# VIOLENCE AND DEPRESSION AMONG ETHNICALLY DIVERSE, LOW INCOME WOMEN: MEDIATING AND MODERATING FACTORS

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This longitudinal study examined factors influencing the relationship between sustained partner violence and depression/suicidality among ethnically diverse, low income, community women. The sample at Wave 1 consisted of 303 African American, 273 Euro-American, and 260 Mexican American women in long term relationships with a household income less that twice the poverty threshold. There were no ethnic differences on frequency of partner violence, depression, or suicidality.

The moderate relationship between partner violence and women's depression, confirmed previous findings. Frequency, but not recency, of violence predicted depression and suicidal ideation for African Americans and Mexican Americans, even after controlling for earlier depression or ideation. Recent violence did not predict Euro-American's

depression or suicidality after controlling for initial scores.

Causal and responsibility attributions for partners' violence did not mediate the relationship between violence and depression or suicidality in any ethnic group. However, African American women's attributions of global effects for violence mediated the relationship of violence on depression and suicidal ideation.

Poverty level and marital status moderated the relationship between violence and the number of times women seriously considered and actually attempted suicide. Frequent violence was most lethal among the poorest women and marriage provided the least protection for women in the most violent relationships. Specifically, poverty status moderated violence on consideration of suicide for African Americans and Euro-Americans and suicide attempts among Mexican Americans. Marital status moderated partners' violence on suicidal ideation and attempts for Mexican Americans and consideration of suicide for Euro-Americans, but was not a moderator for African Americans' depression or suicidality.

Women with different ethnic backgrounds appear to differ in the ways partner violence contributes to their depression and suicidality. Policy implications include the need to offer suicide intervention, particularly for low income women seeking services for violence. Mental health professionals should routinely inquire about partner violence when women present with depression or suicidality. Further, sensitivity to ethnic differences is recommended when confronting women's attributions regarding violence.

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# CHAPTER I

## INTRODUCTION

### Statement of the Problem

During the 1970s, grassroots movements helped raise the awareness of family violence among social and behavioral scientists (Dobash & Dobash, 1979; Martin, 1976; Pagelow, 1981) and called for shelter for victims, legislative change, and research. A national survey (Straus, Gelles, & Steinmetz, 1980) conducted in 1975 found that 28% of respondents had been victims of physical aggression by their partner at some point in their marriage. Moreover, 12.2% of the women had been the target during the preceding year.

These and other findings led former Surgeon General C. Everett Koop (1985) to declare violence against women the number one health problem of American women in 1985. Using Bureau of Justice Statistics data, Greenfield (1998) found that an intimate partner is responsible for approximately one-fifth of all female victimizations with about half of these women reporting a physical injury. The problems women

sustain as a result of violence by their partners are not limited to physical injury. Depression and increased suicidality have been repeatedly recognized as common psychological outcomes (Browne, 1993; Campbell & Lewandowski, 1997; Goodman, Koss, & Russo, 1993; Hotaling & Sugarman, 1986). The frequency and severity of the violence increase the risk of depression (Follingstad, Brennan, Hause, Polek, & Rutledge, 1991; Mitchell & Hodson, 1983). Furthermore, recency of violence also has been associated with increased depressive symptoms among samples from battered women's shelters (Campbell, Sullivan, & Davidson, 1995) and homeless, seriously mentally ill women (Goodman & Dutton, 1996).

In addition to a direct relationship, other factors may mediate or moderate the association between partner violence and depression. Factors or processes that specify how or why a relationship occurs are termed mediators (Baron & Kenny, 1986). Attributions (explanations for behavior) may be one mediator of violence and depression. Researchers have explored the relationship between attributions and violence (Byrne & Arias, 1997; Holtzworth-Monroe, 1988; Murphy, Vivian, & O'Leary, 1989) and between attributions and depression in distressed (Fincham, Beach,

& Bradbury, 1989; Fincham, Beach, & Nelson, 1987) and violent (McClennan, Joseph, & Lewis, 1994) relationships. However, no study has addressed whether attributions for men's violence mediate the association of violence and depression found among women.

Moderators specify when an association between variables (in this case between violence and depression) is most likely to occur. A moderator variable would interact with the violence to describe when and for whom depression would be most likely or would be exacerbated. Possible moderators include ethnicity (Biafora, 1995; Lester, 1991; Neff & Hoppe, 1993), socioeconomic status (Culbertson, 1997; Murphy, et al., 1991), and marital status (Stets, 1991).

The present study was designed to address two issues. First, the mediating effects of attributions for partner violence were explored because attributions have been implicated in the violence, depression, and relationship literatures. Second, by examining poverty status and marital status as possible moderators the study yields information on whether some groups who sustain partner violence are more or less likely than others to experience symptoms of depression. Partner violence, depression and

suicidality have all been associated with low socioeconomic status (Fellin, 1989; Hotaling & Sugarman, 1986; Straus, et al., 1980). Consequently, this study was limited to low income, community women. Further, minority ethnic status appears to be a risk factor for partner violence (Hotaling & Sugarman, 1986) and for depression (Kessler, McGonagle, & Zhao, 1994). Therefore, analyses were conducted within each of three ethnic group (African American, Euro-American, and Mexican American) as well as across the groups.

## Review of the Literature

This review reports empirical studies on the association between partner violence and depression. A brief summary of theories posited to explain this relationship is followed by a description of attribution theory as it has been applied in the violence, depression, and relationship literatures. Few investigators have examined the interrelationships of attributions, partner violence, and depression. Further, literature implicating marital status, socioeconomic status, and ethnicity as possible moderators of the relationship between partner violence and depression is described. Finally, conclusions drawn from the literature review lead to specific hypotheses that will be addressed in the proposed study.

Terminology issues have not been settled in the literature on partner violence. Wife battering, abuse, assault, domestic violence, and partner violence denote situations in which an adult woman sustains an act or acts of physical violence from a man with whom she is intimately involved. Dating, cohabiting, and marital relationships are included in the term intimate. The nature of the relationship is assumed to be ongoing and involve some level of commitment to distinguish it from violence by an acquaintance or a stranger. The term partner violence is gender neutral. However, both the review and the study were limited to acts sustained by women from their male partners.

Although abuse may include psychological and sexual acts, this study was limited to the effects of physical acts. In the literature, it is not always possible to separate physical acts from threats of violence or verbal aggression because some measures combine these different forms of abuse. Therefore, terminology of the original researcher may be used. The most common measure used is a subscale of the Conflict Tactics Scale (CTS; Straus, 1979) which measures the frequency of threats and acts of violence. Severity of violence in this literature usually

refers to high frequency scores. However, CTS scores are often dichotomized to represent the presence or absence of violence. The term recency indicates the time elapsed since the most recent incident.

The term depression refers to depressive symptoms. Unless noted, there is no assumption that diagnostic criteria for a depressive disorder have been met. Studies reporting levels of symptomatology that meet criteria for diagnosis are specifically noted.

The term mediator designates a variable that represents a process, generally intrapersonal, that accounts for why a relationship occurs between two variables (e.g., violence and depression). The term moderator describes a variable that interacts with violence to help predict depression as an outcome. Thus, a mediator denotes an intervening process that makes the outcome more likely while moderators describe when and for whom the outcome is more likely to occur (i.e., the conditions under which an outcome is most likely).

Attributions are explanations made for behaviors. In the depression literature (Abramson, Seligman, & Teasdale, 1978), relevant attributions are assumed to be causal with a locus of the self or others. Dimensions of causal

attributions include locus (cause internal or external to the self), stability (changing or unchanging over time) and globality (specific to the situation or consistent across situations). Relationship attributions (Fincham & Bradbury, 1992) are defined as explanations of self and partner behavior involving causality, responsibility, and blame, often with the self, partner, or relationship implicated. In the relationship literature, globality refers to attributions regarding the effect of the behavior across situations. Responsibility attributions involve intent (intentional or unintentional), motivation (selfish or unselfish) and justification (justified or not justified). Blame attributions refer to judgement of blame or fault for the behavior.

The Association of Violence and Depression

Anecdotal reports and empirical evidence show a relationship between sustaining partner violence and depression in women. Samples have been drawn from residents of battered women's shelters, battered women seeking help for the violence in emergency rooms and mental health centers, women seeking marital therapy, the community, and college campuses. A variety of measures have been used for depressive symptomology. These include the Diagnostic

Interview Schedule (DIS; Robins, Helzer, Croughan, & Ratcliff, 1981), Center for Epidemiologic Studies Depression Scale (CES-D; Radloff, 1977), the Structured Clinical Interview for DSM-III-R (SCID; Spitzer, Williams, Gibbon, & First, 1992), the Depression Scale of the Minnesota Multiphasic Personality Inventory (Hathaway & McKinley, 1940), the Beck Depression Inventory (BDI; Beck, Ward, Mendelson, Mock & Erbaugh, 1961), and the Symptom Checklist-90-R (SCL-90-R; Derogatis and Cleary, 1977). Mean scores rather than clinical cut offs are usually used. Only results that were statistically significant at the level of $p < .05$ are included unless otherwise noted. Unfortunately, some of the descriptive studies Reporting percentages did not use statistical procedures to determine whether differences were significant. Many studies reporting rates of depression or comparing mean depression scores were based on data which dichotomized violence scores (i.e., presence or absence of violence).

The lifetime prevalence of Major Depressive Disorder for community women ranges from 10% to 25% according to the Diagnostic and Statistical Manual of Mental Disorders – Fourth Edition (DSM-IV; American Psychiatric Association, 1994). Among women, incidence ranges from 5% to 9% at any

point in time, and, according to the DSM-IV, appears to be unrelated to ethnicity, income, or marital status. However, the American Psychological Association's Taskforce on Women and Depression (McGrath, Keita, Strickland, & Russo, 1990) reported that marital status and low socioeconomic status were associated with depression for women. They also found that sustaining physical abuse was a contributing factor for women's depression.

Several studies have been done using samples from battered women shelters or women seeking services for the violence. In shelters, 21% (Gayford, 1975) to 69% (Gleason, 1993) have met the clinical criteria for depression. Of women seeking services specifically for the violence, 52% have met criteria for severe depression (Cascardi & O'Leary, 1992). In a study by Orava, McLeod and Sharpe (1996) women in a shelter group had a mean of 23.7, which is above the clinical cut off (20) on the BDI, compared to 7.5 for groups of students and community women. Depressive symptoms, not necessarily meeting criteria for diagnosis, were found for 76.7% of women seeking shelter services (Follingstad et al., 1991). Campbell (1992) also reported a higher, but unspecified, rate of severe depression among battered women compared to women seeking help for

relationship problems. Part of the depression found in women seeking help, however, may be relatively unrelated to the violence. Particularly for women in shelters, depression may be a function of the disruption of their lives rather than, or in addition to, the violence. For example, in Campbell's study, the two groups did not differ on depression scores, only on rates. There was also no difference in depression scores between a group of community dwelling battered women and battered women incarcerated for killing their partners (Roberts, 1996).

Battered women have also been recruited from emergency rooms, mental health clinics and other treatment centers. Of the battered women at these sites, 37% met the diagnostic criteria for depression (Rounsaville & Weissman, 1977-78) and 80% (Rounsaville, 1978) had "substantial" symptoms. On the MMPI-II Depression Scale, 10 abused women scored higher than 10 nonabused women at a residential treatment center (Gellen, Hoffman, Jones, & Stone, 1984).

Several violence researchers have investigated depression in community samples, women seeking therapy, and college students, often with conflicting results. For example, a national telephone survey found no differences between women reporting assault by a partner or a stranger

(Riggs, Kilpatrick, & Resnick, 1992). More depressive symptoms have been found among young, community women who had sustained partner violence than those who had not (Magdol et al., 1997). Among women seeking relationship therapy both rates of depression (Cascardi, O'Leary, Lawrence, & Schlee, 1995) and mean scores (Arias, Lyons, & Street, 1997; Cascardi, Langhinrichsen, & Vivian, 1992) have been higher for women in violent rather than nonviolent relationships. Yet Cascardi, et al. (1995) found no difference in rate of depression diagnosis between the maritally violent and discordant groups seeking therapy.

Although the CTS and other violence scales yield frequency scores, the results reported in the preceding paragraphs were based on collapsing the data to identify differences between groups, based on the presence or absence of partner violence. Other research has shown that as violence scores increase, so do depressive symptoms. Samples for these studies, however, were generally limited to women specifically identified for the presence of violence (e.g., shelter residents). An exception was a small correlation ($r$ = .17) between partner violence and depression found among female college students (Graham, et al., 1995). Additionally, Straus and Gelles' (1987) second

national survey found that rates of depression increased with severity, from 8.9% for no violence to 20.5% for women reporting minor acts, and 37.6% for those who reported severe acts (e.g., beat up). The relationship between violence and depression scores among shelter samples has ranged from correlations of $r$ = .36 (Sato & Heiby, 1992) to $r$ = .52 (Orava et al., 1996). Among women seeking services for domestic violence correlations have ranged from $r$ = .31 (Mitchell & Hodson, 1983) to $r$ = .54 (Cascardi & O'Leary, 1992). Follingstad, et al. (1991) reported that violence scores accounted for 3.8% of the variance in psychological symptoms, including depression, in her sample of women identified for the violence.

Very few studies have examined the relationship between recency of violence and depression. Levit (1991) reported anecdotal evidence that obvious impaired intellectual functioning and disruption of thought processes were evident for women assaulted recently but returned to normal within a year. Sedlak (1988) found higher depression scores when women entered a shelter than a month later when they left. In contrast, Campbell et al. (1995) found that 83% of battered women exiting a shelter were depressed. Although the rate of depression remained

high among those who continued to report violence, almost half of the women who were no longer in a violent relationship were depressed 6 months after leaving a shelter. Gleason (1993) reported an increase in depression one (69%) to 6 months (83%) after entering a shelter. Surprisingly, his community dwelling group who were obtaining shelter services had a higher (81%) lifetime prevalence of depression than women residing in a shelter (63%).

Many of the scales used to measure depression (e.g., BDI, MMPI-II) include items addressing suicidal ideation as a symptom (DSM-IV, 1994). However, because suicide presents a threat to life specific results should be noted. Again, the majority of studies sampled shelter residents or women seeking services for partner violence. In their review, Stark and Flitcraft (1991) found there were no differences in reported suicidality prior to first episode of violence. Subsequently, battered women experienced a relative risk of suicide attempt that was 4.8 times higher than women with no history of sustained violence. Rates of suicide attempts by battered women have ranged from 20% (Scott-Gliba, Minne, & Mezy, 1995) to 50% (Stuart & Campbell, 1989). However, the association is not straightforward. Horton and Johnson

(1993) found higher rates for women who no longer lived with their violent partner (37%) than women living with their formerly violent partner in distressed (18%) or satisfactory (17%) relationships. African American women seeking medical services for attempted suicide reported higher means for partner violence (M = 14.95) than a non-attempter comparison group (M = 7.14))(Kaslow et al., 1998). In a study of community women in psychologically abusive relationships, Vitanza, Vogel, and Marshall (1995) reported that the rate of suicide attempts increased from 22.6% for women who sustained moderate violence to 43.8% for women who reported severe violence.

Taken together, these studies support the conclusion that partner violence is associated with depression and suicidality. Rates of depression appear higher in samples drawn from shelters than community samples. It is possible that the higher rates are partly a function of the trauma of leaving home in addition to trauma caused by the violence. However, the depression may also be a function of the recency of violence. The strength of the relationship varies for both community and shelter samples which may be partly a function of the severity and/or recency of the violence.

Several theories have been posited to explain the association between depression and partner violence. Stress and negative life events have been associated with depression, particularly for women (Brown & Harris, 1978). Both past and current victimization including partner violence have been identified as stressors that increase the risk for depression (Goodman, et al., 1993). The emerging view of depression, however, is that its cause is variable, episodic, and influenced by a changing environment and the cumulative effects of experience (Coyne & Downey, 1991). Although the best predictor of current depression is a history of depression (Depue & Monroe, 1986), the diathesis-stress model would support a relationship between recency of partner violence and increase in symptomology, beyond that predicted by a history of depression alone.

The Stockholm Syndrome (Graham & Rawlings, 1991) and Traumatic Bonding (Dutton & Painter, 1981) were posited to explain why women remain with or return to a violent partner and the resulting depression. From these perspectives, relationships with an imbalance of power and the men's intermittent good-bad treatment result in women

having strong emotional attachments as well as psychological trauma, including depression.

The first theory applied to explain the relationship between partner violence and depression was Walker's (1977—78) Battered Woman Syndrome which incorporated Seligman's (1975) Learned Helplessness theory. She proposed that women come to expect battering because they have learned that they cannot influence its occurrence. This theory was extended by Frieze (1979) who suggested that women make internal and global causal attributions for the violence which leads to an increase in feelings of helplessness and depression. A key characteristic of Battered Woman Syndrome was the notion that, as a result of learned helplessness, women appear to passively accept or tolerate the violence inflicted by their partner. The notion that battered women are passive has been refuted by several researchers. For example, Bowker (1983) found that battered women had persistently sought a wide range of help. Among more than 6,000 battered women in shelters, Gondolf, Fisher, and McFerron (1988) found that the more intensive and extensive the violence, the more likely women were to respond assertively in order to protect themselves and their

children. Findings such as these contradict predictions derived from the Learned Helplessness model.

Attribution Theory

The application of attribution theory to the partner violence literature initially was begun with the reformulated Learned Helplessness Model (Abrahamson, et al., 1978). This theory asserted that a pattern of attributing of negative events to internal, stable, and global causes is associated with depressive symptoms. This pattern was described as an individual's attribution style (Peterson, et al., 1982) and believed to occur with almost all negative events in that individual's life. However, Horneffer and Fincham (1995, 1996) found that attributional style had only a small association with depression for community women. This attributional style was not important, especially in comparison to attributions for specific behaviors. Further, using the attributional dimensions from the reformulated Learned Helplessness Model, McClennan, et al. (1994) found that only globality ($r$ = .53) was related to depression, not internality ($r$ = .02) or stability ($r$ = .04) in a study of 15 women in a shelter.

Although researchers continued to cite learned helplessness as an outcome of partner violence (e.g., Walker, 1983), Peterson and Seligman (1983) acknowledged difficulty in applying the model to victimization. Other investigators such as Wortman, Panciera, Shusterman, and Hibscher (1976) postulated the stress and maladaptive outcomes ascribed to learned helplessness could be better explained by perceptions of avoidability or failure to exert control. Bulman and Wortman (1977) labeled these attributions self blame. Frieze (1979) reported that 27% of battered women from a shelter and 41% from the community attributed the cause of their partner's first violent act to themselves. Campbell (1989) examined the interrelationship of self blame, partner violence and depression. Although only 23% of the battered women blamed themselves for the violence, yet there was a significant correlation ($r$ = .37) between self blame and depression. Sato & Heiby (1992) found a lower correlation ($r$ = .18) in their sample of battered women. Andrews & Brewin (1990) found no significant difference in rates of depression among women regardless of whether they blamed themselves or their partner for the violence. However, more women who blamed themselves remained depressed (86%) than those who

blamed their partner (46%) after the relationship had ended.

Although several researchers used the term “blame” it is often used incorrectly. Blame in reference to locus of causality differs from an assignment of responsibility, which holds a person accountable for an act. Assessment of internal causality may not be as affectively damaging as assignment of personal responsibility for an act or the outcome of the act. Nevertheless, the research supports the notion that internal causal attributions for a partner’s violence may be related to depression.

A more useful approach that distinguished causation and responsibility attributions was made in the marital satisfaction and distress literature by Fincham and Bradbury (1992). Their perspective was derived from Weiner (1972, 1985) who proposed causal dimensions of locus, stability and controllability. To Weiner, controllability had subdimensions of effort and intention. For Fincham and Bradbury, casual attribution includes locus (internal or external), stability (isolated or ongoing), and globality (impact in other areas of the relationship). Distress enhancing attributions enhance the impact of negative events by locating the cause in their partners’ stable

characteristics rather than changeable behavior and globally affect many areas of the relationship. This application of globality in terms of effect differs from the Abramson, et al.'s (1978) conception of globality in terms of cause. Fincham, et al. (1987), reported that distressed couples seeking therapy made more external (locus in the partner) causal attributions regarding hypothetical negative partner behaviors than a nondistressed community group.

Fincham and Bradbury (1992) further proposed that responsibility attributions are composed of intentionality (malicious or benign) and motivation (selfish or unselfish). To attribute blame, fault and liability for the behavior must be considered. Fincham and Bradbury developed the Relationship Attribution Measure (RAM; 1992) to assess attributions for hypothetical positive and negative events.

Fincham, et al. (1987) found that responsibility attributions for negative partner behaviors predicted negative affect in distressed and nondistressed couples. With the same sample Fincham, et al. (1989), reported that maritally distressed wives in the group seeking therapy did not differ in causal or responsibility attributions regardless of whether or not they were depressed . However,

these groups made different attributions than did a nondepressed, nondistressed comparison group. Fincham, et al. concluded that depression did not account for the relationship between attributions and marital distress. Horneffer and Fincham (1995, 1996) used a combined summary score consisting of external (locus in the partner), stable and global causal attributions and partner responsibility attributions for negative behavior and found an association with depression ($\underline{R}^2$ = .14). However, the attributions were for hypothetical negative behaviors. Holtzworth-Munroe, Jacobson, Fehrenbach, and Furzzetti (1992) found that women in violent relationships attributed less stability (less likely to occur in the future) and more partner responsibility for violent behaviors than for negative, nonviolent behaviors. However, they found no difference for globality. Attributions for specific violent behaviors may also differ from hypothetical negative behaviors. None of these findings preclude the possibility that attributions for a negative behavior such as violence mediate the effects of that negative behavior on depression.

A few other studies have examined attributions and violence together. For example, marital satisfaction and women's acts of violence was moderated by responsibility

(i.e., motivation and intent) but not causal (i.e., locus, stability, and globality) attributions for negative partner behavior (Byrne & Arias, 1997). Murphy et al., (1989) found that, for therapy seeking women, both causal (*r* = .19) and responsibility (*r* = .21) attributions were related to the violence they sustained. However, the focus of these studies was with violence as an outcome (e.g., Byrne & Arias, 1997) or to identify the satisfaction-attribution association independent of partner violence (e.g., Fincham, Bradbury, Arias, Byrne, & Karney, 1997).

In sum, previous research has provided some evidence for a relationship between partner violence and causal attributions that are external, stable and global as well as attributions of responsibility. Results also support the possibility both causal and responsibility attributions are associate with depression. However, the findings are not conclusive. It is important to remember that the Fincham and Bradbury model focused on identifying attributions associated with relationship satisfaction. It is likely that distress maintaining attributions (external, stable and global) would also be related to partner violence. However, this pattern may not be as strongly associated with depression as it is with relationship distress. The

attributions usually studied were for hypothetical negative acts. It is likely that causal and responsibility attributions for the partner's actual violence rather than hypothetical acts may have a stronger association with depression. Further, these attributions may mediate the effects of violence on women's depression. Additionally, attributions have been tested for moderating (interaction) effects rather than as a mediational process. Attributions occur intrapsychically. Consequently, it would be more reasonable to expect attributions to help explain why the relationship between violence and depression exists rather than for whom it exists (Baron & Kenny, 1986).

To date, no theory has been offered to specifically address causal and responsibility attributions as they may mediate the effects of violence on depression. Based on the dimensions of attributions in the Fincham and Bradbury (1992) model, I postulate that attributions for a partner's violence will mediate the relationship between sustained partner violence and depression. In addition to the mediational process of attributions, it is possible that the relationship between partner violence and depression is moderated by other factors.

Moderators of Violence

The violence literature suggests that several factors may moderate the relationship between the violence women sustain from their partners and their depressive symptomology. Several variables have also been associated with differences in levels of depression. Unfortunately, two potential moderators, marital status and ethnicity, are often confounded with socioeconomic status (Straus, et al., 1980). This problem makes interpretation of results less clear than it should be.

Socioeconomic status (SES) has been identified as a risk factor for partner violence as well as depression. Hotaling and Sugarman (1986) found that low SES was consistently a risk factor for violence in 9 studies. According the Bureau of Justice Statistics (Bachman & Saltzman, 1995), women with a family income below $10,000 were more likely than other women to sustain partner violence. Similarly, the American Psychological Association Taskforce found that low SES was strongly related to reported depressive symptoms (McGrath, et al., 1990). Depression had a significant inverse association with SES in an epidemiological study, with rates of 13.5 per 100

among low SES women, 4.5 for middle class women and only 3.6 for those with high SES (Murhpy, et al., 1991).

Marital status is recognized as a risk factor for violence and for depression. According to Bachman and Saltzman (1995), the annual rate of victimization by an intimate partner varies by type of relationship. Rates for sustaining violence were 82.2 per 1,000 for separated, and 23.1 for divorced women. In contrast, the rates were 12.0 for never married and 2.7 for married women. Hotaling and Sugarman (1986) found that marital status was a consistent risk factor in six studies. Married couples had lower incidence for partner violence than divorced, separated or cohabiting couples. Similar findings are evident in the depression literature. Among inner city community women, single mothers had double the risk of depression onset and chronicity (episode lasting more than one year) compared to married or cohabiting mothers (Brown & Moran, 1997). In an analysis of data from the Second National Violence Survey with intact couples, Stets (1991) reported higher depression scores for cohabiting men and women than for married persons. However, these studies did not control for SES. The main effect of marital status on violence or depression may be nonsignificant if SES is controlled.

Further, it remains possible that an interaction between marital status and violence may affect the level of depressive symptoms.

Minority status has been also identified as a risk factor for violence (Hotaling & Sugarman, 1986; McLaughlin, Leonard, & Senchak, 1992; Straus, et al., 1980) and depression (Barbee, 1992; Kessler, et al., 1994). However, ethnicity also appears to be confounded with SES. Fellin's (1989) review of 50 studies found no difference in rates of depression between African Americans and Euro-Americans when SES was used as a control variable. In a critique of the depression literature for African Americans, Barbee (1992) noted that differential exposure to partner violence may be responsible for African American women's higher prevalence of depression. As with marital status, it is possible that, without SES as a confound, an interaction may exist between partner violence and ethnicity that affects women's depression.

## Rationale

Although the relationship between partner violence and depression is well documented with a variety of samples, several gaps in knowledge were addressed in this study. First, very few studies addressed the relationship of

recency of violence and depression, although depressive symptoms would be likely to increase as a result of recent stress. Second, the relationships between violence and attributions and between attributions and depression are suggestive of a mediational process. However, causal and responsibility attributions, specific to partner have not been examined. It is unclear whether internal or external causal attributions would exacerbate depression. However, results of studies on self blame suggest that internal attributions specifically for the violence would have a greater effect on depression. Third, the literature suggests the relationship between violence and depression may be moderated by SES, marital status, and ethnicity.

A sample of community women, not identified for the presence of partner violence was used. Therefore, the relationship between violence and depression could be examined without the confound of women's lives being disrupted by entering a shelter. Threats and acts of partner violence are highly correlated but their effects may differ. Although the relevant literature to date has focused on acts, threats are included in the measure usually used. Therefore, only acts of violence were included. Further, a longitudinal study, comparing women at

two points in time allowed recency of violence to be measured at each wave and compared to all violence in the relationship measured at Wave 1.

The present study also examined women's causal and responsibility attributions for the violence they sustain. These attributions tested to determine whether they mediate the relationship between violence and depressive symptomology. Further, women's attributions about their partners' acts of violence was compared with their perception of their partners' attributions for his acts.

In addition, two possible moderators of partner violence were tested. The sample includes low income women in dating, cohabiting, and marital relationships. Thus, marital status and poverty status, within the limited range of this sample, were examined as possible moderators of the relationship between violence and depression. The sample includes women from three ethnic groups (African American, Euro-American, and Mexican American). Because it is desirable to understand how violence, attributions and depression are interrelated for each ethnic group, analyses were conducted within ethnicity.

Several specific hypotheses were derived from the literature.

Hypothesis #1: As the severity of violence increases, external attributions (i.e., attributing cause to the partner) will increase, even after controlling for marital satisfaction.

Hypothesis #2: Attributing partner violence to the self (i.e., making an internal attributions) will be positively associated with depression and with suicidality.

Hypothesis #3: Recency of violence at Wave 1 will partially predict depression and suicidality. These associations will hold at Wave 2 after controlling for women's initial scores.

Hypothesis #4: The relationship between partner violence and depression will be mediated by each of three dimensions of attributions (locus of causality, globality of effect, and responsibility.

Hypothesis #5: Both poverty status and marital status will moderate the relationship between violence and depression.

# CHAPTER II

# METHOD

## Methods and Procedures

### Sample

The data utilized were obtained as part of a longitudinal study funded by the National Center for Injury Prevention and Control of the Centers for Disease Control and Prevention. Over 1.5 years, community women from the southwest area of Dallas County were recruited and completed the first interview for Project HOW: Health Outcomes of Women. Flyers, newspaper advertisements, public service announcements, mass mailings and personal contact were implemented to solicit participants for "a study examining how to improve women's health."

Of the 998 women interviewed, 163 did not meet all of three requirements for inclusion. These were age (20 to 48 years), relationship (in a current, serious heterosexual relationship with a duration of at least one year) and income (less than 200% of poverty or currently receiving public aid). For screening purposes, level of poverty was based on the United States poverty threshold for household

income and the number of people in the household. Women's poverty status ranged for 0% (i.e., 100% below the poverty threshold) to 338% of the federal threshold when only household income and number in household were included. The range was from 0% to 399% when the cash value of public assistance was included. The final sample consisted of 836 women who were African American (n = 303), Euro-American (n = 273), or Mexican American (n = 260). At Wave 2 there were 272 African American, 209 Euro-American, and 216 Mexican American women in the study.

Only Mexican American women were included rather than the broader category of Hispanic to eliminate the likely cultural differences in socialization of women descended from different locales (e.g., Puerto Rico, Cuba, Central or South American). Further, only women born in the United States or those who attended at least 10 years of school in the United States were included for two reasons. First, immigrant women may differ in unknown ways from those born in this country. Second, the use of rating scales is likely to be relatively familiar only to women educated in the United States.

Measures

Several measures and questionnaires were contained in the interviews. However, only those that apply to the examination of attributions, depression, suicidality, and partner violence were used for the current study. Demographic information including age, ethnicity, marital status, income and receipt of financial assistance was also included in each wave of interviews.

Violence by women's current partner. The Severity of Violence Against Women Scales (SVAWS; Marshall, 1992) was used to assess the frequency of violent acts committed by the participant's current partner. Of the 46 items, 19 assess threats of violence, 21 assess acts of violence and 6 assess sexual aggression by women's partner. No Cronbach's Alpha in the original samples was lower than .92 for the severity subscales and inter-item correlations were higher within rather than between the subscales. Only the acts of violence were included in this study (Appendix A).

At Wave 1, participants reported how many times their current partner had ever inflicted each of the acts and how often he had performed each act in the previous six months. A 6-point scale ranging from never (0) to a great many times (5) was used to report acts across the relationship.

For recent violence, the 10-point scale was anchored by never (0) and almost daily (9). Women were not asked for a recent rating unless they had responded with a 1 or greater, indicating the act had been done at some time. These rating scales assess subjective frequency of the acts. A mean of the 21 acts constituted the measure of violence.

At Wave 2 each of the participants was asked to report acts of violence sustained from their partner in the previous 8 months or the time since the previous interview. The mean indicated recent violence at Wave 2.

At Wave 1 and Wave 2 women who reported any threat or act of violence preceding the date of the interview were asked when the most recent act occurred. Answers were coded as the number of weeks that had elapsed between the violence and the interview. This constituted a measure of recency of violence.

Depression and Suicidality. Depression and suicidal ideation were measured using the same items at Wave 1 and Wave 2. First, the 11-item depression subscale of the Hopkins Symptom Checklist (HSCL; Derogatis, Lipman, Rickels, Uhlenhuth, & Covi, 1974) mdoified to include 2 additional items was used. This subscale reflects a broad

range of symptoms including dysphoric mood and affect, withdrawal of life interest, lack of motivation and loss of vital energy, feelings of hopelessness as well as other cognitive and somatic correlates. Participants rated how much they had been bothered by each symptom during the previous month using a 5-point scale anchored by not at all (0) and extremely (4). Internal consistency (coefficient alpha) of the depression dimension for Derogatis et al.'s normative, out-patient sample was high (.86). These items are listed in Appendix B. Depression scores were the mean of these items.

Three measures of suicidality were used. The first was based on five of the 7 items on the severe depression subscale of the General Health Questionnaire (GHQ; Goldberg and Hillier, 1979). Participants' responses, rated on 7-point scales anchored by never (1) and almost always (7), indicated how often women experienced each symptom. This scale was developed for use in the United Kingdom. Therefore, some modifications were made in wording to facilitate reporting by low income women in the United States. Items are listed in Appendix C. The mean of these items indicate suicidal ideation.

As additional measures of suicidality, at Wave 1, participants also reported the number of times they had seriously considered killing themselves ever and in the preceding 6 months. They were also asked the number of times they had attempted suicide. At Wave 2, participants reported consideration and attempts since the past interview.

Attributions. Participants' attributions for the violence they sustained from their partner were measured at Wave 2 using a modified version of items from Vivian's Adapted Conflict Tactics Scale (Vivian & Langhinrichsen-Rohling, 1994). Participants also reported their perception of how their partner would attribute his violent behavior.

Three questions measured attributions of globality in terms of the effect of the violence on the participant, her partner, and their relationship. Responses were made on a 7 point scale (1 = extremely good to 7 = extremely bad). Scores of 5, 6 and 7 were assigned 1, 2, and 3, respectively. Responses of 1, 2, and 3 was reversed so a high score indicated more effect. Ratings using the neutral 4 were assigned to 0. After these changes, the mean of the three items indicated globality (i.e., greater and broader effect).

Causal attributions for partner violence were assessed directly and indirectly. The direct causal item was who would you (he) say causes those threats and acts. The two items that indirectly assessed causal attributions were who would you (he) say starts and ends those threats and acts. Responses for the three items were made using a 7 point scale (1 = always you to 7 = always him). The mean of these three items represented causal attributions. Lower means indicated internality and higher means indicated externality.

Responsibility attributions were also assessed directly and indirectly. The direct responsibility item was who would you (he) say is responsible for threats and acts. The three items that indirectly assessed responsibility attributions were who would you (he) say keeps the threats and acts from happening, who makes them better, and who makes them worse. Responses were again made on a 7 point scale (1 = always you to 7 = always him). The mean of these four items represented responsibility attributions with lower scores indicating internality and higher scores indicating externality.

Relationship Satisfaction. Participants' relationship satisfaction and well being were measured at Wave 1 and

Wave 2. Questions were based on a modified measure designed to yield an overall assessment of women's relationship (Acitelli, Douvan & Veroff, 1993). Two items addressed marital satisfaction and happiness. One item addressed equity. And three items addressed the perceived stability of the relationship. The scale has been shown to be internally consistent (alpha = .83). Responses were rated on a 7 point scale (1 = not at all or never to 7 = completely or extremely often. The items are listed in Appendix D. The mean of the 6 items represented marital satisfaction.

Procedure

Participants. Women were recruited to participate in a multiple wave, longitudinal study of factors which impact their health. The study was named "Project HOW: Health Outcomes of Women". Women were told the incentive for participation would increase each time they returned for the next interview in the study. Recruitment began in May, 1995, and was completed in December, 1996. Participants were given a membership card, $15 in cash, a bus pass, a canvas tote bag, and a "Project HOW" t-shirt in return for completing the first interview. Women who completed Wave 2 interviews were given 2 bus passes and $35 in cash.

Women were recruited through personal contact, distribution of flyers and a mass mailing. In addition, a primary source of recruitment was study participants who referred their friends and family. Flyers, written in both Spanish and English, were distributed through churches, schools (pre-schools to junior colleges) and left in public places (e.g., libraries, convenience stores, other businesses). A mass mailing of over 18,000 letters also went to women in the lower income sections of southwest Dallas County with labels purchased from an independent company. The mailing consisted of a letter and two to three flyers inviting women to call the project offices. Participants were also recruited through announcements about the study at churches, schools, community gathering, social service and health care agencies. Additionally, public service announcements were made, in both English and Spanish, on local radio stations and in minority newspapers describing the study and giving interested women telephone numbers to call.

The interviewers were trained to do street recruiting. They went to stores, clinics, laundromats, social service agencies, health fairs, etc. and talked to women they met. On the contact sheets, only women's first names and phone

numbers were requested by interviewers to maintain relative anonymity. Names of friends and family members women felt might be willing to participate were also obtained. The contact sheets were then taken to one of two offices in Oak Cliff.

Indigenous workers received the contact sheets and conducted screening via the telephone. Screening consisted of asking women their age, how long they had been in their relationship, their household income, the number of people dependent on that income and their race/ethnicity. Income was matched to census figures (Appendix E) so that women reporting greater than 175% of poverty were eliminated. Because women generally underreported income during screening, this allowed a final sample who lived within 200% of poverty or received public aid designed to alleviate poverty. In addition, Mexican American women were asked whether they were born in the United States. Immigrants were asked the number of years they had gone to school in the United States.

Women were told that participation would require them to answer questions in a total of four interviews, each of which would last approximately three hours. These interviews were to occur over a two-year period. When women

were qualified and agreed to participate, office workers obtained their full name, address, and telephone numbers, before scheduling their Wave 1 interview.

A letter was sent to each participant requesting that she contact the office workers when it was time to schedule her Wave 2 interview. Office workers attempted to contact women who did not respond to the letter. For women who could no longer be reached at the telephone number or address given at Wave 1, calls were made to the persons identified on the permission to contact forms completed at Wave 1 registration. If the office worker was unable to reach the woman through provided contacts letters were sent to these persons requesting that they ask the woman to contact the office. Searches to find difficult to reach subjects were also made through computer databases providing telephone numbers for persons in the Dallas area. Of the 836 women included in the study, 697 (83.4%) completed the Wave 2 interview. Because recruitment took more time than expected, Wave 2 interviews occurred after about one year on average.

Confidentiality. Strict procedures of confidentiality were devised for the study. A Certificate of Confidentiality was obtained from the United States Public

Health Service to protect women's anonymity and the data they provided. With this certificate, neither women's names nor their answers can be released even to a court of law.

When a woman came for her interview, a registration form was completed to acknowledge informed consent and provide information to match each subject to her data (Appendix F). Women were given a copy of the informed consent information in two ways (Appendix G). One was written in technical terms and hand signed by the principal investigator. In the other form, simple English was used and the information was organized into summary points. Given that this was a longitudinal study, permission to contact forms were also completed to facilitate contacting women for future interviews. Interviewers were not allowed to be in the waiting area during the intake process to ensure that the participant's last name or address would not be overheard.

Issues of confidentiality for employees were dealt with in several ways. Interviewers were told not to discuss participants' answers with anyone except other interviewers, the principal investigator and the doctoral students in charge of data. Interviewers did not have access to identifying information, such as the

participants' last names or addresses. In addition, interviewers were naive to the actual purposes of the study, hypotheses and research questions. All students and employees, with the exception of the principal investigator, statistician, and doctoral research assistants, were told that the study was being conducted to better understand various factors in the lives of low-income women that impact both their physical and mental health.

Office workers assigned participant numbers that did not correspond to subject numbers used with the data. These numbers facilitated tracking by the office. Office workers did not have access to the questions being asked, participants' answers, purposes of the study, hypotheses and research questions. Only one doctoral student and the principal investigator had access to both women's answers and the registration forms containing identifying information.

When completed interviews were received in the research room at the University of North Texas, subject numbers were assigned. The interviews, master sheet matching participant codes to specific subjects and registration forms were stored in a locked room at the

University of North Texas. When Wave 2 interviews were received, they were matched by personal identifying information (i.e., date of birth, mother's first name, number of siblings, and name of oldest sibling) to the subject number assigned.

Interviewers. Data were collected using structure interviews conducted by trained, undergraduate and graduate females. Only female students collected data to increase rapport and participants' feelings of security. The interviewers were trained by three doctoral students in Clinical or Counseling psychology under the supervision of two faculty advisers (Guarnaccia and Marshall). Training consisted of an overview of the project while keeping interviewers naïve to the exact purposes. Also, trainers went through the entire interview describing how each question should be asked, when to ask conditional questions, and how to record responses. The need for standarization and confidentiality were stressed during the training. Trainees were instructed to spend time practicing the interview aloud and role playing with one another and with friends and family.

When a trainee believed she was ready to begin interviewing, she was assessed by one of the doctoral

students. This procedure consisted of a role play session with a doctoral student playing the part of a difficult subject. They assessed whether the student knew the interview, knew when to ask conditional questions, whether she was able to handle extraneous question and comments appropriately, whether her pacing was adequate, whether her recording of responses was accurate, etc. Videotaping of role play sessions was used on occasions to allow a faculty adviser to be consulted when necessary.

Graduate research assistants recorded errors in completed interviews and met regularly with interviewers to provide feedback. A total of 62 students, each conducting between 1 and 57 interviews, participated as interviewers for the Wave 1. Interviewers ceased collecting data for Wave 1, prior to training for Wave 2 interviews. Training for Wave 2 interviewers followed the procedures for Wave 1. A total of 43 interviewers, conducted interviews for Wave 2. Of these students, 5 conducted both Wave 1 and Wave 2 interviews.

Data collection. Data were collected in two store front offices in the Oak Cliff area of Dallas. Interviews were conducted in one of several private rooms at the offices. Questions were read aloud by the interviewer and

the participant gave a verbal answer that was recorded by the interviewer. Response scales were kept in a notebook for women to use during the interview.

After the interviews were completed, they were taken to a research room at the University of North Texas. Each interview was checked by a graduate student and all time related questions were coded on the interview for number of months or number of weeks, depending upon the question asked. Any participant who gave information in the Wave 1 interview that indicated she did not meet the inclusion criteria was dropped from the study and sent a letter notifying her of this fact. Moreover, participants unable to master the use of rating scales and those who were obviously intoxicated were dropped during the interview, but were given the incentives for their efforts.

# CHAPTER III

## RESULTS

Prior to addressing individual hypotheses, reliability analyses, descriptive statistics, attrition analyses, and ethnic differences were reported. All tables referred to were included in Appendix H. For descriptive statistics, the sample mean was listed with group means reported only when there was a significant difference. When three groups were used in ANOVAs, post hoc analysis was conducted with Tukey's Honestly Significantly Difference Test. The figures showing decomposition of interactions were presented in Appendix I.

### Reliability analyses

The internal consistency of scales was assessed using Cronbach's Alpha to ensure that the integrity of each instrument was maintained. Table 1 presents the standardized coefficients of each scale for the sample and for each ethnic group. All scales were internally consistent, with $\alpha \geq .90$.

Alpha reliability coefficients were also calculated for each attribution dimension. These were presented in Table 2. The coefficients for the sample and each ethnic group for globality attributions were acceptable. However, the internal consistency of causal and responsibility attributions was extremely low. Therefore, items with low item-total scale correlations were deleted. Acceptable coefficients were found using two items for causal (items 4 and 6) and responsibility (items 5 and 9) attributions. Consequently, these two item indices were used in the analyses.

Sample

Descriptive statistics for demographic information and variables of interest in the study were reported for the sample at Wave 1 and Wave 2. Where found, ethnic differences were reported as well. Attrition was also examined.

Wave 1. At Wave 1, the sample consisted of 836 women of whom 303 were African Americans (Blacks), 260 were Mexican Americans (Chicanas) and 273 were Euro-Americans. Hereafter the term Whites refers to the non-Hispanic, Euro-American women. The average age of these women was 32.81 (SD = 7.76 years). Women's formal education ranged from

none to 19 years (M = 11.96; SD = 2.06 years) with 12 years assigned to women with a diploma or GED. Poverty status (income plus financial aid for the household) as measured by percentage of the U.S. poverty threshold, ranged from 0 to 399% with a mean of 106.98% (SD = 59.5%). The average length of women's relationships was 7.7 years (SD = 6.58 years) with a range of 1 to 32.67 years. Women were dating (24%), cohabiting (34.4%), or married (41.5%). As measured by the SVAWS, 572 (68.4%) of the women in the sample had sustained at least one act of violence from their current partner.

Table 3 lists the means and standard deviations for the sample. The scores for all sustained violence ranged from 0 to 99. Scores for recent violence ranged from 0 to 148. Length of time since the last violent incident ranged from 0 to 290 weeks (5.78 years). On the measure of marital satisfaction, women's scores ranged of 1 to 7. In the sample, women's scores on the measures of depression and suicidality ranged from 0 to 4 for the modified HSCL Depression subscale and 1 to 7 for suicidal ideation from the GHQ. The number of times women had seriously considered suicide ranged from 0 to 99 and the number of suicide attempts ranged from 0 to 30. The high of 99 may have been

attenuated because only two spaces were allowed for coding. Of the sample, nearly half (46.9%) of the women had considered suicide and 29.1% reported at least one suicide attempt.

There were no ethnic differences on the total violence women had sustained in the relationship, $F(2,833) = 1.43$, the number of weeks since the most recent incident, $F(2,701) = 1.97$, depression, $F(2,833) = 1.13$, suicidal ideation, $F(2,833) = 1.71$, consideration of suicide, $F(2,807) = 1.07$, or suicide attempts, $F(2,786) = 0.77$. However, Black women ($M = 8.58$) reported more violence in the previous 6 months than Chicanas ($M = 4.52$), $F(2,566) = 3.47$, $p < .05$, and were less satisfied ($M = 4.83$) with their relationship than Chicanas ($M = 5.19$), $F(2,832) = 3.44$, $p < .05$. The means for Whites did not differ from either group on recent violence ($M = 7.64$) or satisfaction ($M = 5.15$).

Wave 2. At Wave 2 there were 272 Blacks, 216 Chicanas, and 209 Whites in the study. Of the sample, 83.5% of the women were in the same relationship as at Wave 1. Descriptive statistics were reported in the last two columns of Table 3. There were no ethnic differences on the frequency, $F(2,694) = 2.50$, or weeks since, $F(2,433) =$

1.41, recent violence, depression, $F(2,696) = 0.34$, suicidal ideation, $F(2,694) = 2.76$, consideration of suicide, $F(2,693) = 0.16$, or suicide attempts, $F(2,673) = 0.02$. Blacks ($M = 4.48$) reported less satisfaction with their relationship than Chicanas ($M = 5.00$) or White women ($M = 5.02$), $F(2,691) = 7.25$, $p < .001$.

Attrition. Attrition was low (16.4%) with only 30 Black women, 44 Chicanas, and 65 Whites not completing Wave 2. Analyses were performed to determine whether women who dropped out differed from those completing the second interview. An ethnic difference was found, $\chi^2(2) = 20.01$, $p < .001$. Among the women dropping out, 21.6% were Blacks, 31.7% were Chicanas, and 46.% were Whites. Thus, of those who remained, 39.2% were Black, 31.0% were Chicana, and 29.8% were White. There was no difference in marital status, $\chi^2(2) = 0.28$, between women who dropped out and those who remained in the study.

ANOVAs were used to identify differences between the women who did not ($n = 139$) and did ($n = 697$) complete Wave 2. Means and standard deviations were presented in Table 4. Compared to dropouts, women who remained in the study were older, $F(1,834) = 11.95$, $p < .001$, but did not differ on

education, $F(1,834) = 1.27$, or poverty status, $F(1,819) = 0.01$. Dropouts had shorter $F(1,833) = 6.43$, $p < .05$, but more violent relationships, overall, $F(1,834) = 7.44$, $p < .01$, and recently, $F(1,567) = 7.86$, $p < .01$. They also reported less time since the most recent act of violence, $F(1,702) = 4.56$, $p < .05$. No differences were found on depression, $F(1,834) = .00$, or suicidal ideation, $F(1,834) = .19$. However, compared to women remaining in the study, dropouts had considered, $F(1,808) = 8.79$, $p < .01$, and attempted, $F(1,787) = 4.62$, $p < .05$, suicide a greater number of times.

Attributions

Attributions for violence were reported at the Wave 2 interview. Of the 697 women interviewed, only the 461 women who reported recent aggression or acknowledged earlier violence made these attributions. Unfortunately, the attribution questions were not asked of 92 women who initially reported violence but did not sustain threats or acts between the waves. There were no differences between women who should have been asked these questions and women who made attributions by ethnicity, $\chi^2(2) = 4.01$, or marital status, $\chi^2(2) = .47$. Other comparisons were shown in Table

5. There was no difference on education, $F(1,552) = .01$, poverty status, $F(1,538) = .16$, relationship satisfaction, $F(1,551) = 3.85$, recent violence, $F(1,567) = .33$, depression, $F(1,552) = 2.64$, suicidal ideation, $F(1,552) = .36$, or the number of times women considered, $F(1,552) = .00$, or attempted suicide, $F(1,552) = .56$, at Wave 1. Women who should have made attributions were older, $F(1,552) = 4.54$, $p < .05$, had longer relationships, $F(1,552) = 10.69$, $p < .01$, less total, $F(1,552) = 10.37$, $p < .01$, and recent, $F(1,552) = 13.57$, violence, and more time since the last violent incident, $F(1,512) = 6.39$, $p < .05$.

The means and standard deviations for each of the three attribution dimensions for the sample were presented in Table 6. There was no difference between the ethnic groups on attributions of globality for partner violence, $F(1,460) = 1.13$. However, Black women attributed more cause, $F(2,459) = 3.59$, $p < .05$, and responsibility, $F(2,459) = 5.70$, $p < .01$, for the violence to their partner than did Chicanas.

Table 7 lists the correlations between attribution dimensions for the sample and for each ethnic group. For the sample, all correlations were significant at $p < .001$. The patterns were quite similar for each ethnic group.

Table 8 presents the results of matched sample t-tests used to compare women's attributions to their perceptions of how their partners would make attributions. Women were not asked how their partner would make globality attributions. Every comparison was significant at $p < .0001$. As the pattern was similar for each ethnic group, only $t$ values for the sample as a whole were reported. Women attributed more Causality, $t(461) = 24.57$, and Responsibility, $t(459) = 22.72$, to their partners than they believed their partner would attribute to themselves. In general, these women believed their partners would hold them accountable for men's acts as indicated by means of 3 or less.

Preparation for Hypothesis Testing

Several of the hypotheses involved predicting depression and/or suicidality from sustained partner violence. Consequently, preliminary analyses were conducted to determine whether there were differences based on the violence. Approximately equal groups had sustained no violence ($n = 264$, 31.6%), moderate (frequency scores of 6 or less) violence ($n = 293$, 35.0%), or frequent (scores above 6) violence ($n = 279$, 33.4%). Using a MANOVA, differences were found, Pillais's $F(16,1504) = 4.33$, $p <$

.001. The univariate results were presented in Table 9. Wave 1 depression, $F(2,833) = 37.73$, $p < .001$, and suicidal ideation, $F(2,833) = 18.12$, $p < .001$, was greater among women sustaining frequent violence than those with moderate or no violence. Women who sustained frequent violence reported a greater number of suicide attempts, $F(2,786) = 4.30$, $p < .05$, than those who sustained no violence. There was no difference on the number of times women seriously considered suicide, $F(2,807) = 2.73$, prior to Wave 1.

At Wave 2, depression, $F(2,695) = 24.74$, $p < .001$, was greater for women who sustained frequent violence than those sustaining moderate or no violence. Suicidal ideation, $F(2,695) = 6.10$, $p < .01$, was greater for women sustaining frequent violence than no violence. There were no differences on the number of times women seriously considered, $F(2,693) = 0.49$, or attempted, $F(2,673) = 1.24$, suicide between the waves.

Partial correlations were executed to test the stability of depression over time regardless of other factors (Depue & Monroe, 1986). These correlations did not change when all or recent violence was controlled. The correlation between Wave 1 and Wave 2 depression ($r = .66$) did not change after controlling for either all ($r = .63$)

or Wave 2 recent (r = .64) violence. Nor did the correlation between Wave 1 and Wave 2 suicidal ideation (r = .55) change after controlling for all (r = .51) or recent (r = .52) violence. The results were similar for suicidality. The correlation between Wave 1 and Wave 2 consideration (r = .29) was unchanged after controlling for all (r = .27) or recent (r = .28) violence. The correlation between Wave 1 and Wave 2 suicide attempts (r = .24) was unchanged after controlling for all (r = .23) or recent (r = .23) violence. All correlations were significant at p < .001. The pattern was similar for each ethnic group.

The correlation matrix for all Wave 1 variables of interest was presented in Table 10. These were the depression and suicidality variables, violence, as well as poverty status and marital status which would be used in testing the moderation hypothesis. As expected, the highest correlation was between the depression and suicidal ideation. All other correlations were moderate to small.

The correlation matrix presented in Table 11 shows the relationships among Wave 2 variables. In addition to depression and suicidality, relationships between attributions, recent violence, and relationship satisfaction were presented. Causal and Responsibility

attributions were highly correlated. The only other strong correlation was between depression and suicidal ideation.

Hypothesis 1

Hypothesis 1 posited that as the severity of violence (i.e., frequency of acts) increased, the externality of attributions (e.g., attributing cause or responsibility to the partner) would increase, even after controlling for marital satisfaction. This hypothesis was tested by the partial correlations shown in Table 12. Only low zero-order correlations were found between women's attributions and the violence they sustained. Although the correlation for causal attributions decreased to nonsignificance, the change was small as it was in all analyses. Therefore, this hypothesis was not supported.

Hypothesis 2

It was hypothesized that attributing partner violence to the self (i.e., making an internal attributions) would be related to an increase in depression and suicidality. Because internal attributions were evidenced by lower scores, negative correlations would support Hypothesis 2. The results presented in Table 11 show that all correlations between violence and attributions were moderate to small and positive. The results for each ethnic

group were essentially the same. Thus, there was no support for this hypothesis.

Hypothesis 3

Hypothesis 3 posited that recency of violence would partially predict Wave 1 depression and suicidality. Recency was defined as time since the last incident. This hypothesis was tested by separately regressing depression and each of the suicidality variables at Wave 1 on recency of violence. Although all betas were negative in these multiple regressions, recency of violence was not related to depression, $R = .07$, consideration of suicide, $R = .05$, or suicide attempts, $R = .07$. A significant, but small association, $R = .09$, $p < .05$, was found for suicidal ideation. The results were similar and nonsignificant for women in each ethnic group except for the prediction of depression among Chicanas, $R = .14$, $p < .05$. Thus, Hypothesis 3 was not supported when time since the most recent incident at Wave 1 was considered.

It was further hypothesized that the association between Wave 2 recency and depression/suicidality would hold after controlling for women's initial scores on the dependent measures. For depression, $R = .61$, $p < .001$, suicidal feelings, $R = .66$, $p < .001$, consideration, $R =$

.22, p < .001, and attempts, R = .24, p < .05, only women's previous scores were important. The results were similar for each ethnic group.

An alternative way to consider recency would be to use recent violence scores. Multiple regression equations were calculated to determine whether the frequency of violence between the waves would predict depression and/or suicidality, after controlling for women's initial scores. The results, presented in Table 13, show that recent acts of violence significantly increased the variance accounted for by Wave 1 depression/suicidality for the sample. These associations appeared strongest in all equations with Black women. Among Chicanas, recent violence was not important for suicidal considerations and attempts. No incremental effects were found for White women. Thus, with this alternate measure, Hypothesis 3 was supported among Black women and partially supported for Chicanas. Recent violence, but not its temporal recency contributed to depression and suicidality.

Hypothesis 4: Mediation

Hypothesis 4 posited that the relationship between partner violence and depression would be mediated by women's attributions (globality, cause, and

responsibility). According to Baron and Kenny (1986), three requirements must be fulfilled for mediation. First, the mediator must predict the independent variable. Thus, attributions must first predict violence. Second, the independent variable must predict the dependent variable. Thus, violence must predict depression and suicidality. Third, the contribution of the independent variable must be eliminated (complete mediation) or decreased (partial mediation) when the mediator is entered into regression equations. This process was conducted using the sample as a whole and with each ethnic group.

Results for the sample. The first requirement was fulfilled for the sample. Attributions of globality ($R$ = .18, $p$ < .001), cause ($R$ = .10, $p$ < .05), and responsibility ($R$ = .16, $p$ < .001) predicted the violence women sustained during their relationships.

The second requirement was fulfilled with violence predicting depression, $R$ = .23, $p$ < .000, and suicidal ideation, $R$ = .14, $p$ < .002. New scores were calculated for suicidal consideration and attempts. The number of times suicide had been seriously considered at Wave 1 was summed with Wave 2 recent suicide consideration to create a single measure. Violence was not related to considering suicide, $R$

= .04. Consequently none of the attributions could be tested as mediators. Total suicide attempts was the sum of times attempted before Wave 1 and attempts between the waves. Violence predicted suicide attempts $R = .10$, $p < .01$. Thus, mediation was tested using three of the four depression/suicidality measures.

Mediation was first tested using globality attributions. These results were presented in Table 14. In all three equations, violence continued to make a significant contribution after globality was entered. However, entry of globality attributions decreased the contribution of violence. Thus, globality partially mediated the effects of violence on depression and suicidal ideation, but not suicide attempts.

Next, attribution of cause was tested as a mediator. Causal attributions did not make a significant contribution in any of the equations. Further, the contribution of violence to depression, $R = .25$, $p < .001$, suicidal ideation, $R = .14$, $p < .01$, and suicide attempts, $R = .15$, $p < .008$, did not change when causal attributions were included.

Finally, responsibility attributions were tested as mediators. These attributions did not make a significant

contribution in any equation. The relationship between violence and depression, R = .25, p < .001, suicidal ideation R = .15, p < .005, and suicide attempts, R = .15, p < .01, changed little when responsibility was entered.

Results for ethnic groups. Although little support was found for the mediation hypothesis, other studies using this sample have found ethnic differences in the pattern of relationships. Consequently, the mediation hypothesis was tested for each ethnic group. For Blacks, violence predicted globality (R = .28, p < .001) and responsibility (R = .14, p < .05), but not causal (R = .06, ns) attributions. For White women, violence predicted cause (R = .19, p < .03) and responsibility (R = .21, p < .03), but not globality (R = .09, ns) attributions. No attribution dimension was predicted by Chicanas' sustained violence. Thus, Baron and Kenny's (1986) first requirement was fulfilled in some instances among Black and White women.

The pattern for Black women's globality attributions shown in Table 15 was similar to that found for the sample as a whole. Baron and Kenny's (1986) second requirement for mediation was fulfilled by violence making a significant contribution to all four of the measures. Although the strength of the association for violence decreased in every

equation, mediation did not occur on suicide considerations and attempts because globality did not add significant predictability to the equations. Thus, partial mediation occurred only on depression and suicidal ideation.

Similar to results for the sample, Black women's responsibility attributions did not make a significant contribution in any equation. The relationship between violence and depression, $R = .33$, $p < .001$, suicidal ideation $R = .25$, $p < .001$, suicide consideration, $R = .25$, $p < .003$, and attempts, $R = .30$, $p < .001$, changed little when responsibility was entered. $\beta$ decreased by .01 on depression, and increased by .01 on suicidal ideation, consideration, and attempts.

For White women, causal and responsibility attributions were possible mediators. Baron and Kenny's (1986) second requirement was fulfilled by the significant contribution of violence to depression, $R = .19$, $p < .02$, but not suicidal ideation, $R = .11$, consideration, $R = .02$, or attempts, $R = .04$. After violence was entered, causality did not make a significant contribution to depression ($\beta = .050$). The relationship between violence and depression became nonsignificant ($\beta = .193$, $p < .03$, to $\beta = .166$, ns)

when responsibility attributions ($\beta$ = .128, ns), $R$ = .23, $p$ < .03, were entered. However, because these attributions did not make a significant contribution, mediation did not occur (Baron & Kenny, 1986).

Hypothesis 5: Moderation

The final hypothesis posisted that both poverty status and marital status would moderate the relationship between violence and depression and/or suicidality. Moderation was tested by a series of multiple regression equations using data collected at Wave 1. Because poverty status was skewed and marital status was not continuously distributed, z-score transformations were made for these variables. Significant interactions were decomposed using ANOVAs with categorization of original scores.

Poverty status. Poverty status was defined as a percentage of the poverty threshold. Lower scores indicted more severe poverty. In multiple regressions, a significant interaction after entry of direct effects shows moderation (Baron & Kenny, 1986). In Step 1 of the equations, Wave 1 depression, suicidal feelings, suicide consideration, and suicide attempts were each regressed on violence and poverty status. In Step 2, the interaction term (violence x

poverty status) was entered. When a significant interaction was found using regression procedures, it was decomposed using ANOVAs. To decompose the interactions, poverty status was divided into quartiles of approximately 200 women each (below 66%; 66% to 106%; 106% to 144%; and more than 144% of poverty). Violence was categorized as none, moderate (>0 to 6), or serious (>6) based on frequency scores for acts sustained during the relationship. These categorical variables were then used as independent variables to conduct the ANOVAs.

The results for the sample as a whole were presented in Table 16. The interaction term was not significant in the multiple regression equations with depression or suicidal ideation. However, poverty status moderated violence on consideration of suicide and attempts. Figure 1 shows the ANOVA interaction on the number of times women had considered suicide. Consideration of suicide was most likely among the poorest women when they sustained frequent or moderate violence. Among the most abused women there was a sharp decline in consideration in the second quartile of poverty and the relationship remained fairly level as their economic status improved. After a small increase from the first to second quartile of poverty, the number of times

nonabused women considered suicide continued to decline as their economic status improved.

The pattern in Figure 2, based on the ANOVA interaction for attempted suicide was somewhat different, but again the greatest risk was among the most abused women who were poorest. Among the most abused women, the steady decline leveled at the third quartile (i.e., the poverty threshold), but their risk was greater than the other groups even among women with the highest income. Among nonabused women, there was a steady decline in suicide attempts with increasing income. In the moderate violence group suicide attempts were fairly high in the poorest and third quartiles but low in the second quartile and among women with the highest household incomes.

As shown in Table 17, despite the lack of direct effect for poverty status on depression among Black women, poverty status made a direct contribution to suicidal ideation in the regression equation. The interaction was significant on consideration of suicide. This moderation effect was decomposed by the ANOVA interaction depicted in Figure 3. There was little change in suicide considerations across poverty quartiles when women reported moderate or no abuse but there were small peaks in the poorest group and

the third quartile among nonabused women. Again, the most frequently abused and poorest women were most at risk with a sharp decrease to the third quartile of poverty and small increase in risk among women with the most income.

The regression equation results for Chicanas presented in Table 18 show a pattern similar to that for Blacks' consideration of suicide. There were direct effects for violence and poverty status and the interaction was significant on the number of times Chicanas attempted suicide. This moderating effect, decomposed by the ANOVA interaction was shown in Figure 4. Suicide attempts were most likely for the poorest women when they sustained frequent violence. The risk was higher among women who sustained moderate violence with incomes in the first and third quartiles of poverty than for those whose income was within the second or forth quartile. Although there was little difference in the number of suicide attempts among nonabused women, those with the lowest and highest incomes were at slightly greater risk.

Table 19 presents results of regression equations with White women. Only consideration of suicide showed moderation. The ANOVA interaction used to decompose the moderation and shown in Figure 5 revealed a different

pattern than found in the other figures. Consideration of suicide was highest for the poorest women when they sustained moderate or frequent violence. For women sustaining moderate violence, there was a sharp decrease in the second and third quartiles of poverty and an increase among women with the highest incomes. For women sustaining frequent violence, consideration decreased in the second quartile and the relationship remained fairly level as income increased. However, for nonabused women, consideration was highest among those in the second quartile with a sharp decrease as income improved.

Education. Education may function as an indicator of poverty status. Regression equations were also conducted using years of education. When a significant interaction was found using regression procedures, it was decomposed using ANOVAs. For this purpose, education was divided into groups (less than high school, n = 238; high school diploma or GED, n = 321; some college, n = 112; and AA degree or higher, n = 165).

Results for the sample are presented in Table 20. The interaction term was not significant in the multiple regression equations with depression, suicidal ideation, or consideration. However, education moderated violence on

suicide attempts. Figure 6 shows the ANOVA interaction on the number of times women attempted suicide. The results were dissimilar to those for poverty status and the pattern was not clear. Risk for attempts was highest for women in frequently violent or nonviolent relationships with some college and lowest for women in moderately violent relationships with some college.

Next regression equations were calculated for each ethnic group. Only violence was important for Black women. Neither education nor the interaction made a contribution to depression, $R = 34$, $p < .000$, suicidal ideation, $R = .29$, $p < .000$, or attempts, $R = .22$, $p < .001$. Violence was not associated with Blacks' consideration of suicide, $R = 11$.

Table 21 shows results for Chicanas. Violence was related to depression, ideation and attempts. There was a main effect for education on ideation and attempts and moderation was found for attempts. This interaction, decomposed using ANOVA results is showed in Figure 7. As with the sample as a whole, results were dissimilar to those for poverty level. For women with some college, risk was highest for those in the most violent relationships and lowest for those in moderately or nonviolent relationships.

For Whites, as for Black women, only violence was important. Neither education nor the interaction made a contribution to depression, $R = .36$, $p < .000$, ideation, $R = .34$, $p < .000$, or consideration of suicide, $R = .21$, $p < .01$. Violence was not related to the number of times White women attempted suicide, $R = .14$.

Overall, the results for education were dissimilar to those found for poverty status. This is likely due to the weak correlation between the measures, $r = .15$, $p < .001$.

Marital status. Marital status (dating, cohabiting, married) was considered an ordinal variable, with increasing levels of legal and social involvement. In tests of predictive validity, marital status was correlated with length of relationship ($r = .43$, $p < .01$), number of children ($r = .13$, $p < .01$), and commitment to the relationship ($r = 20$, $p < .01$). ANOVA results showed differences between groups, with means increasing as level of commitment increased. Married women's relationships were longer ($M = 11.47$ years) than dating ($M = 4.90$) or cohabiting ($M = 5.14$) women. Dating women's scores on a measure of commitment were lower ($M = 4.33$) than cohabiting ($M = 4.79$) or married ($M = 5.06$) women. Dating women had fewer children ($M = 2.10$) than married women ($M = 2.83$).

Further, financial support (reported as presence or absence of regular support) from the partner increased with level of involvement, $\chi^2(4) = 130.17$, $\underline{p} < .0001$. Partners regularly gave monetary support to 13.3% of the dating, 36.5% of the cohabiting and 50.2% of the married women. These results suggest relationship status could be used in regression equations as a quasi-continuous variable. However, because this manuscript describes dissertation research, several different procedures were used.

First, the procedures used with poverty status and education were conducted. The results of regression equations for the sample as a whole were presented in Table 22. There were main effects for violence, but not for marital status, on all dependant variables. The interaction was significant only for the number of times women had considered and attempted suicide. The interactions were decomposed in Figure 8 for consideration of suicideand Figure 9 for attempts. Both cohabiting and legal marriage were protections for consideration when abuse was moderate in frequency or nonexistant. In contrast, consideration of suicide increased with relationship involvement when women sustained frequent violence. The pattern was similar for

suicide attempts, but there was little difference in number of attempts between cohabiting and married women who sustained frequent violence.

Next, regression equations were calculated for each ethnic group. Only violence was important for Black women. Neither marital status nor the interaction made a contribution to depression, $R$ = .34, $p$ < .000, suicidal ideation, $R$ = .31, attempts, $R$ = .20, $p$ < .01. Violence was not associated with Black women considering suicide, $R$ = .16.

Table 23 shows results for Chicanas. Violence was related to depression, suicidal ideation, and suicide attempts. There was no direct effect for marital status in any equation. However, a moderating effect was found on suicidal ideation. This interaction was decomposed using the ANOVA interaction shown in Figure 10. For women sustaining frequent violence, suicidal ideation increased with relationship involvement. In contrast, for women in nonviolent and moderately violent relationships, suicidal ideation was highest for women in dating relationship and decreased somewhat for those who were cohabiting or married. There was little difference in ideation between married and cohabiting women, regardless of whether they

sustained moderate or frequent violence. The moderating effect found on Chicanas' suicide attempts, decomposed using the ANOVA inteaction was shown in Figure 11. Risk of suicide attempts increased sharply with relationship involvement for women sustaining frequent violence. Among cohabiting women, the number of attempts was highest when they sustained moderate violence. Relationship status had little effect on suicide attempts for women in nonviolent relationships.

For White women, as shown in Table 24, moderation was found only for consideration of suicide. The ANOVA interaction shown in Figure 12, indicates relationship involvement provided protection for women in nonviolent relationships because consideration decreased sharply with relationship involvement. For those sustaining moderate violence, consideration peaked among cohabiting women. There was little difference for Whites who sustained frequent violence, regardless of relationship involvement.

The ANOVAs conducted to decompose the interactions in the regressions were examined to support the moderation found. There were no significant interactions or main effects for marital status. There were significant main effects for frequency of violence on depression for the

entire sample and each ethnic group. There were main effects for violence with the sample, $F(2,827) = 18.59$, $p < .000$, and for Blacks and Whites on suicidal ideation. Only Blacks had main effects for violence, $F(2,285) = 3.10$, $p < .05$, on number of times considered suicide. There were main effects for the sample, $F(2,273) = 4.24$, $p < .05$, and for Blacks on number of times attempted suicide. The results were similar when severity of violence based on worst act (none, moderate, severe) was used. Although these results do not confirm the moderation found with regression equations, the lack of significant interaction may be due to the loss of power when continuous data are transformed to discrete groups.

MANOVAs, using marital status as an independent variable and covarying the frequency of violence, did not support the hypothesis of marital status as a moderator. There was no significant difference between groups by marital status on any of the dependant variables (i.e., depression, suicidal ideation, suicide consideration or attempts). For Whites, marital status approached significance, $F(2,259) = 3.01$, $p = .051$, on consideration of suicide.

A final procedure to assess marital status as a moderator was employed. Examination of variables associated with relationship involvement showed there was little difference between length of relationship for dating or cohabiting women and that their relationships were half the length of married women. Therefore, marital status was dichotomized (i.e., unmarried, married). Each of the depression/suicidality variables was regressed on violence within each marital group. Tests of the difference between unstandardized regression coefficients (Baron & Kenny, 1986) provided support for the moderation hypothesis. The results, including t - tests using procedures described by Howell (1992), were presented in Table 25, 26, 27 and 28, show patterns identical to those found based on interactions in the regression equations. For the sample, moderation by marital status of the relationship between violence and consideration of suicide and suicide attempts was confirmed. As with the earlier regressions, marital status was not a moderator for Blacks. For Chicanas, suicidal ideation and attempts were moderated by marital status. Only consideration of suicide was moderated by marital status for White women. These results confirmed the

moderation reported based on the multiple regression equations.

# CHAPTER IV

# DISCUSSION

This study examined factors that may affect the relationship between sustained partner violence and depression/suicidality. The direct association reported in the literature was replicated with ethnically diverse, low-income, community women. A general overview for the sample is followed by findings specific to each ethnic group. Several limitations of the study are then described. Implications of the results are addressed throughout this section.

Most earlier studies of partner violence and depression consisted of shelter samples and women seeking services for partner violence. The correlation between violence and depression approached moderate strength in this study, consistent with findings among shelter residents (Sato & Heiby, 1992) and women seeking services specifically for the violence (Mitchell & Hodson, 1983). Studies with shelter women (Gleason, 1993; Orava et al., 1996) and women seeking services (Campbell, 1992; Cascardi & O'Leary, 1992, Follingstad et al., 1991) found high rates

of clinical depression, and means above clinical cutoff. In contrast, the mean depression scores for women sustaining the most frequent violence, while higher than for women in nonviolent relationships, was below the diagnostic cutoff of 2.00 (Derogatis et al., 1974). These findings are similar to the few previous studies with community dwelling women, not identified for the violence (Arias et al., 1997; Cascardi et al., 1995; Magdol et al., 1997).

The differences in means between women identified for the violence (e.g., shelter residents) and those not identified (e.g., community dwelling women) may be due to situational differences. Help-seeking women may be experiencing more uncertainty and their general life situation may be more chaotic perhaps due to fear and very recent trauma. At the very least, identified battered women are focused on the violence at the time of the research (e.g., they are being treated for injuries or living in a shelter). Thus, even if the violence women sustained was of similar severity, we would expect to see more depression in identified samples. A majority of this sample (68%) had sustained violence at a rate of at least one act more than twice a month. However, few (17%) had thought about or contacted a shelter for partner violence (VanHorn &

Marshall, 2000). Thus, the findings reported here may more accurately represent the association between violence and depression in women's everyday lives.

Length of time since the most recent incident did not contribute to depression, suicidal ideation, serious consideration of suicide or suicide attempts. This, again, suggests that the decrease in battered women's depression during a shelter stay (Sedlak, 1988) and shortly after leaving (Campbell, et al, 1995) may be related to the disruption of their lives rather than the recency of violence. However, the frequency of recent violent acts predicted depression and suicidality, even after controlling for women's initial depression or suicidality. This is consistent with findings for shelter residents (Mitchell & Hodson, 1983), women seeking domestic violence services (Cascardi & O'Leary, 1992), and self identified battered women (Follingstad, et al., 1991).

The correlations between partner violence and women's attributions for cause, responsibility and globality were similar to each other. Attributions to the partner were negatively related to women's satisfaction with their relationship. After controlling for relational

satisfaction, women's attributions were not related to depression/suicidality.

The women tended to hold their partner, rather than themselves, accountable for men's violence as indicated by the means for cause and responsibility attributions. This is consistent with findings from identified battered women (Campbell, 1989; Frieze, 1979). These attribution measures were bipolar, anchored by self and partner. Consequently, a negative correlation between attributions and depression/suicidality would have supported the Learned Helplessness (Frieze, 1979; Walker, 1977-78; Walker, 1983) and attribution style (Peterson et al., 1982) explanations. Campbell's (1989) study of battered found a significant correlation between attributions to the self and depression, despite finding that attributions to the partner were more common. For women in the current study, however, the weak positive correlations showed the more women held their partner accountable for his violence, the more depression and suicidality they reported. Again, the difference may be due to sample selection. Unlike the community women in this study, Campbell's participants were recruited for the presence of violence. Women's efforts to make sense of the violence may result in difference in the

effect of internal attributions (Wood, Saltzberg, Neal, Stone, & Rachmiel, 1990) when they consider themselves to be battered. Community women may have given less conscious thought to the meaning of the attributions they make for the violence. Consequently, depression, like violence, is related to external attributions.

Limited support was found for the hypothesis that attributions mediate the relationship between sustained violence and depression/suicidality. Neither causal nor responsibility attributions mediated this relationship, whereas attributions for the globality of the effect of the violence (i.e., on themselves, their partners and their relationship) provided partial mediation. Specifically, as violence had broader (i.e., more global) effects, its direct effect on depression and suicidal ideation decreased.

Poverty and marital status moderated the relationship between violence and the number of times women seriously considered or actually attempted suicide. The most risk for consideration and attempts was evident among women who sustained the most violence and were poorest or married. The poorest women who sustained violence with moderate frequency were at somewhat higher risk for considering

suicide, but otherwise had a pattern similar to women with nonviolent partners. Marriage appeared to protect these two groups. Women who were dating were at similar risk, independent of partner violence. Thus, women who sustain partner violence are differentially at risk for suicidal behavior, depending on their financial resources and relationship involvement.

An important way this sample differed from previous studies is that the diversity allowed analysis between and within different ethnic groups. Factors that functioned to delineate the relationship between the abuse and depression/suicidality differed between Black, Chicana, and White women. Consequently, these three groups can be addressed separately.

Black Women

Blacks did not differ from others on the violence they sustained from partners during their relationship or between the two interviews. Nor did they differ on depression or suicidality. However, the frequency of acts they sustained between interviews predicted depression, suicidal ideation, consideration and attempts, even after controlling for their initial affective state. This association was consistent only among Blacks. Black women

are at greater risk for many types of violent victimization than Whites or other minorities according to Bachman and Saltzman (1995). Although their report found no greater risk for partner violence among Blacks, the additional stress of other victimization may cause Black women to become more depressed when their partner is violent.

Black women held their partners more accountable for men's violent acts than Chicanas or Whites, but neither cause nor responsibility attributions mediated the relationship between violence and depression or suicidality. Blacks did not differ from the other groups on how globally they perceived the effects of violence. However, in this group, greater effects partially mediated the direct effect of violent acts. Globality attributions decreased the contribution of violence to both depression and suicidal ideation, but not to suicide consideration or attempts. Why mediation would occur on some but not all outcome measures is puzzling.

The degree to which Black women perceived men's violence as broadly affecting themselves, their partner and their relationship helped to explain why they were depressed and had suicidal ideation. There are at least two possible explanations for these findings. First,

intrapsychic processes, such as attributions, may be more likely to affect other intrapsychic processes (e.g., feeling hopeless or that life has no meaning) than behavioral life events (e.g., suicidal behavior). The measures for depression and suicidal ideation both focus on feelings and thoughts rather than behaviors. The second possibility is that it may be an artifact of the method of measurement. Depression and ideation were reported using response scales from never or not at all to always or extremely. In contrast, suicidal consideration and attempts were quantified as indexes of life events. Finding mediation for intrapsychic processes, but not life events, is consistent with Baron and Kenny's (1986) assertion that intrapsychic processes are more likely to function as mediators.

The conceptualization of globality as a separate measure of effect was drawn from the relationship satisfaction literature. Fincham and Bradbury (1992) held that globality of effect in the relationship should be measured separately, rather than as one aspect of cause (i.e., global causes for an outcome). This varies from the internality of the Learned Helplessness model. In contrast, to the extent that the greater effect of a partner's

negative behavior plays a mediational role in depression among Black women, Beck's (1976) cognitive model for depression is supported. Beck theorized that persons who magnify the importance of undesirable events are more likely to be depressed. Black women sustained no greater amount of partner violence than others nor were they more depressed. Yet their perceptions about the impact of the violence explained nearly as much of the variance in depression as did the violence itself. This mediation occurred only with Black women. Therefore, explanations beyond the Beck model should be sought. Because Black women are victims of more total violent victimization (Bachman & Saltzman, 1995), they may perceive the effects of any violence as cummulative and, therefore, broader. Consequently, the "magnification" Beck described may be an accurate representation of Black women's experience.

Poverty status moderated only the relationship between violence and the number of times Black women specifically considered suicide. Although not equivalent to an actual attempt, consideration itself can be a risk factor. As suicide is contemplated more frequently, it may become more familiar and inhibitions against suicide attempts could decrease. Blacks who had the least financial resources and

sustained the most frequent violence had seriously considered ending their own life more than 4 times as often as women in the moderate no violence groups. With increasing income, consideration of suicide decreased among those in the most violent relationships and was similar to other groups when the poverty threshold was reached. Yet even among those with the greatest financial resources, women who frequently sustained violence were still more likely than nonabused or moderately abused women to have considered suicide, but the ratio decreased to 2 to 1. Thus, the combination of two severe stressors, extreme poverty and frequent violence, put Black women at extreme risk.

Lack of financial resources leaves women with few alternatives to stop the violence. Black women may fear racial discrimination in the form of weak or negative responses from legal or criminal authorities. Consequently, they may not consider calling the police as helpful in ending the violence. Furthermore, they cannot afford to move to separate themselves from a violent partner. These women may perceive suicide as a viable way to escape. Interestingly, household income made little difference among Black women who sustained moderate or no violence.

Unless violence is frequent, Black women may not believe that escape is necessary. Therefore, the presence or absence of sufficient resources to escape would not be an important determinant of suicidal behavior.

Marital status did not moderate the relationship between violence Black women sustained and depression or suicidality, although it was a moderator for the other groups. Due to a lack of available partners (Greene, 1994), Black women may be less likely to be married. Only 27% of the Blacks in this study were married, compared to 47% of Chicanas and 52% of White women (VanHorn & Marshall, 1998). Further, since slavery Black women have worked outside the home and have not been socialized to expect marriage to relieve them of the need for outside employment (Greene, 1994). Therefore, legal involvement with a man may be perceived as unrelated to financial independence. Consequently, Black women's marital status does not moderate their suicidal behavior, whereas poverty status was a moderator.

In sum, Black women differed from the other groups in several ways. Recent violence consistently predicted depression, suicidal ideation, consideration, and attempts. Blacks' attributions of globality decreased the direct

effect of violence on depression and ideation. Poverty moderated the relationship between violence and consideration of suicide. These finding are likely related to life experiences of Blacks, such as their higher risk of violent victimization and discrimination by the legal system. Such differences emphasize the need to examine ethnic groups separately rather than combined as "minorities" to be compared to Whites.

Chicanas

Chicanas differed from Black women in several ways. Recent violence was not a consistent predictor of suicidality. Nor did attributions function as mediators. For Chicanas, as for Blacks, the frequency of recent violence predicted concurrent depression and suicidal ideation, even after controlling for women's prior state. However, Chicanas' recent consideration of suicide and number of suicide attempts were not related to the recent violence, when prior consideration and attempts were taken into account. Chicanas endorsed suicidal consideration and attempts as frequently as other groups. Therefore, the lack of association was not due to cultural differences in willingness to acknowledge suicidal behaviors. It is unclear how the extent of suicidal ideation, but not the

number of suicidal behaviors, would be related to frequency of violence.

Chicanas tended to attribute more cause and responsibility to their partner than to themselves for his violent acts, as did the other groups. However, they held their partners less accountable than did Black women. Further, none of the attribution dimensions mediated the relationship between violence and depression or suicidality among Chicanas. Both Hispanics and Whites experience fewer violent victimizations than Blacks (Bachman & Saltzman, 1995). Although there was no difference for globality, Chicanas attributed less cause and responsibility to their partner for his violence. This, coupled with less violent victimization may result in attributions being less important for Chicanas.

Although no mediation was found, both poverty and marital status functioned as moderators. Chicanas' financial resources moderated violence on attempted suicide. As with Blacks, extreme poverty, when coupled with frequent violence was most potentially lethal. Chicanas' relationship involvement also functioned as a moderator between violence and suicidal ideation and attempts. For Chicanas who sustained the most frequent violence, suicidal

ideation was highest when they were cohabiting or married. Conversely, for women in nonviolent relationships, ideation was highest for dating women. the moderation found for Chicanas' ideation is the sole exception to mediation of intrapsychic processes and moderation of life events. However, the difference in mean scores was not great for ideation. In contrast, the figure is more clear for suicide attempts. The risk of attempted suicide increased sharply with relationship involvement among Chicanas who sustained the most frequent violence. Further, relationship status made little difference in the number of attempts for women in nonviolent relationships. Clearly, escalation in violence not only threatened married Chicanas' lives directly, but also increased risk of lethality by women's own hand.

The dissimilarity between Blacks and Chicanas in the effects of marital status suggests differences in how legal involvement and marriage function for women from different ethnic backgrounds. Socialization may result in the status of relationship having more importance for Chicanas than for Black women. That marriage provided the least protection for Chicanas in the most violent relationships, suggests that tolerance for violent partners comes at a

cost. The patriarchal nature of Hispanic relationships (Dutton, 1994; Straus & Smith, 1990), equated with the term "macho", has been associated with condoning violence (Smith, 1990). However, studies of gender roles within the Mexican American family (Cromwell & Ruiz, 1979; Zapata & Jaramillo, 1981) concluded cultural effects are more complex. Macho refers only to the role of being male (e.g., provider and protector). Roles within the family tend to be traditional (e.g,, father working, mother homemaker), leaving women feeling less in control of their own lives and relying more on their partner. Such traditional gender roles may induce Chicanas to expect patriarchy to provide more, not less, protection from violence. When this expectation is not met and violence occurs, the result is more devastating.

White Women

White women were similar to their minority counterparts in the depression and suicidality they reported, the violence they sustained, and the extent to which they attributed the violence to their partner. Nevertheless, they differed in several ways. First, unlike Blacks and Chicanas, the frequency of recent violence sustained from their partner did not predict depression or

any measure of suicidality. Second, attributions did not mediate the relationship between the violence and their depression, suicidal thoughts or behavior. However, both level of poverty and degree of relationship involvement moderated White women's consideration of suicide. Consideration was three times as high for the poorest women in frequently violent dating relationships than for women dating nonviolent men. For Whites with the most frequent violence, relationship involvement made little difference. However, for Whites with nonviolent partners, consideration decreased sharply as involvement increased. Given the comparative high risk for dating women in nonviolent relationships, the possibility of an outlier was examined. One dating White woman with a nonviolent partner reported considering suicide 60 times. However, a dating White in a frequently violent relationship had also considered suicide 60 times. Consequently, outliers alone cannot explain the results.

Results for White women in this study differed from their minority sisters. Only the moderation hypothesis was supported and then only on one of the suicide variables. Therefore, the factors that influence the relationship between violence and depression/suicidality for this group

are less clear. These findings repudiate the belief that members of the majority can be assumed to be representative of the population.

Implications for Service Providers

For Black women and Chicanas, but not Whites, sustaining frequent, recent violence was related to increased symptoms of depression and suicidal ideation. These findings suggest that minority women may differ from White women in the ways or the extent to which partner violence contributes to depression and suicidality. It is possible that other stressors in minority women's lives, such as discrimination or concern for differential treatment by the legal system in low income women (Hass, 1996; Vogel, Marshall, & Connor, 1997), may account for this difference. It is imperative that service providers who come in contact with abused minority women be cognizant of their increased risk for depression, suicidal thoughts, and for Black women, the increased risk of suicide attempts. Further, since relatively few of these community women had sought services specifically for the partner violence in their lives (VanHorn & Marshall, 2000), it is also important that partner violence be addressed when minority women present in hospitals or clinics with

symptoms of depression or suicidality. Conversely, when minority women do seek help for the violence, service providers should be attentive for the possibility of depression/suicidality.

Further, the association between violence and suicidality underscores the need to provide intervention services for both. However, since few of the women in this study ever sought help for the violence, intervention should be offered at locations where women with the lowest incomes are likely to be found. These include governmental aid offices as well as private social service agencies. Hotlines for both domestic violence and suicide are available in most communities, however, women may need to be encouraged to access these resources. Policy makers should support referral to such services when professionals suspect a need. They should further insure that information regarding hotlines is displayed in places frequented by low income women. Training for hotline employees must include understanding the dually lethal role that partner violence may play in women's lives.

Marital status also specified for whom partner violence is more likely to be associated with suicidality. Counselors or other professionals who talk with women about

the violence they experience in their lives should be attentive to ethnic differences in how relationship involvement may affect women. Further, such professionals must be sensitive to multicultural differences and not assume that marriage brings the same expectations for women of different backgrounds.

Therapists and others who provide mental health counseling for depression, would be advised to consider the cognitive model for depression, which applied primarily to Black women. Again, sensitivity to cultural experiences is required. Therapists would do well to consider the possible differential function of attributional thoughts prior to challenging them.

Limitations

The most obvious limitation of this study is due to including only women with little income. However, this restriction of range is not as severe as it would initially appear. Women's financial resources ranged from none (a few women at Wave 1 were living in a homeless shelter) to 399% of the US poverty threshold when the monetary value of their financial aid was included. This seems quite high (e.g., a two person household ranging from no income to $40,000 per year). However, of the 36 women in the study

with a household income exceeding 200% of the poverty threshold, all but four were receiving public aid from a poverty program and only two women exceeded 300%.

That participants were limited to living near the poverty level is also a strength because ethnicity was not confounded by socioeconomic status. In addition, differences were found with ethnicity, suggesting that poverty itself does not cause a homogenous group. Consequently, although the findings may not generalize to women of higher socioeconomic status, the differences found are meaningful for women living below or near the poverty threshold.

A primary limitation is that the sample was not developed by random selection. Although large, the sample was purposive, with several selection criteria. Further, women had to be willing to commit to four interviews. Thus, differences reported in research on volunteers compared to nonvolunteers are relevant.

Another limitation derives from the measures. The internal consistency of the scales used in this study was high. Some modifications produced Chronbach alphas higher than the standard version. However, the modified version of Vivian and Langhinrichsen-Rohling's (1994) attribution

measure did not yield acceptable alphas. Internal consistency approached an acceptable range only after the causal and responsibility attribution dimensions were reduced to two items. The lack of mediating effect for these attributions may be related to problems with the measures. Although the correlations for the revised attribution dimensions were similar to those found by Fincham and Bradbury (1992) with the RAM, it is possible the resulting instrument was not sufficiently sensitive to accurately record women's attributions. Consequently, the lack of significant findings for causal and responsibility attributions should not be accepted as conclusive.

Additionally, some of the measures were less specific than would be desirable. For example, the length of time since the last violent incident referred to the time since any threat or act of violence. Thus, it was not possible to differentiate time since acts from time since threats. Consequently, even among women who sustained the most violence, the time referred to may have been since their partner expressed a threat rather than act of violence.

A similar methodological difficulty must be noted for the attribution questions. Only women who reported threats or acts of violence by their partner between the two waves

were asked to make attributions. Although only the effect of violent acts was examined in this study, the attributions were made for both threats and acts. More specificity for acts of violence may change the way attributions function.

The issue of statistical significance versus clinical significance is also relevant. Few of the correlations exceeded moderate strength. However, because the relationships were similar to those found in other studies (e.g., Mitchell & Hodson, 1983; Sato & Heiby, 1992), this study confirmed a relationship between violence and depression that is generalizable to a broader population. Intrapsychic processes are complex. Even a small or moderate relationship provides evidence that the variable being examined is part of these complex processes. Further, as mediators, internal psychological variables such as attributions, are prone to measurement error which may produce an underestimate of the effect of the mediator (Baron & Kenny, 1986). Consequently, the partial mediation found for Blacks' depression and suicidal ideation may underestimate the true effect of globality attributions. Finally, although the moderation found using regression procedures was not supported by the ANOVAs used for

decomposition, the results were replicated using two differing techniques to find moderation. The lack of confirmation by ANOVAs may have resulted from reduction in power, which occurs when continuous variables are reduced to discrete categories.

Directions for Future Research

Despite the limitations, this study contributed to understanding the relationship between the partner violence women sustain and their depression and suicidality. The mediating and moderating effects suggest directions for future research. Finding mediation for intrapsychic variables and moderation for behavioral variables corroborates the need to differentiate between mediating and moderating effects and to test appropriately. Better and more specific measures of attributions are needed. More qualitative research that could illuminate attributional processes in different ethnic groups might be fruitful.

Poverty status functioned as a moderator even within the limited confine provided by this sample. Therefore, effects of income should be tested among women from a broader range of socioeconomic status. Differences by ethnicity in the moderating function of both poverty and marital status emphasize the need for ethnically diverse

samples and the importance of examining issues not just across, but within ethnic group.

# APPENDIX A

## SEVERITY OF VIOLENCE AGAINST WOMEN SCALES

## VIOLENCE SUBSCALES

## SEVERITY OF VIOLENCE AGAINST WOMEN SCALES-VIOLENCE SUBSCALE

A) how many times has he ever …

| 0 | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| never | once | a few times | several times | many times | a great many times |

B) how often past 6 months

never 0 1 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

held you down pinning you in place
pushed or shoved you
grabbed you suddenly or forcefully
shook or roughly handles you
scratched you
pulled your hair
twisted your arm
spanked you
bit you
slapped you with the palm of his hand
slapped you with the back of his hand
slapped you repeatedly around your face and head
hit you with an object
punched you
kicked you
stomped on you
choked you
burned you with something
used a club-like object on you
beat you up
used a knife or gun on you

# APPENDIX B

## HOPKINS SYMPTOM CHECKLIST

## MODIFIED DEPRESSION SUBSCALE

## HOPKINS SYMPTOM CHECKLIST MODIFIED DEPRESSION SUBSCALE

Rate how much that problem has distressed or bother you during the past month.

| 0 | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| not at all | a little bit | moderately | quite a bit | extremely |

loss of interest or sexual pleasure
feeling low in energy or slowed down
thoughts of ending your life
crying easily
feelings of being trapped or caught
blaming yourself for things
feeling lonely
feeling blue
worrying or stewing about things
feeling no interest in things
feeling hopeless about the future
feeling everything is an effort
feelings of worthlessness

# APPENDIX C

## GENERAL HEALTH QUESTIONNAIRE

## MODIFIED SEVERE DEPRESSION SUBSCALE

GENERAL HEALTH QUESTIONNAIRE

MODIFIED SEVERE DEPRESSION SUBSCALE

How often have you…

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|
| never | | | about half the time | | | always |

felt that life is entirely hopeless
felt that life isn't worth living
thought of the possibility that you might do away with your self
found yourself wishing you were dead and away from it all
found that the idea of taking your own life kept coming into your mind

# APPENDIX D

# MODIFIED RELATIONSHIP SATISFACTION QUESTIONNAIRE

MODIFIED RELATIONSHIP SATISFACTION QUESTIONNAIRE

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|
| not at all or never | | | | | | completely or extremely often |

Taking things together, how happy is your relationship

When you think about your relationship—what each of you puts into it and gets out of it how happy do you feel

How certain are you that you'll be together one year from now

What about 5 years from now

How stable is your relationship

In the past 6 month how often have you considered leaving him

# APPENDIX E

## CENSUS FIGURES FOR POVERTY STATUS

1995 Poverty Figures

Ora & Vernette: use the 150% with 175% maximum for screening.

Interviewers: If subject is a little over 175% go ahead and complete the interview. But if she is near 200%, stop the interview.

| # Persons | Yearly Poverty | Yearly 150% | Yearly 175% | Monthly Poverty | Monthly 150% | Monthly 175% |
|---|---|---|---|---|---|---|
| 1 | 7,470 | 11,205 | 13,072 | 623 | 934 | 1,090 |
| 2 | 10,030 | 15,045 | 18,030 | 836 | 1,254 | 1,463 |
| 3 | 12,590 | 18,885 | 22,033 | 1,049 | 1,574 | 1,836 |
| 4 | 15,150 | 22,725 | 26,513 | 1,263 | 1,894 | 2,210 |
| 5 | 17,710 | 26,565 | 30,993 | 1,476 | 2,214 | 2,583 |
| 6 | 20,270 | 30,405 | 35,473 | 1,689 | 2,534 | 2,956 |
| 7 | 22,830 | 34,245 | 39,953 | 1,903 | 2,854 | 3,330 |
| 8 | 25,390 | 38,085 | 44,433 | 2,116 | 3,174 | 3,703 |

| # | Yearly 200% | Monthly 200% |
|---|---|---|
| 1 | 14,940 | 1,246 |
| 2 | 20,060 | 1,672 |
| 3 | 25,180 | 2,098 |
| 4 | 30,300 | 2,526 |
| 5 | 35,420 | 2,952 |
| 6 | 40,540 | 3,378 |
| 7 | 45,660 | 3,806 |
| 8 | 50,780 | 4,232 |

1996 Poverty Figures

Ora & Vernette: use the 150% with 175% maximum for screening.

Interviewers: If subject is a little over 175% go ahead and complete the interview. But if she is near 200%, stop the interview.

| # Persons | Yearly Poverty | Yearly 150% | Yearly 175% | Monthly Poverty | Monthly 150% | Monthly 175% |
|---|---|---|---|---|---|---|
| 1 | 7,740 | 11,610 | 13,545 | 645 | 968 | 1,129 |
| 2 | 10,360 | 15,540 | 18,130 | 863 | 1,295 | 1,511 |
| 3 | 12,980 | 19,470 | 22,715 | 1,082 | 1,623 | 1,893 |
| 4 | 15,600 | 23,400 | 27,300 | 1,300 | 1,950 | 2,275 |
| 5 | 18,220 | 27,330 | 31,885 | 1,518 | 2,278 | 2,657 |
| 6 | 20,840 | 31,260 | 36,470 | 1,737 | 2,605 | 3,039 |
| 7 | 23,460 | 35,190 | 41,055 | 1,955 | 2,933 | 3,421 |
| 8 | 26,080 | 39,120 | 45,640 | 2,173 | 3,260 | 3,803 |

| # | Yearly 200% | Monthly 200% |
|---|---|---|
| 1 | 15,480 | 1,290 |
| 2 | 20,720 | 1,727 |
| 3 | 25,960 | 2,163 |
| 4 | 31,200 | 2,600 |
| 5 | 36,440 | 3,037 |
| 6 | 41,680 | 3,473 |
| 7 | 46,920 | 3,910 |
| 8 | 52,160 | 4,347 |

APPENDIX F

RREGISTRATION FORM

Project H.O.W.
Master Form

This is the only form which would allow your identity to be matched with answers you give in the interviews. The office worker who administers this form will never know any of your answers to interview questions. Ms. Deirdre Harris, the interview co-ordinator, will give this form to Ms. Anne C. Freeman at the Dallas County Health Department for safe-keeping. Ms Freeman will not see any completed interviews. Dr. Linda L. Marshall at the University of North Texas will keep completed interviews. Dr. Marshall will not see this form unless funding for a follow-up study is obtained several years from now.

Completion of this form and your signature at the bottom shows that you received a copy of the Informed Consent Form signed by Ms. Anne C. Freeman and Dr. Linda L. Marshall.

Please print the information requested.

Date: _____

Full Name:_____
first middle last

Current address: _____

_____

Telephone number: _____

Social Security Number:_____

Driver License Number:_____

Texas Identification Number:_____

The following information will be used as your code on the interview forms. We will assign you a number so interviews can be connected without ever using names. This allows the researchers to identify changes in each woman's health and life situation so results can be used to find ways to help women become healthier.

Your first name or nickname used for interviews: _____

Your Birthdate: _____

Where you were born:_____

Race/ethnicity (circle):
African American Mexican American White American

Mother's First Name: _____

Number of Brothers and Sisters:_____

Name of Mother's First(oldest)Child:_____

Your Partner's Initials: _____

Your Partner's race/ethnicity (circle): African American Mexican American White American Other

Your partner's Birthdate: _____

The information I provide is true to the best of my knowledge.

_____
signature

# APPENDIX G

# INFORMED CONSENT FORMS

Informed Consent Form
Project H.O.W., Health Outcomes of Women - Time 1

1. The purpose of this study is to find out HOW to help women become healthier. We want to identify ways to help women. We are looking at your total health and well-being. When the study is over, we will try to change things that you and the other women identify as important here in Dallas. We will also report the combined results from all women nationally, hoping that changes can be made elsewhere, too.

2. This study is being funded by the Centers for Disease Control and Prevention. It is being conducted jointly by Ms. Anne Freeman of the Dallas County Health Department and Dr. Linda Marshall of the University of North Texas, Psychology Department.

3. We are looking at HOW stress and life situations hurt and help women's health and well-being. This is the first of four interviews over the next two years to find out how your life changes and how it stays the same. It is very important that you complete all four interviews. You will be asked about how you have been thinking and feeling lately; relationships with friends and family; how you think about yourself, your self-concept; and how you cope with your problems, etc. The questions are about good things and bad things in your life.

4. Because we need personal information, we want to explain our procedures. The office workers will not know exactly what we ask or any of your answers. The interviewer will not know your full name. No one can connect your full name to the answers you give us unless you want us to, or unless Dr. Marshall does a follow-up study in several years. For your interviews, you will use a code. The project is covered by Certificates of Confidentiality so no one (including a court of law, the housing department, etc.) can find out what you say to us. We got the Certificates from the government because it is important that you answer our questions truthfully, even when doing so violates some rule (like if you make more money than you are supposed to). No one can learn anything about you from us. When we make reports, write articles, and give presentations, we will use only the combined answers from many women.

5. We need your help to keep the content of this study confidential. Please do not talk about specific questions we ask with anyone else, even the office worker or other women participating in this study. Some women could be hurt if people find out what questions we ask.

6. Besides keeping track of all the women who participate, our office workers will provide child care during interviews. As with anyone else in an "official" capacity (like teachers, doctors, etc.), we will report child abuse if we see evidence of it or are told about it. That is the ONLY exception to our rule of not telling anyone anything about individual women.

7. It may be difficult to answer some questions, use rating scales, or tell us things you have never told anyone else. You may feel frustrated, sad, offended or angry. These feelings should be temporary. On the other hand, the questions may help you in some way. You may come to think about yourself in a different way, even if the interview upset you.

8. The time you spend on the project will be compensated with a combination of cash, vouchers, and other goods. To show how valuable your time is and the increasing importance of what you tell us, we will give you more cash and gifts for each of the later interviews. To contact you for later interviews we may send postcards, call you and/or visit your home. We may try to find you through the people you give us. If you tell us when your address or telephone changes, we will not need to contact anyone else. These procedures are used because each woman is very important to us.

9. It is very important to us that you are treated well. If anyone on the project is impolite or unkind, please report it to Dr. Marshall (817-565-4329) or Ms. Anne Freeman (819-1900) at the Health Department. We want to make this experience as easy for you as possible. Also feel free to contact Ms. Deirdre Harris, 819-1930, if you have any ideas about making the project better for you.

10. Results of the study will be used to identify ways to more effectively help those of you who have problems that affect your health and well-being. We hope to be able to tell you some of the things we find out as we go along, but we will not be able to tell you everything about the study until it is over. A few months after the last set of interviews, we will have a series of meetings for women who participated. At that time we will answer all your questions and report our findings to you. While the study is going on, we will try to provide information that could help you as often as possible.

Ms. Anne C. Freeman

Dr. Linda L. Marshall

11. This study was approved by the University of North Texas Institutional Review Board for the Protection of Human Subjects in Research.

Project HOW
Summary of Informed Consent
Time 1 Interviews

1. The purpose of the study is to find out how to help low income women become healthier. The results will help us make changes to serve you better.

2. The Centers for Disease Control and Prevention is funding the study. Dr. Linda L. Marshall from the University of North Texas and Ms. Anne C. Freeman from the Dallas County Health Department are directing the study.

3. We are looking at how stress and life situations hurt and help your health and well-being. You will be interviewed (in English) 4 times in the next 2 years so we can learn how women's lives change and how they stay the same in ways that affect their health. The first time you come may take about 3 hours for you to register, report the history of your health, and be interviewed. You will also have the opportunity to make suggestions to improve the project.

4. Procedures for confidentiality are very strict so you can feel safe answering questions truthfully. The office workers will not know the questions we ask or your answers. The interviewers will not know your full name or where you live. Certificates of Confidentiality protect you. No one (even a court of law) can ever find out what you tell us without your written permission.

5. Some women could be hurt if people learn about our questions. Please help us protect these women by not talking about specific questions asked during interviews. Do not even discuss it with others in the study or our office workers.

6. We will not ask questions about current or recent abuse of children. However, if the office worker notices abuse while she is providing child care during interviews, we will report it.

7. You may feel frustrated, sad, offended or angry during interviews. The feelings will be temporary and may cause you to see things in a new way.

8. It is important that you come for all 4 interviews. The gifts we give you will increase in value each time. We may contact you for later interviews through the mail, by telephone, in person, or (if necessary) through other people. You will tell us what is best for you.

9. If anyone on the project is impolite, unkind, or offensive in any way please contact Ms. Freeman or Dr. Marshall. Call Ms. Harris if you have ideas about making the project better.

10. After the project is over, we will have meetings to tell you everything we learned. In the meantime, we plan to provide you with useful information through our offices.

11. The procedures for this study were approved by the University of North Texas Institutional Review Board for the Protection of Human Subjects in Research.

# APPENDIX H

## TABLES

Table 1.

Standardized Chronbach Alpha Coefficients for Scales

| Measure | Sample | Black | Chicana | White |
|---|---|---|---|---|
| Wave 1 | | | | |
| Violence | .95 | .95 | .95 | .95 |
| Depression | .92 | .93 | .92 | .92 |
| Suicidal Ideation | .92 | .91 | .92 | .93 |
| Rel Satisfaction | .93 | .94 | .92 | .94 |
| Wave 2 | | | | |
| Violence | .96 | .96 | .94 | .96 |
| Depression | .93 | .93 | .93 | .92 |
| Suicidal Ideation | .91 | .90 | .91 | .93 |
| Rel Satisfaction | .91 | .90 | .90 | .92 |

Table 2.

Standardized Chronbach Alpha Coefficients for Attributions

| Measure | Sample | Black | Chicana | White |
|---|---|---|---|---|
| Original | | | | |
| Globality | .75 | .75 | .77 | .75 |
| Causal | .12 | -.15 | .36 | .17 |
| Responsibility | -.36 | -.42 | -.14 | -.47 |
| Revised | | | | |
| Causal | .71 | .64 | .71 | .79 |
| Responsibility | .57 | .45 | .57 | .67 |

Table 3.

Sample Means and Standard Deviations

| | Wave 1 | | Wave 2 | |
|---|---|---|---|---|
| Measure | *M* | (*SD*) | *M* | (*SD*) |
| All Violence | 8.19 | (13.37) | | |
| Recent Violence | 6.99 | (15.67) | 7.26 | (18.52) |
| Last Violence (wks) | 22.43 | (39.66) | 27.23 | (59.61) |
| Depression | 1.42 | (0.96) | 1.09 | (0.90) |
| Suicidal Ideation | 2.16 | (1.39) | 1.77 | (1.19) |
| Considered Suicide | 1.60 | (5.76) | 0.27 | (1.26) |
| Suicide Attempt | 0.51 | (1.56) | 0.05 | (0.41) |
| Rel Satisfaction | 5.05 | (1.77) | 4.80 | (1.82) |

Table 4.

Attrition: Dropouts Compared to Completers

| | Sample | | Dropouts | | Completers | |
|---|---|---|---|---|---|---|
| | M | (SD) | M | (SD) | M | (SD) |
| Age (yr.) | 32.81 | (7.76) | 30.74 | (7.06) | 33.22 | (7.83) |
| Years Education | 11.96 | (2.06) | | | | |
| Percent of Poverty | 106.98 | (59.50) | | | | |
| Years in Relationship | 7.71 | (6.58) | 6.42 | (0.61) | 7.92 | (6.69) |
| Relationship Satisfaction | 4.69 | (1.27) | | | | |
| All Violence | 8.19 | (13.37) | 11.01 | (16.38) | 7.63 | (12.62) |
| Recent Violence | 6.99 | (15.67) | 10.79 | (22.69) | 6.11 | (13.62) |
| Weeks since Violence | 22.43 | (39.66) | 15.58 | (27.29) | 23.92 | (41.72) |
| Depression | 1.42 | (0.96) | | | | |
| Suicide Ideation | 2.16 | (1.39) | | | | |
| Considered Suicide | 1.60 | (5.75) | 2.95 | (11.35) | 1.34 | (3.75) |
| Suicide attempts | 0.51 | (1.56) | 0.78 | (2.85) | 0.46 | (1.15) |

Table 5.

Participants Who Made Violence Attributions Compared to Those Not Asked

| | Sample | | Not Asked | | Asked | |
|---|---|---|---|---|---|---|
| | M | SD | M | SD | M | SD |
| Age | 32.90 | (7.79) | 34.78 | (7.59) | 32.59 | (7.80) |
| Years Education | 11.97 | (1.99) | | | | |
| Percent of Poverty | 105.06 | (59.02) | | | | |
| Years in Relationship | 8.32 | (6.74) | 10.40 | (7.43) | 7.90 | (6.52) |
| Relationship Satisfaction | 4.88 | (1.77) | | | | |
| All Violence | 9.59 | (13.48) | 5.50 | (6.86) | 10.41 | (14.30) |
| Recent Violence | 6.12 | (13.43) | 1.54 | (3.30) | 7.25 | (14.69) |
| Weeks since Violence | 24.27 | (42.51) | 34.57 | (47.25) | 22.11 | (41.19) |
| Depression | 1.52 | (0.96) | | | | |
| Suicidal Ideation | 2.24 | (1.40) | | | | |
| Considered Suicide | 1.42 | (3.95) | | | | |
| Suicide Attempts | 0.49 | (1.19) | | | | |

Table 6.

Attributions by Ethnicity

| | Sample | | Black | | Chicana | | White | |
|---|---|---|---|---|---|---|---|---|
| | M | (SD) | M | (SD) | M | (SD) | M | (SD) |
| Globality | 1.45 | ( .99) | | | | | | |
| Cause | 5.51 | (1.48) | 5.72 | (1.43) | 5.31 | (1.51) | 5.41 | (1.49) |
| Responsibility | 5.37 | (1.46) | 5.63 | (1.42) | 5.09 | (1.52) | 5.29 | (1.42) |



Table 7.

Correlations Between Attributions

| | Sample | | Black | | Chicana | | White | |
|---|---|---|---|---|---|---|---|---|
| | 2. | 3. | 2. | 3. | 2. | 3. | 2. | 3. |
| 1. Global | .20*** | .24*** | .22*** | .30*** | .19* | .25*** | .22** | .18* |
| 2. Cause | | .74*** | | .71*** | | .72*** | | .79*** |
| 3. Responsibility | | | | | | | | |

* p < .05, ** p < .01, *** p <.001

Table 8.

Attributions For Self compared to Perceived Partner Attributions

| | Minor | | Violence | |
|---|---|---|---|---|
| | Subject | Partner | Subject | Partner |
| Sample | | | | |
| Cause | 4.65 | 2.58 | 5.51 | 2.86 |
| Responsibility | 4.78 | 2.93 | 5.37 | 2.87 |
| Blacks | | | | |
| Cause | 4.92 | 2.42 | 5.72 | 2.83 |
| Responsibility | 4.99 | 2.76 | 5.63 | 2.85 |
| Chicanas | | | | |
| Cause | 4.59 | 2.51 | 5.31 | 2.74 |
| Responsibility | 4.74 | 2.99 | 5.09 | 2.76 |
| Whites | | | | |
| Cause | 4.38 | 2.85 | 5.41 | 3.04 |
| Responsibility | 4.56 | 3.08 | 5.29 | 3.00 |

Table 9.

Differences by Frequency of Violence

| | None | | Moderate | | Frequent | |
|---|---|---|---|---|---|---|
| | *M* | (*SD*) | *M* | (*SD*) | *M* | (*SD*) |
| Wave 1 | | | | | | |
| Depression | 1.07 | (.88) | 1.41 | (.93) | 1.76 | (.95) |
| Suicidal Ideation | 1.79 | (1.18) | 2.17 | (1.41) | 2.49 | (1.47) |
| Suicide Attempts | 0.33 | (1.06) | 0.45 | (1.22) | 0.72 | (2.13) |
| Wave 2 | | | | | | |
| Depression | 1.10 | (.80) | 1.10 | (.88) | 1.39 | (.93) |
| Suicidal Ideation | 1.58 | (1.06) | 1.79 | (1.24) | 1.96 | (1.22) |

Table 10.

Wave 1 Correlations

| | 2. | 3. | 4. | 5. | 6. | 7. |
|---|---|---|---|---|---|---|
| 1. Depression | .66*** | .19*** | .21*** | .32*** | -.09** | -- |
| 2. Suicidal Ideation | | .37*** | .40*** | .26*** | -.12*** | -- |
| 3. Considered Suicide | | | .37*** | .13*** | -.12*** | -- |
| 4. Suicide Attempts | | | | .24*** | -.09** | -- |
| 5. All Violence | | | | | -.13** | .07* |
| 6. Poverty Level | | | | | | .17*** |
| 7. Marital status | | | | | | |

Note. Dash indicates correlation was nonsignificant.

* $p < .05$, ** $p < .01$, *** $p < .001$

Table 11.

Wave 2 Correlations

| | 2. | 3. | 4. | 5. | 6. | 7. | 8. | 9. | 10. | 11. |
|---|---|---|---|---|---|---|---|---|---|---|
| 1.Global | .21*** | .25*** | .23*** | .17*** | -- | .11** | .18*** | .27*** | .10* | -.31*** |
| 2.Cause | | .74*** | .28*** | -- | .09* | -- | .10* | .32*** | -- | -.32*** |
| 3.Responsibility | | | .10* | -- | -- | -- | .16*** | .21*** | -- | -.34*** |
| 4.Depression | | | | .61*** | .30*** | .19*** | .27*** | .31*** | -- | -.30*** |
| 5.Suicidal Ideation | | | | | .55*** | .36*** | .18*** | .21*** | -- | -.20*** |
| 6.Considered Suicide | | | | | | .51*** | -- | .08* | -- | -.10** |
| 7.Suicide Attempt | | | | | | | .12*** | -- | -- | -- |
| 8.All Violence | | | | | | | | .51*** | -- | -.22*** |
| 9.Recent Violence | | | | | | | | | -- | -.29*** |
| 10.Last Violence (wk) | | | | | | | | | | -- |
| 11.Rel Satisfaction | | | | | | | | | | |

Note. Dash indicates correlation was nonsignificant.

* p < .05, ** p < .01, *** p <.001

Table 12.

Violence with Attributions, Controlling for Relationship Satisfaction

| | Sample | | Blacks | | Chicanas | | Whites | |
|---|---|---|---|---|---|---|---|---|
| | *r* | part. | *r* | part. | *r* | part. | *r* | part. |
| Globality | .19*** | .14** | .28*** | .21** | .13 | .10 | .10 | .05 |
| Cause | .10* | .03 | .07 | -.01 | .03 | -.01 | .18* | .12 |
| Responsibility | .18*** | .11* | .17* | .07 | .11 | .06 | .22** | .17* |

* *p* < .05, ** *p* < .01, *** *p* <.001

Table 13.

Wave 2 Depression/Suicidality Predicted by Recent Violence

| | Controls | | Recent Violence | | | |
|---|---|---|---|---|---|---|
| Wave 2 Variable | beta | p | beta | p | R | p |
| Depression | | | | | | |
| Sample | .606 | .000 | .180 | .000 | .67 | .000 |
| Blacks | .607 | .000 | .232 | .000 | .70 | .000 |
| Chicanas | .594 | .000 | .240 | .000 | .68 | .000 |
| Whites | .606 | .000 | .051 | ns | .62 | .000 |
| Suicidal Ideation | | | | | | |
| Sample | .616 | .000 | .114 | .000 | .64 | .000 |
| Blacks | .505 | .000 | .184 | .000 | .58 | .000 |
| Chicanas | .640 | .000 | .137 | .008 | .67 | .000 |
| Whites | .714 | .000 | .039 | ns | .72 | .000 |

(table continued)

| | | | | | | |
|---|---|---|---|---|---|---|
| Considered Suicide | | | | | | |
| Sample | .235 | .000 | .079 | .04 | .25 | .000 |
| Blacks | .279 | .000 | .141 | .02 | .32 | .000 |
| Chicanas | .223 | .001 | .006 | ns | .23 | .003 |
| Whites | .243 | .001 | .046 | ns | .25 | .002 |
| Suicide Attempts | | | | | | |
| Sample | .232 | .000 | .109 | .004 | .26 | .000 |
| Blacks | .183 | .003 | .242 | .000 | .32 | .000 |
| Chicanas | .354 | .000 | -.005 | ns | .35 | .000 |
| Whites | .173 | .016 | -.019 | ns | .17 | ns |

Table 14.

Sample: Mediation by Globality Attributions

| | Step 1 | | Step 2 | | | | | |
|---|---|---|---|---|---|---|---|---|
| | beta | p | beta | p | $R^2_{chg}$ | $p_{chg}$ | R | p |
| Depression | | | | | | | .25 | .000 |
| Violence | .245 | .000 | .211 | .000 | | | | |
| Globality | | | .188 | .000 | .03 | .000 | | |
| Suicidal Ideation | | | | | | | .20 | .000 |
| Violence | .141 | .002 | .114 | .02 | | | | |
| Globality | | | .147 | .002 | .02 | .002 | | |
| Suicide Attempt | | | | | | | .15 | .008 |
| Violence | .126 | .009 | .110 | .03 | | | | |
| Globality | | | .085 | ns | .007 | ns | | |

Table 15.

Blacks: Mediation by Globality Attributions

| | Step 1 | | Step 2 | | | | | |
|---|---|---|---|---|---|---|---|---|
| | beta | p | beta | p | $R^2_{chg}$ | $p_{chg}$ | R | p |
| Depression | | | | | | | .40 | .000 |
| Violence | .319 | .000 | .260 | .001 | | | | |
| Globality | | | .214 | .003 | .04 | .003 | | |
| Suicidal Ideation | | | | | | | .28 | .000 |
| Violence | .241 | .000 | .198 | .008 | | | | |
| Globality | | | .156 | .04 | .02 | .03 | | |
| Considered Suicide | | | | | | | .25 | .003 |
| Violence | .242 | .001 | .223 | .003 | | | | |
| Globality | | | .070 | ns | .005 | ns | | |

(table continued)

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Suicide Attempt | | | | | | | .29 | .001 |
| Violence | .286 | .000 | .272 | .001 | | | | |
| Globality | | | .044 | ns | .002 | ns | | |

Table 16.

Sample: Moderation by Poverty Status

| | Step 1 | | Step 2 | | | |
|---|---|---|---|---|---|---|
| | beta | p | beta | p | R | p |
| Depression | | | | | .33 | .000 |
| Violence | .320 | .000 | .322 | .000 | | |
| Poverty Status | -.071 | .04 | -.070 | .04 | | |
| Interaction | | | .013 | ns | | |
| Suicidal Ideation | | | | | .29 | .000 |
| Violence | .262 | .000 | .250 | .000 | | |
| Poverty Status | -.110 | .001 | -.112 | .001 | | |
| Interaction | | | -.061 | ns | | |

(table continued)

| | | | | | | |
|---|---|---|---|---|---|---|
| Considered Suicide | | | | | .24 | .000 |
| Violence | .136 | .000 | .107 | .003 | | |
| Poverty Status | -.110 | .002 | .115 | .001 | | |
| Interaction | | | -.160 | .000 | | |
| Suicide Attempt | | | | | .35 | .000 |
| Violence | .243 | .000 | .202 | .000 | | |
| Poverty Status | -.083 | .02 | -.088 | .009 | | |
| Interaction | | | -.235 | .000 | | |

Table 17.

Blacks: Moderation by Poverty Status

| | Step 1 | | Step 2 | | | |
|---|---|---|---|---|---|---|
| | beta | p | beta | p | R | p |
| Depression | | | | | .34 | .000 |
| Violence | .327 | .000 | .329 | .000 | | |
| Poverty Status | -.098 | ns | -.095 | ns | | |
| Interaction | | | .013 | ns | | |
| Suicidal Ideation | | | | | .32 | .000 |
| Violence | .287 | .000 | .282 | .000 | | |
| Poverty Status | -.132 | .02 | -.138 | .02 | | |
| Interaction | | | -.029 | ns | | |

(table continued)

| | | | | | | |
|---|---|---|---|---|---|---|
| Considered Suicide | | | | | .15 | .04 |
| Violence | .115 | ns | .093 | ns | | |
| Poverty Status | -.099 | ns | -.124 | .04 | | |
| Interaction | | | -.129 | .04 | | |
| Suicide Attempt | | | | | .21 | ns |
| Violence | .210 | .001 | .211 | .001 | | |
| Poverty Status | .026 | ns | .027 | ns | | |
| Interaction | | | .006 | ns | | |

Table 18.

Chicanas: Moderation by Poverty Status

| | Step 1 | | Step 2 | | | |
|---|---|---|---|---|---|---|
| | beta | p | beta | p | R | p |
| Depression | | | | | .28 | .000 |
| Violence | .277 | .000 | .289 | .000 | | |
| Poverty Status | -.018 | ns | -.017 | ns | | |
| Interaction | | | .066 | ns | | |
| Suicidal Ideation | | | | | .22 | .007 |
| Violence | .178 | .004 | .158 | .02 | | |
| Poverty Status | -.057 | ns | -.058 | ns | | |
| Interaction | | | -.112 | ns | | |

(table continued)

| | | | | | | |
|---|---|---|---|---|---|---|
| Considered Suicide | | | | | .13 | ns |
| Violence | .053 | ns | .049 | ns | | |
| Poverty Status | -.115 | ns | -.115 | ns | | |
| Interaction | | | -.019 | ns | | |
| Suicide Attempt | | | | | .72 | .000 |
| Violence | .406 | .000 | .299 | .000 | | |
| Poverty Status | -.178 | .003 | -.175 | .002 | | |
| Interaction | | | -.582 | .000 | | |

Table 19.

Whites: Moderation by Poverty Status

| | Step 1 | | Step 2 | | | |
|---|---|---|---|---|---|---|
| | beta | p | beta | p | R | p |
| Depression | | | | | .37 | .000 |
| Violence | .341 | .000 | .337 | .00 | | |
| Poverty Status | -.093 | ns | -.092 | ns | | |
| Interaction | | | -.024 | ns | | |
| Suicidal Ideation | | | | | .37 | .000 |
| Violence | .317 | .000 | .307 | .000 | | |
| Poverty Status | -.149 | .01 | -.146 | .02 | | |
| Interaction | | | -.055 | ns | | |

(table continued)

| | | | | | | |
|---|---|---|---|---|---|---|
| Considered Suicide | | | | | .37 | .000 |
| Violence | .207 | .001 | .159 | .008 | | |
| Poverty Status | -.121 | .05 | -.094 | ns | | |
| Interaction | | | -.273 | .000 | | |
| Suicide Attempt | | | | | .18 | .039 |
| Violence | .111 | ns | .115 | ns | | |
| Poverty Status | -.125 | .05 | -.127 | .05 | | |
| Interaction | | | .022 | ns | | |

Table 20.

Sample: Moderation by Education

| | Step 1 | | Step 2 | | | |
|---|---|---|---|---|---|---|
| | beta | p | beta | p | R | p |
| Depression | | | | | .32 | .000 |
| Violence | .312 | .000 | .234 | ns | | |
| Education | -.055 | ns | -.063 | ns | | |
| Interaction | | | .079 | ns | | |
| Suicidal Ideation | | | | | .29 | .000 |
| Violence | .255 | .000 | .469 | .01 | | |
| Education | -.113 | .001 | -.091 | .05 | | |
| Interaction | | | -.217 | ns | | |

(table continued)

| | | | | | | |
|---|---|---|---|---|---|---|
| Considered Suicide | | | | | .14 | .01 |
| Violence | .131 | .001 | .121 | ns | | |
| Education | -.026 | ns | -.027 | ns | | |
| Interaction | | | .011 | ns | | |
| Suicide Attempt | | | | | .43 | .000 |
| Violence | .235 | .000 | 1.99 | .000 | | |
| Education | -.087 | .05 | .100 | .01 | | |
| Interaction | | | -.179 | .000 | | |

Table 21.

Chicanas: Moderation by Education

| | Step 1 | | Step 2 | | | |
|---|---|---|---|---|---|---|
| | beta | p | beta | p | R | p |
| Depression | | | | | .27 | .001 |
| Violence | .257 | .000 | .063 | ns | | |
| Education | -.074 | ns | -.096 | ns | | |
| Interaction | | | .201 | ns | | |
| Suicidal Ideation | | | | | .27 | .001 |
| Violence | .159 | .01 | .450 | ns | | |
| Education | -.202 | .001 | .169 | ns | | |
| Interaction | | | .30 | ns | | |

(table continued)

| | | | | | | |
|---|---|---|---|---|---|---|
| Considered Suicide | | | | | .11 | ns |
| Violence | .039 | ns | .133 | ns | | |
| Education | -.095 | ns | -.084 | ns | | |
| Interaction | | | -.097 | ns | | |
| Suicide Attempt | | | | | .72 | .000 |
| Violence | .392 | .000 | 2.672 | .000 | | |
| Education | -.181 | .01 | .084 | ns | | |
| Interaction | | | -2.363 | .000 | | |

Table 22.

Sample: Moderation by Marital Status

| | Step 1 | | Step 2 | | | |
|---|---|---|---|---|---|---|
| | beta | p | beta | p | R | p |
| Depression | | | | | .32 | .000 |
| Violence | .317 | .000 | .321 | .000 | | |
| Marital Status | -.016 | ns | -.020 | ns | | |
| Interaction | | | -.021 | ns | | |
| Suicidal Ideation | | | | | .27 | .000 |
| Violence | .266 | .000 | .261 | .000 | | |
| Marital Status | -.052 | ns | -.048 | ns | | |
| Interaction | | | .025 | ns | | |

(table continued)

| | | | | | | |
|---|---|---|---|---|---|---|
| Considered suicide | | | | | .19 | .000 |
| Violence | .134 | .000 | .105 | .003 | | |
| Marital Status | -.018 | ns | .003 | ns | | |
| Interaction | | | .139 | .000 | | |
| Suicide Attempt | | | | | .30 | .000 |
| Violence | .243 | .000 | .209 | .000 | | |
| Marital Status | -.027 | ns | -.001 | ns | | |
| Interaction | | | .174 | .000 | | |

Table 23.

Chicanas: Moderation by Marital Status

| | Step 1 | | Step 2 | | | |
|---|---|---|---|---|---|---|
| | beta | p | beta | p | R | p |
| Depression | | | | | .27 | .000 |
| Violence | .267 | .000 | .293 | .000 | | |
| Marital Status | .065 | ns | .077 | ns | | |
| Interaction | | | .064 | ns | | |
| Suicidal Ideation | | | | | .21 | .011 |
| Violence | .166 | .008 | .110 | ns | | |
| Marital Status | -.002 | ns | .024 | ns | | |
| Interaction | | | .137 | .05 | | |

(table continued)

| | | | | | | |
|---|---|---|---|---|---|---|
| Considered suicide | | | | | .16 | ns |
| Violence | .053 | ns | .000 | ns | | |
| Marital Status | .100 | ns | -.078 | ns | | |
| Interaction | | | .128 | ns | | |
| Suicide Attempt | | | | | .51 | .000 |
| Violence | .397 | .000 | .252 | .000 | | |
| Marital Status | -.012 | ns | .049 | ns | | |
| Interaction | | | .357 | .000 | | |

Table 24.

Whites: Moderation by Marital Status

| | Step 1 | | Step 2 | | | |
|---|---|---|---|---|---|---|
| | beta | p | beta | p | R | p |
| Depression | | | | | .35 | .000 |
| Violence | .346 | .000 | .353 | .000 | | |
| Marital Status | .043 | ns | .041 | ns | | |
| Interaction | | | .021 | ns | | |
| Suicidal Ideation | | | | | .35 | .000 |
| Violence | .331 | .000 | .360 | .000 | | |
| Marital Status | .086 | ns | -.093 | ns | | |
| Interaction | | | -.082 | ns | | |

(table continued)

| | | | | | | |
|---|---|---|---|---|---|---|
| Considered suicide | | | | | .32 | .000 |
| Violence | .212 | .001 | .129 | .041 | | |
| Marital Status | -.094 | ns | -.074 | ns | | |
| Interaction | | | .237 | .000 | | |
| Suicide Attempt | | | | | .20 | .016 |
| Violence | .127 | .000 | .138 | .033 | | |
| Marital Status | -.148 | .016 | -.151 | .014 | | |
| Interaction | | | -.033 | ns | | |

Table 25.

Sample: Regression Coefficient Comparisons by Marital Status

| | | | | Unmarried | | Married | |
|---|---|---|---|---|---|---|---|
| Measure | (df) | t | p | B | SE B | B | SE B |
| Depression | (832) | .0 | ns | .023 | .003 | .023 | .004 |
| Suicidal Ideation | (832) | .71 | ns | .025 | .005 | .030 | .005 |
| Considered Suicide | (802) | -3.77 | .001 | .009 | .017 | .126 | .026 |
| Suicide Attempt | (781) | -4.96 | .001 | .012 | .004 | .052 | .007 |



Table 26.

Blacks: Regression Coefficient Comparisons by Marital Status

| | | | | Unmarried | | Married | |
|---|---|---|---|---|---|---|---|
| Measure | (df) | t | p | B | SE B | B | SE B |
| Depression | (295) | .85 | ns | .035 | .008 | .026 | .007 |
| Suicidal Ideation | (295) | -1.31 | ns | .026 | .007 | .042 | .010 |
| Considered Suicide | (287) | -1.14 | ns | .023 | .009 | .139 | .101 |
| Suicide Attempt | (274) | .0 | ns | .014 | .005 | .014 | .008 |

Table 27.

Chicanas: Regression Coefficient Comparisons by Marital Status

| | | | | Unmarried | | Married | |
|---|---|---|---|---|---|---|---|
| Measure | (df) | t | p | B | SE B | B | SE B |
| Depression | (256) | .98 | ns | .026 | .007 | .017 | .006 |
| Suicidal Ideation | (254) | -1.73 | .05 | .004 | .012 | .030 | .009 |
| Considered Suicide | (255) | -1.42 | ns | -.028 | .054 | .052 | .016 |
| Suicide Attempt | (138) | -6.49 | .001 | -.004 | .011 | .122 | .016 |



Table 28.

Whites: Regression Coefficient Comparisons by Marital Status

| | | | | Unmarried | | Married | |
|---|---|---|---|---|---|---|---|
| Measure | (df) | t | p | B | SE B | B | SE B |
| Depression | (267) | -.25 | ns | .021 | .005 | .023 | .006 |
| Suicidal Ideation | (269) | 1.22 | ns | .036 | .008 | .023 | .007 |
| Considered Suicide | (259) | -3.80 | .001 | .004 | .037 | .185 | .030 |
| Suicide Attempt | (259) | .92 | ns | .015 | .009 | .005 | .006 |

# APPENDIX I

## FIGURES

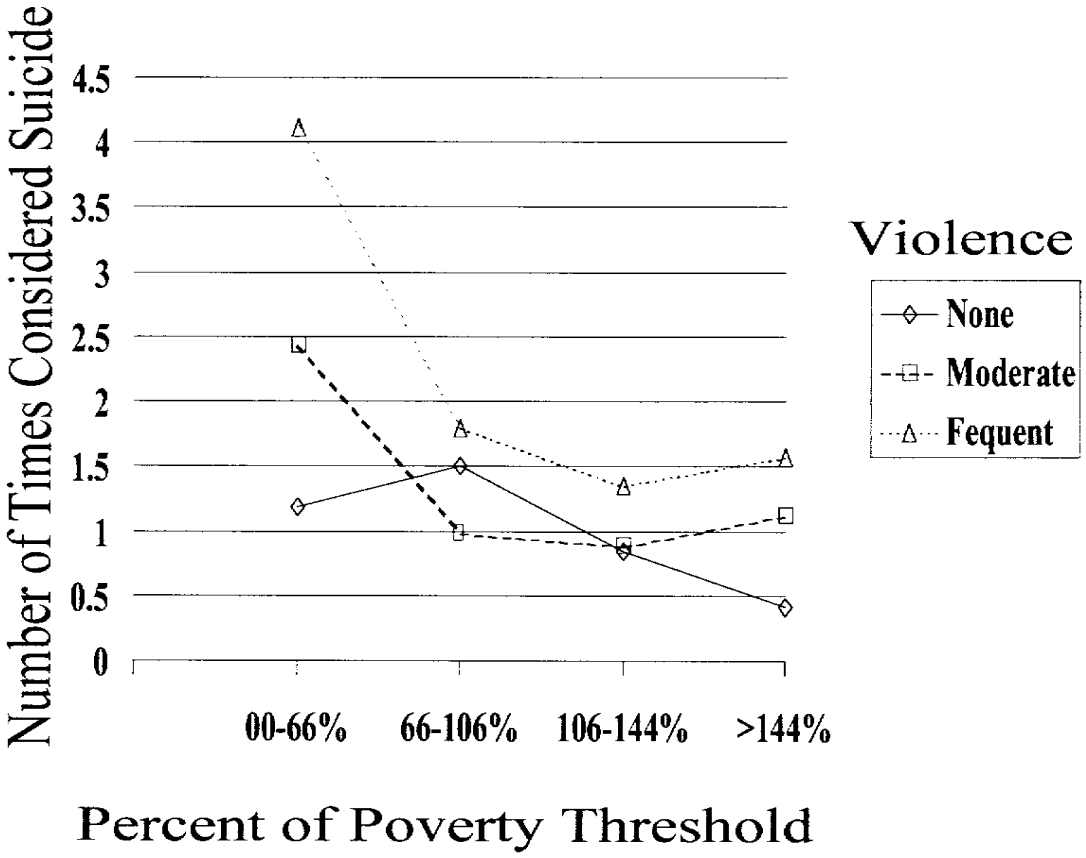


Figure 1. Sample: Interaction between poverty status and violence on the times suicide was considered.

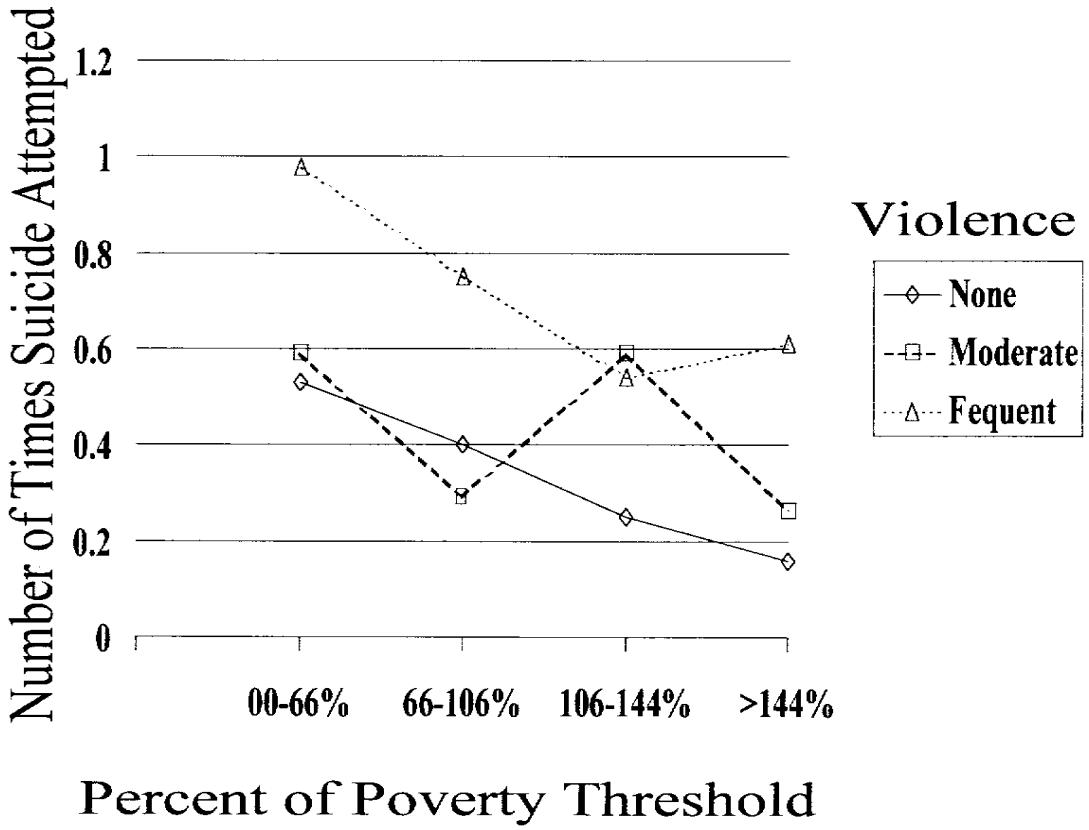


Figure 2. Sample: Interaction between poverty status and violence on the times suicide was attempted.

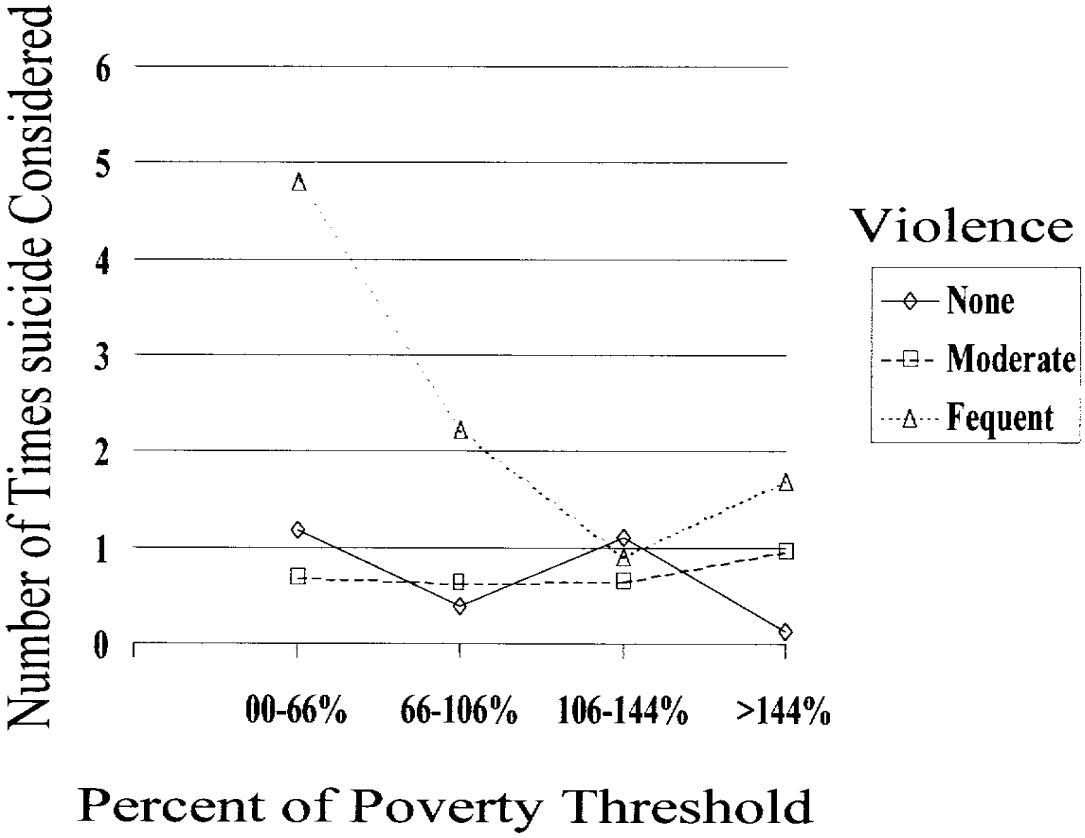


Figure 3. Blacks: Interaction between poverty status and violence on the times suicide was considered.

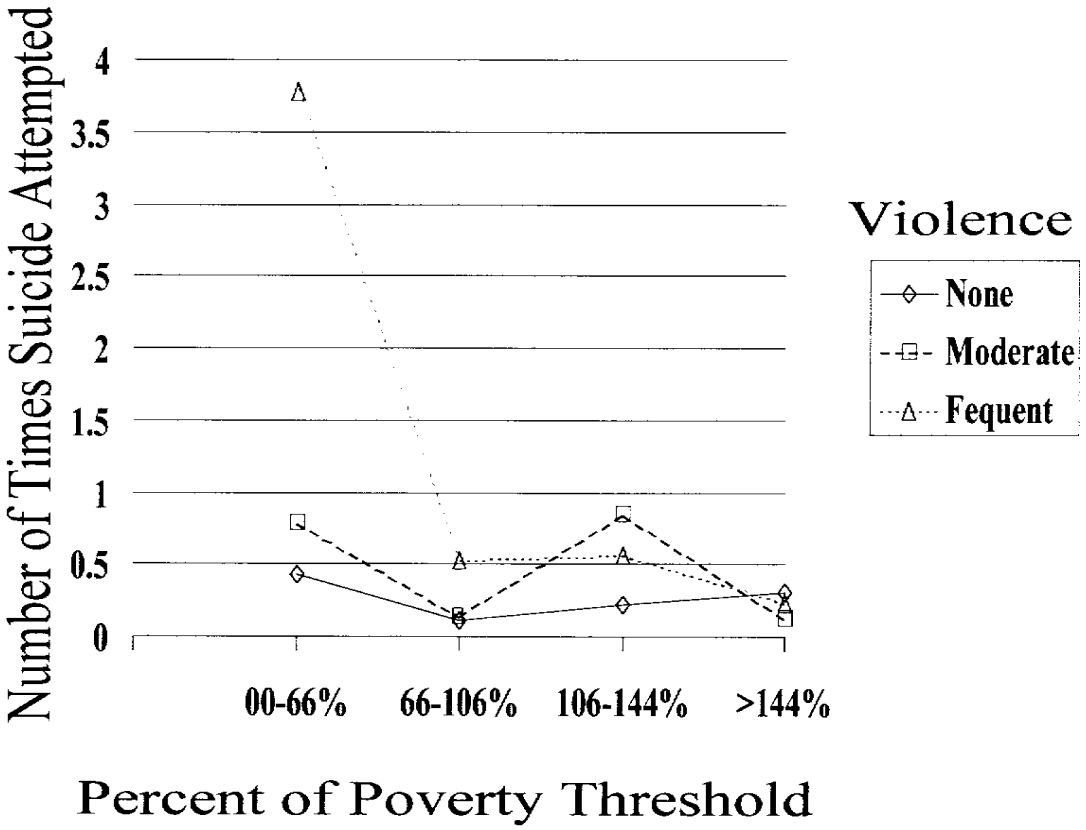


Figure 4. Chicanas: Interaction between poverty status and violence on the times suicide was attempted.

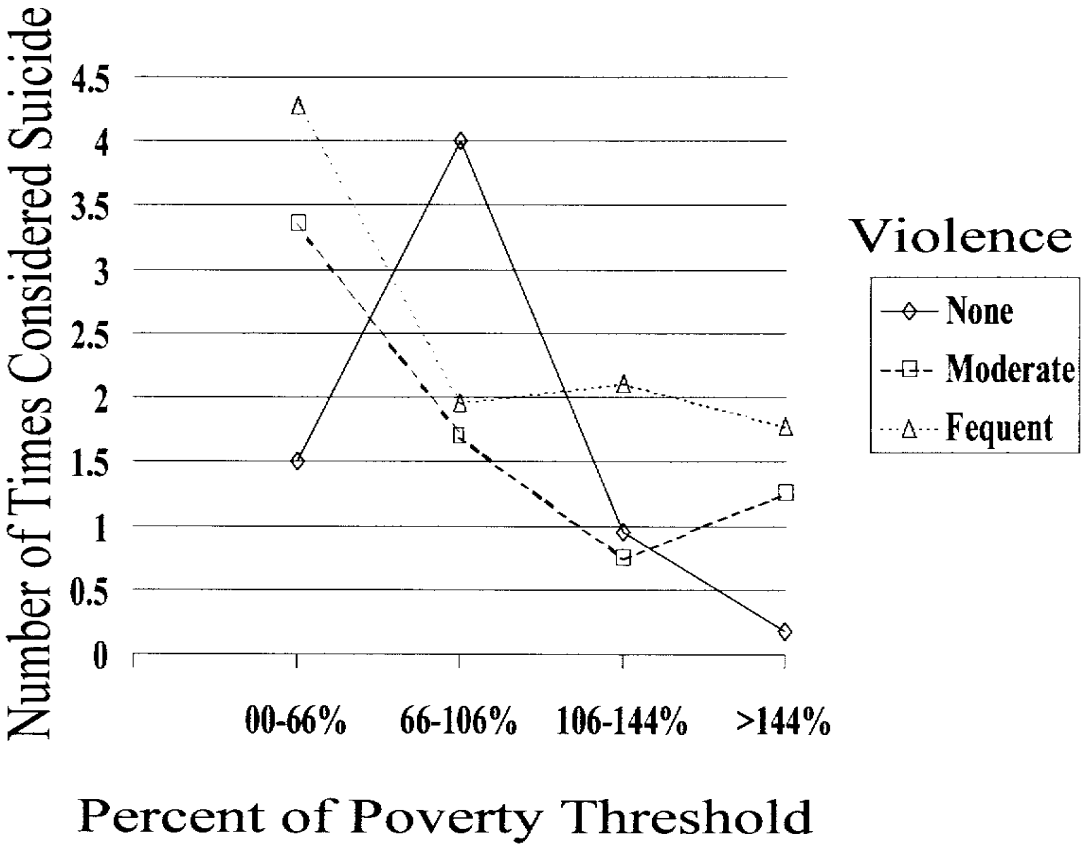


Figure 5. Whites: Interaction between poverty status and violence on the times suicide was considered.

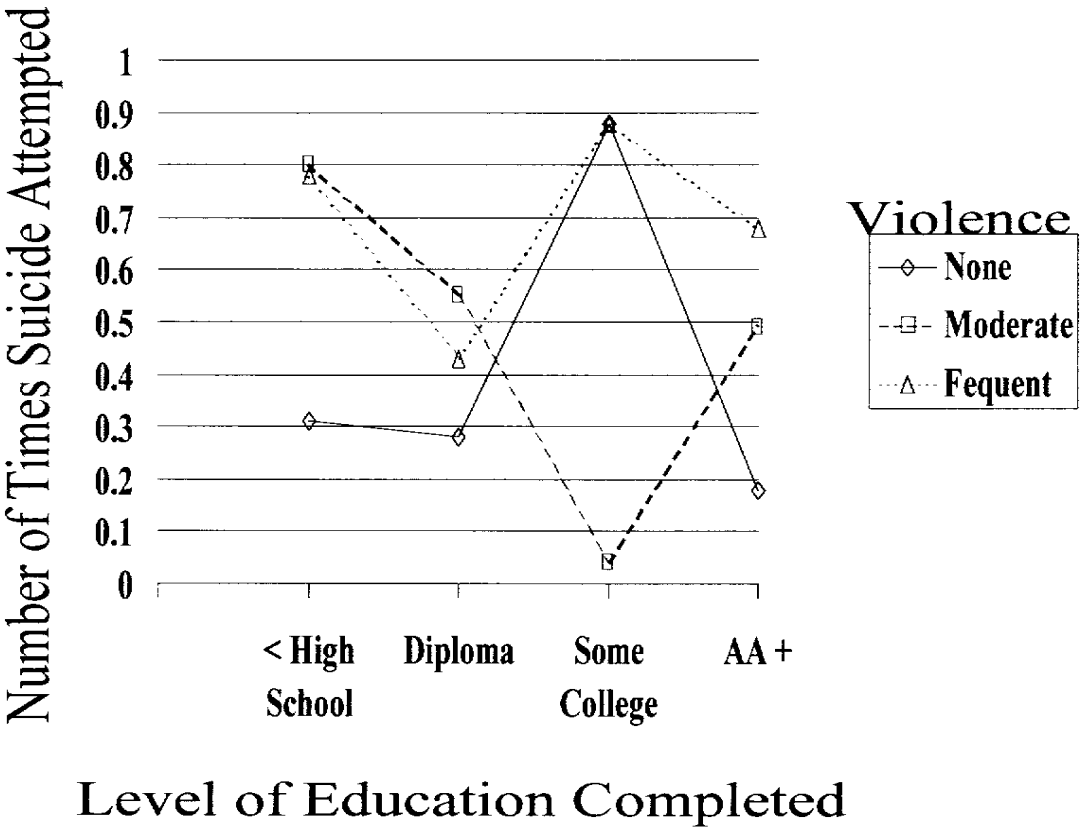


Figure 6. Sample: Interaction between education and violence on the times suicide was attempted.

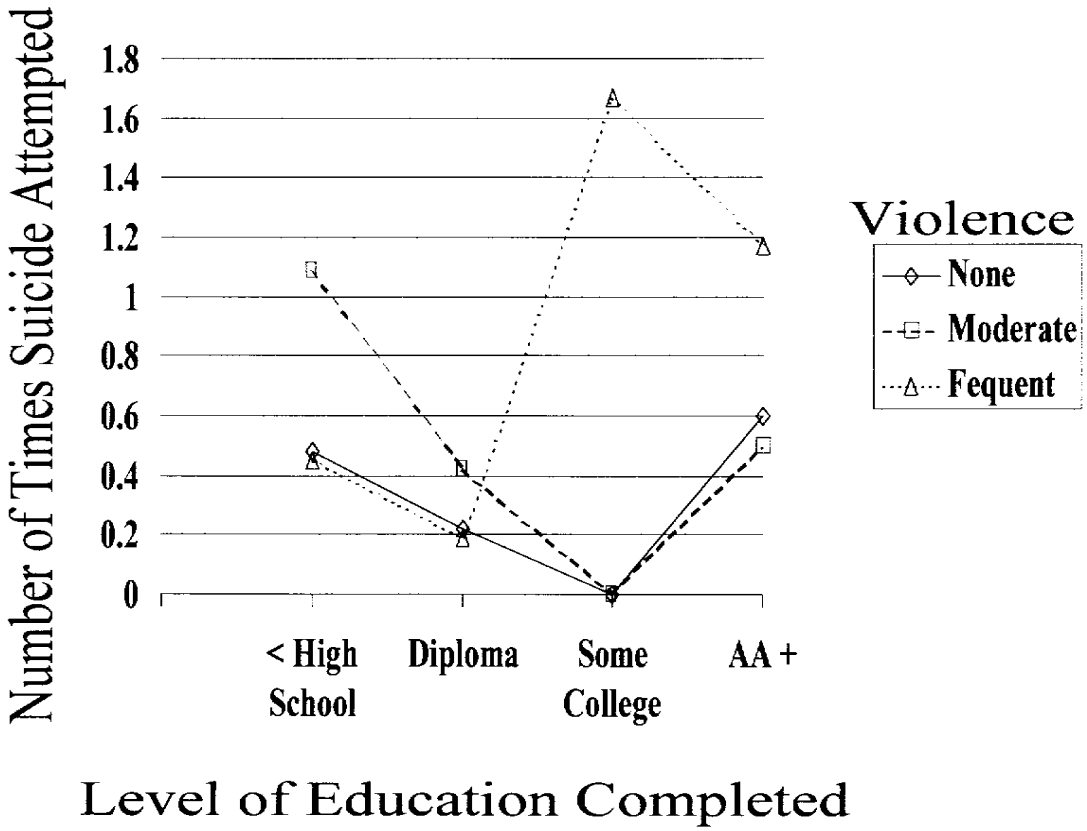


Figure 7. Chicanas: Interaction between education and violence on the times suicide was attempted.

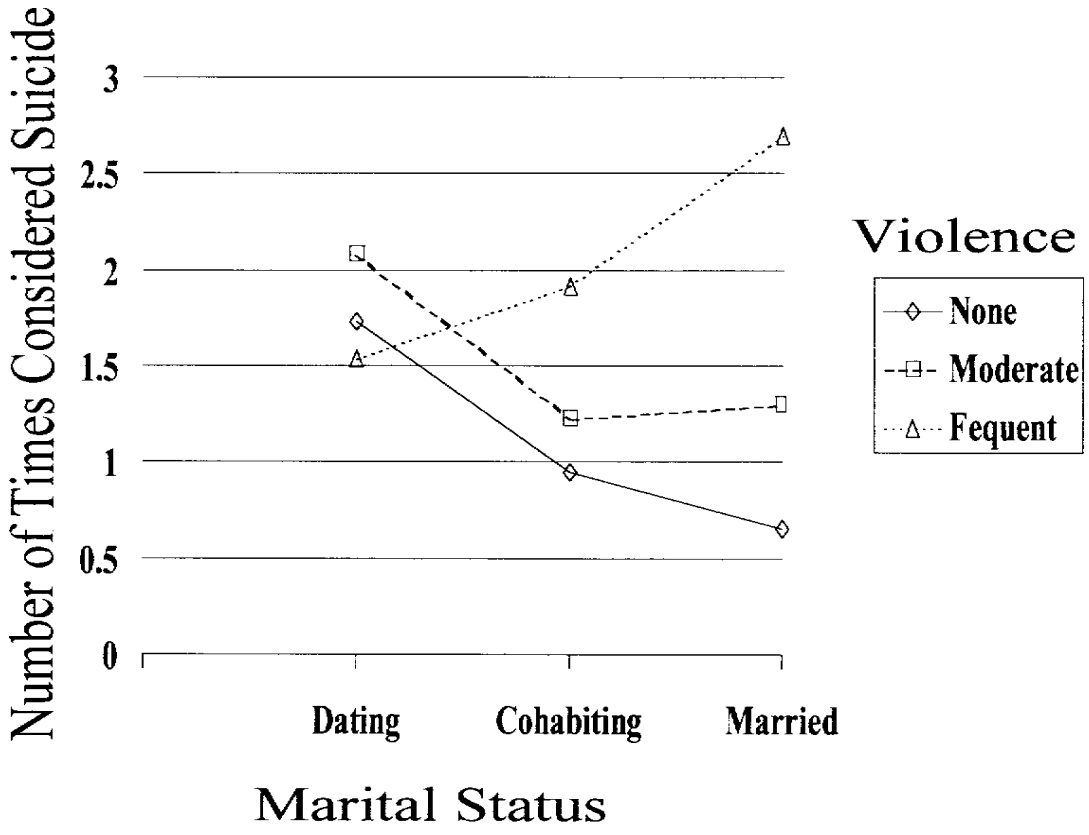


Figure 8. Sample: Interaction between marital status and violence on the times suicide was considered.

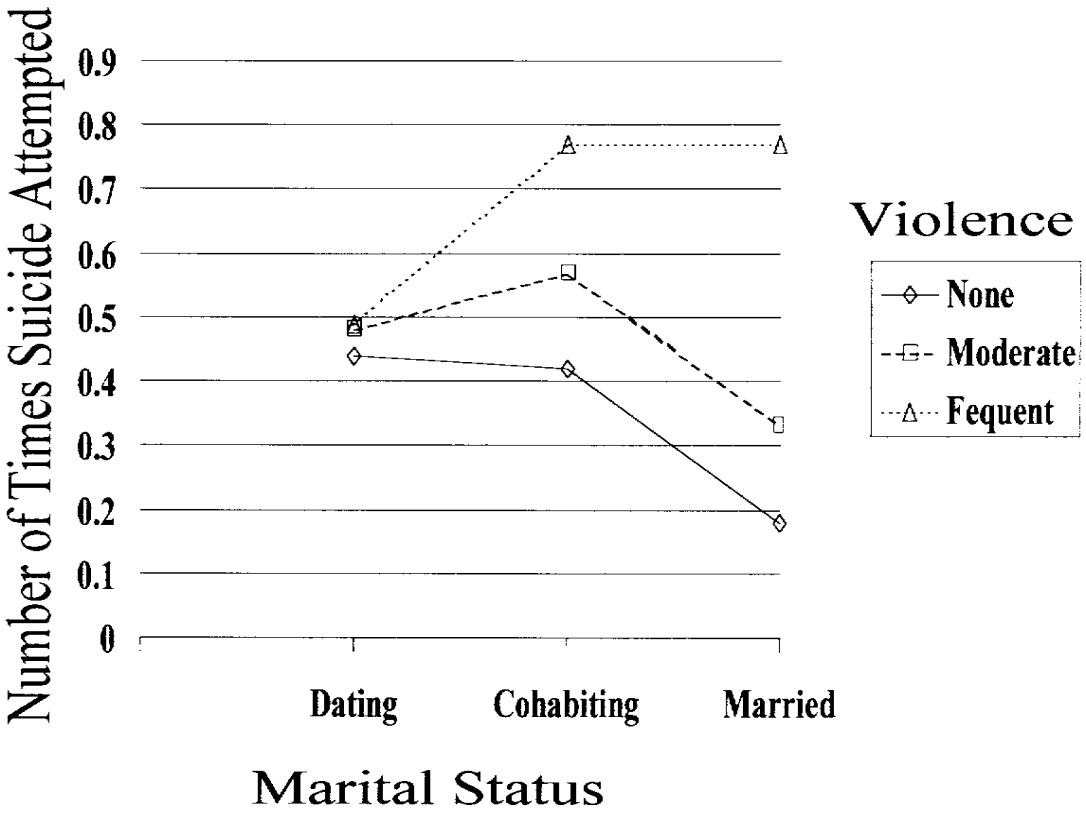


Figure 9. Sample: Interaction between marital status and violence on the times suicide was attempted.


Figure 10. Chicanas: Interaction between marital status and violence on suicidal ideation.

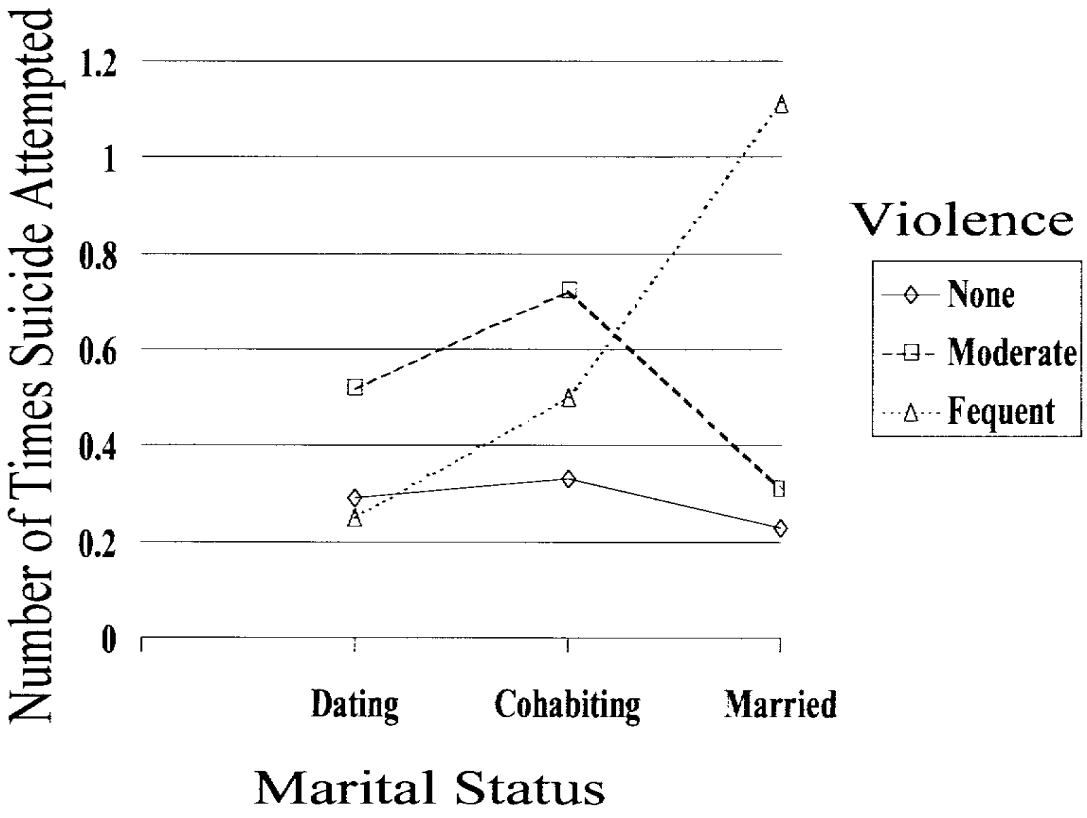


Figure 11. Chicanas: Interaction between marital status and violence on the times suicide was attempted.

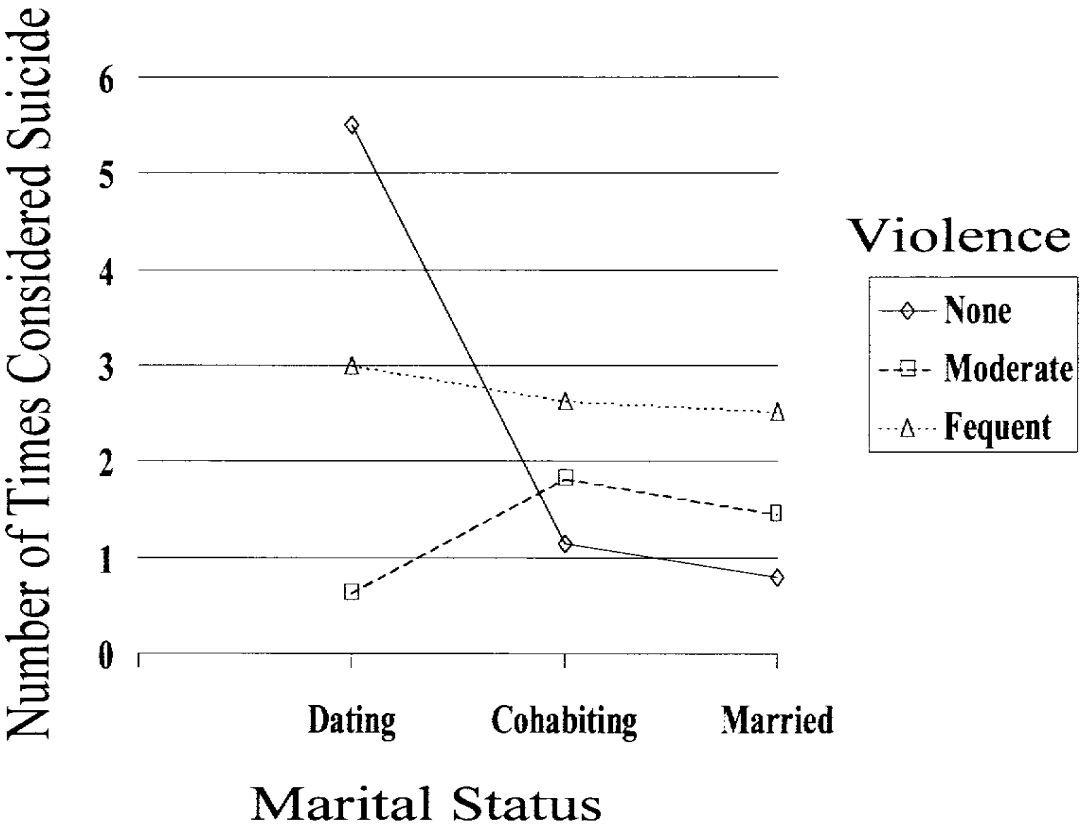


Figure 12. Whites: Interaction between marital status and violence on the times suicide was considered.

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