2a. Coping will moderate the effect of intimate partner violence on physical health.

Hypothesis 2b. Coping will moderate the effect of intimate partner violence on mental health.

These hypotheses will be tested and the results reported below with the total sample and within each of the three ethnic groups represented in the sample.

## 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 to businesses, health-care facilities, community centers and on cars. The community was made aware of the study in church announcements, at their homes, 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 broadcast 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.

*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. Under the supervision of faculty advisors, 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. The doctoral student trainers emphasized issues such as standardization, confidentiality, and response bias in the training of undergraduates.

Trainees practiced individually giving the interview to other trainees, friends and/or family.

When a student felt prepared to begin interviewing, the doctoral students assessed the student's performance. The student-interviewer role-played the interview process in front of a video camera 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 student trainers gave interviewers frequent advice and constructive 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 a woman'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 the 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 first described in technical terms and hand signed by the principal investigator and then 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.

### *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. The SVAWS is composed of forty-six items that measure threats and acts of physical violence and sexual aggression by a male partner toward a female partner. Acts of physical violence include minor, mild, moderate, and severe violence. 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). Psychologically abusive acts may be obvious (verbal aggression and controlling behaviors), overt (dominating and discrediting behaviors), or subtle (isolating and undermining behaviors) (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 35 items ( $\alpha = .98$ , .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 ten-item scale was used to evaluate how women cope with their health problems using cognitive behavioral forms of coping. Women responded to each question with an 8-point scale ranging from never (0) to always (7). The mean of these items represented coping ( $\alpha = .81$ , from .79 for Euro-Americans to .83 for Mexican Americans).

*Physical and mental health symptoms.* The indicators used to measure physical health symptoms include a list of 46 health complaints (Chatters, 1991). A woman responded, “yes,” if she had any of the symptoms. For mental health, the Hopkins Symptom Checklist-90 (SCL90; Derogatis, Lipman & Covi, 1973) measured global distress. Women rated their responses to the

question, “in the past month how much have you been bothered by,” by using a 6-point scale ranging from not at all (0) to extremely (5). The mean of these items represent global distress ( $\alpha = .98$  for the sample and all three groups).

### Results

Table 1 below 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 used to identify differences in the number of health conditions reported, the type of abuse, and the results 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 2 below, physical violence ( $beta = .312$ ), sexual aggression ( $beta = .320$ ), and psychological abuse ( $beta = .509$ ) significantly predicted women’s global distress levels,  $R = .31, p < .001$  for the sample. The direct effects remained significant in the interactions between the three types of violence and coping. However, while the betas are slightly smaller ( $betas = .288, .304, \text{ and } .491$ , respectively), they are not .10 units smaller, so we must conclude that the interactions between each type of violence and coping have no effect on physical health. Concerning the interactions on global distress, there are significant effects for physical violence and coping ( $beta = -.143$ ), for sexual aggression and coping ( $beta = -.164$ ), and for psychological abuse and coping ( $beta = -.105$ ),  $R^2 \text{chg} = .02, p < .001$ . The negative betas indicate that the

coping mechanisms slightly reduce the effect of IPV on mental distress. Thus, as coping interacts with the three types of abuse, distress is reduced.

Similar to the results for women's mental health, physical violence ( $beta = .177$ ), sexual aggression ( $beta = .230$ ), and psychological abuse ( $beta = .271$ ) all significantly affect women's physical health,  $R = .18$ ,  $p < .001$ , as shown in Table 3. Coping has no effect on the relationship between intimate partner violence and physical health, with direct effects of physical violence ( $beta = .169$ ), sexual aggression ( $beta = .225$ ), and psychological abuse ( $beta = .264$ ) remaining. The interactions of IPV and coping have no significant effects on physical health,  $R^2 = .00$ ,  $p > .05$ .

For African Americans, physical violence ( $beta = .356$ ), sexual aggression ( $beta = .379$ ), and psychological abuse ( $beta = .503$ ) significantly predicted women's mental distress,  $R = .36$ ,  $p < .001$  (Table 4). When coping interactions were added to the equation, abuse still exacted significant deleterious effects on mental health, yet with slightly lesser betas ( $betas = .340$ ,  $.365$ , and  $.487$ , respectively), although the betas were not  $.10$  units less, and therefore were not significant. The interactions with coping and physical violence ( $beta = -.143$ ), sexual aggression ( $beta = -.164$ ), and psychological abuse ( $beta = -.105$ ) suggested that coping decreased the effect of IPV on mental health for the African American women,  $R^2chg = .03$ ,  $p < .004$ .

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 5). The direct effects remained significant with no change in variance. Therefore, coping did not lessen the impact of abuse on African American women's physical health.

For Euro-American women, physical violence ( $beta = .334$ ), sexual aggression ( $beta = .359$ ), and psychological abuse ( $beta = .526$ ) impacted women's mental distress significantly,  $R = .33$ ,  $p < .001$  (Table 6). With the inclusion of coping, the direct effects remained, but with reduced betas ( $betas = .288$ ,  $.321$ , and  $.499$ , respectively), although these decreases were not significant. 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,  $R^2chg = .02$ .

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 7). These direct effects remained significant with the introduction of coping ( $betas = .167$ ,  $.278$ , and  $.318$ , respectively) although the interaction effects were not significant.

For Mexican American women, physical violence ( $beta = .228$ ), sexual aggression ( $beta = .163$ ), and psychological abuse ( $beta = .500$ ) significantly affected women's mental health, with psychological abuse having the most impact,  $R = .23$ ,  $p < .001$  (Table 8). The direct effects remained significant ( $betas = .213$ ,  $.162$ , and  $.490$ , respectively). Coping appeared to slightly moderate the effects of physical violence on health ( $beta = -.124$ ) and sexual aggression on health ( $beta = -.148$ ),  $R^2chg = .02$ ,  $p < .043$ . Thus, coping seemed to lessen the impact of physical violence and sexual aggression on women's mental health.

Physical violence ( $beta = .175$ ), sexual aggression ( $beta = .113$ ), and psychological abuse ( $beta = .219$ ), all significantly impacted Mexican American women's physical health,  $R = .18$ ,  $p < .04$  (Table 9). Coping did moderate these relationships.

In summary, the results of the data analysis for Model 1 support Hypothesis 1a; intimate partner violence has a deleterious effect on physical health for the total sample and for each of

the three ethnic subgroups, whether physical violence, sexual aggression, or psychological abuse. The data analysis also supports Hypothesis 1b that intimate partner violence (physical, sexual, and psychological) has a deleterious effect on mental health for the total sample and for each of the three subsamples based on ethnicity.

The data provide no support for Hypothesis 2a. Coping does not decrease the deleterious effects of any type of intimate partner violence on physical health. The data provide mixed results for the moderating effects of coping on the relationship between IPV and mental health. Coping does seem to decrease the negative effects of all three kinds of intimate partner violence on mental health for the total sample and for the African Americans. Coping has a significant moderating effect for the effects of physical abuse and sexual aggression for Euro-Americans and Mexican Americans, but coping does not moderate the effects of psychological abuse on mental health. Thus, the data provide qualified support for Hypothesis 2b.

## 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 et al., 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. To account for this, it could be that participants only reported physical health symptoms that were previously diagnosed by a physician, yet 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, contrary to expectations. 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. There could be several reasons for this. Perhaps, certain types of adaptive coping strategies supply psychological resources that lessen the negative impact on mental health. Likewise, in the presence of severe physical violence, even the most sophisticated coping strategies may not decrease negative physical health consequences. Finally, advanced coping strategies may not defend against the stress associated with severe psychological abuse, which weakens the immune system.

*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). As a solution, 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, Bayne, & Murphy, 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.

#### *Implications and clinical applications*

The effects 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 80% 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 as a result 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, in one study 68% of pediatric residents and 73% of practicing pediatricians never or hardly ever screened for domestic violence (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 when compared to 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, Li, Drossman, & Hu, 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 et al., 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 health-care 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 to the quality given to Whites (Lillie et al., 2000). Many low-income women lack insurance, childcare and transportation, which increase 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 and the additionally stressing effects of 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.

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Table 1

*Means and standard deviations.*

	Sample (N = 835)		African American (N = 302)		Euro-American (N = 273)		Mexican American (N = 260)	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Partner Abuse								
Physical violence	8.18	13.37	8.31	13.22	9.05	14.55	7.12	12.18
Sexual assault*	1.73	3.92	2.25	4.76	1.65	3.81	1.21	2.71
Psychological abuse*	2.22	2.50	2.19	2.53	2.51	2.57	1.93	2.36
General Coping	4.86	1.25	5.11	1.22	4.65	1.19	4.78	1.32
Mental and Physical Health Symptoms								
Health complaints*	8.99	5.44	9.13	5.61	10.44	5.59	7.26	4.53
Global distress	1.08	0.75	1.08	0.79	1.11	0.71	1.05	0.73

\*ANOVA significant,  $p < .05$

Table 2: Sample: Global Distress (n = 835)

	Beta	<i>p</i>	Beta	<i>p</i>	$R^2_{\text{chg}}$	<i>p</i>	R	<i>p</i>
Model 1					.10	.000	.31	.000
Physical violence	.312	.000						
Sexual aggression	.320	.000						
Psychological abuse	.509	.000						
Model 2					.02	.000	.34	.000
Physical violence			.288	.000				
Sexual aggression			.304	.000				
Psychological abuse			.491	.000				
Physical x Coping			-.143	.000				
Sexual x Coping			-.164	.000				
Psychological x Coping			-.105	.001				

Table 3: Sample: Health Conditions (n = 835)

	Beta	<i>p</i>	Beta	<i>p</i>	R <sup>2</sup> <sub>chg</sub>	<i>p</i>	R	<i>p</i>
Model 1					.03	.000	.18	.000
Physical violence	.177	.000						
Sexual aggression	.230	.000						
Psychological abuse	.271	.000						
Model 2					.00	ns	.18	.000
Physical violence			.169	.000				
Sexual aggression			.225	.000				
Psychological abuse			.264	.000				
Physical x Coping			-.051					
Sexual x Coping			-.060					
Psychological x Coping			-.039					

Table 4: African Americans: Global Distress (n = 302)

	Beta	<i>p</i>	Beta	<i>p</i>	R <sup>2</sup> <sub>chg</sub>	<i>p</i>	R	<i>p</i>
Model 1					.13	.000	.36	.000
Physical violence	.356	.000						
Sexual aggression	.379	.000						
Psychological abuse	.503	.000						
Model 2					.03	.003	.39	.000
Physical violence			.340	.000				
Sexual aggression			.365	.000				
Psychological abuse			.487	.000				
Physical x Coping			-.160	.003				
Sexual x Coping			-.164	.002				
Psychological x Coping			-.141	.005				

Table 5: African Americans: Health Conditions (n = 298)

	Beta	<i>p</i>	Beta	<i>p</i>	R <sup>2</sup> <sub>chg</sub>	<i>p</i>	R	<i>p</i>
Model 1					.02	.008	.15	.008
Physical violence	.154	.008						
Sexual aggression	.231	.000						
Psychological abuse	.229	.000						
Model 2					.00	ns	.16	.022
Physical violence			.150	.010				
Sexual aggression			.228	.000				
Psychological abuse			.225	.000				
Physical x Coping			-.042					
Sexual x Coping			-.039					
Psychological x Coping			-.032					

Table 6: Euro-Americans: Global Distress (n = 273)

	Beta	<i>p</i>	Beta	<i>p</i>	R <sup>2</sup> <sub>chg</sub>	<i>p</i>	R	<i>p</i>
Model 1					.11	.000	.33	.000
Physical violence	.334	.000						
Sexual aggression	.359	.000						
Psychological abuse	.526	.000			.02	.010	.37	.000
Model 2								
Physical violence			.288	.000				
Sexual aggression			.321	.000				
Psychological abuse			.499	.000				
Physical x Coping			-.155	.010				
Sexual x Coping			-.166	.004				
Psychological x Coping			-.088					

Table 7: Euro-Americans: Health Conditions (n = 272)

	Beta	<i>p</i>	Beta	<i>p</i>	R <sup>2</sup> <sub>chg</sub>	<i>p</i>	R	<i>p</i>
Model 1					.03	.003	.18	.003
Physical violence	.180	.003						
Sexual aggression	.285	.000						
Psychological abuse	.321	.000						
Model 2					.00	ns	.19	.009
Physical violence			.167	.008				
Sexual aggression			.278	.000				
Psychological abuse			.318	.000				
Physical x Coping			-.045					
Sexual x Coping			-.031					
Psychological x Coping			-.009					

Table 8: Mexican Americans: Global Distress (n = 260)

	Beta	<i>p</i>	Beta	<i>p</i>	R <sup>2</sup> <sub>chg</sub>	<i>p</i>	R	<i>p</i>
Model 1					.05	.000	.23	.000
Physical violence	.228	.000						
Sexual aggression	.163	.009						
Psychological abuse	.500	.000						
Model 2					.02	.042	.26	.000
Physical violence			.213	.000				
Sexual aggression			.162	.008				
Psychological abuse			.490	.000				
Physical x Coping			-.124	.042				
Sexual x Coping			-.148	.016				
Psychological x Coping			-.090					

Table 9: Mexican Americans: Health Conditions (n = 250)

	Beta	<i>p</i>	Beta	<i>p</i>	R <sup>2</sup> <sub>chg</sub>	<i>p</i>	R	<i>p</i>
Model 1					.03	.005	.18	.005
Physical violence	.175	.005						
Sexual aggression	.113	.074						
Psychological abuse	.219	.001						
Model 2					.00	ns	.19	.013
Physical violence			.168	.008				
Sexual aggression			.113	.075				
Psychological abuse			.211	.001				
Physical x Coping			-.061					
Sexual x Coping			-.081					
Psychological x Coping			-.063					

Figure 1. *Conceptual Structural Model.*

