Shattered Assumptions, Coping and Religiosity in Intimate Partner Violence Survivors: A Partial Explanation for Variation in PTSD Symptoms?

by

Michelle Marie Lilly

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Doctoral Committee:

Professor Sandra A. Graham-Bermann, Chair
Associate Professor Lilia M. Cortina
Associate Professor Laura P. Kohn-Wood
Lecturer Jane A. Hassinger

End Violence Against Women

Dedication

To the brave and selfless women who shared their stories and lives with me. Without them, this project would not exist.

To my family, who have always challenged me to go for the stars and supported my abilities, but have also armed me with humility. In particular, to my mom who, via telephone, travelled with me to and from many of the interviews.

Lastly, to G. Daniel Lilly, my loving and wonderful husband, who has demonstrated the utmost patience and understanding over the last two years. Without his love, support and sustenance, this project would have quickly foundered.

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Foreword

This dissertation is about violence against women that occurs in intimate relationships. It explores how intimate partner violence affects women's mental health in the form of post-traumatic stress disorder (PTSD), and whether coping, shattered assumptions and religiosity can ameliorate or exacerbate development of PTSD symptoms. Additionally, it examines interethnic variability in PTSD in IPV survivors, and whether this variability can be accounted for by differences in coping, shattered assumptions and religiosity.

The idea for this project came to me via previous research at the master's level; namely, my masters thesis found that African American women reported fewer symptoms of PTSD than European American women, despite the presence of more risk factors (such as lower income and less education). This raised several important questions for me, such as what factors place women at risk for PTSD after IPV? How does violence challenge women's beliefs about the world and themselves? How does the experience of violence affect a woman's ability to cope? Why is religiosity such a recurrent theme for IPV survivors? How does violence, which occurs within a complex matrix of social locations and identities, get defined, dealt with, and recovered from as a function of women's social position (i.e., income, education, ethnicity)? The present study is an attempt to begin answering these questions.

As a feminist researcher, it is important for me to disclose my own social location in relationship to this project. I am a young, European American woman from a working class background that secured a competitive education that has mobilized me from one social class to another. I have never experienced intimate partner violence, nor was it present in my family during childhood. On the surface, these characteristics may make the choice of dissertation topic seemingly odd.

Like so many in this world, however, I have not been unaffected by partner violence and trauma. I have had to watch, listen and support friends in abusive relationships, learning about how their personal histories impact(ed) their decisions to stay or leave the relationship. As a clinician, I have worked with women from multiple ethnic groups as they struggle to make sense of current and past abuses, hearing about how their experiences of violence were influenced by what they were taught about violence, families and culture.

As a woman, I have not remained immune to forms of violence such as sexual harassment and denigration in relationships, workplaces and on the street. Though less pernicious, these experiences have reinforced to me the extent to which women in violent relationships are not only victimized by their partners, but how available choices for these women are delimited by a social system that perpetuates forms of sexism, and in this case, takes the form of violence against women. It is with a strong belief in the power of activism via education that I have been inspired to complete this work. My observations of the ways in which my own intersectionality has impacted my beliefs and understanding of the world have leant a similar curiosity to this work. How do women

from different social locations experience, respond to, define and recover from violence? It is to this question that I will now turn.

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Abstract

Every year, millions of women around the globe are exposed to violence in intimate relationships. The cost of this violence is substantial, affecting women's economic, physical and emotional health. One common outcome of intimate partner violence (IPV) is Posttraumatic Stress Disorder (PTSD), which has been shown to be disproportionately high in IPV survivors in relation to the general population. However, various factors have been implicated that can serve either to protect against or put at risk for PTSD symptom development in IPV survivors. The current project seeks to explore several factors that have been implicated in PTSD symptoms, such as world assumptions, coping style and religiosity, and to determine whether these place women at risk for PTSD symptoms following IPV. A secondary aim is to establish whether these factors operate differentially as a function of ethnicity in predicting PTSD symptoms.

The present work incorporated the theory of shattered assumptions to the study of IPV survivors, finding that shattered assumptions was related to exposure to more overall IPV, as well as heightened reports of PTSD symptoms. Coping style was found to be related to both IPV and PTSD; namely, emotion-focused coping was related to more overall IPV and higher reports of PTSD. However, a moderation analysis found that problem-focused coping in the face of high rates of IPV similarly increased risk for PTSD symptoms. Finally, religiosity was found to be related to PTSD such that individuals who reported more overall religious involvement also reported heightened

levels of PTSD, confirming the hypotheses that religiosity would signal distress and attempts to cope for IPV survivors.

Consistent with the hypotheses, several interethnic differences emerged in the data. African American women, for example, reported more IPV and more religiosity than their European American counterparts. Contrary to the hypotheses, however, African American women reported equivalent rates of PTSD and shattered assumptions in relation to European American women. The meaning behind religiosity, shattered assumptions and coping in relationship to PTSD symptoms is discussed, as well as the implication for these factors in relationship to ethnicity. A model is proposed for future testing with a larger sample size.

Chapter 1

Introduction

Violence against women takes many forms, has many outcomes, and claims many lives every year. From international trafficking of women and enforced prostitution to violence in the home, women can occupy any number of social locations and not remain immune to the experience or effects of violence. Intimate partner violence, in particular, affects millions of women with rates estimated between 4.4 million and 10 million (Schafer et al., 2002; Sorenson et al., 1996) per year in the U.S. While the women's movement incited curiosity, scholarship and commitment to the problem of IPV, which has led to a burgeoning of articles and books on, and awareness of, IPV, more contextualized studies of how women from different social locations experience, cope with, and are affected by IPV have remained few.

Though definitions of IPV have changed over the years and across studies, for the purposes of this study, IPV is defined as physically, emotionally, or sexually abusive acts intentionally inflicted upon a woman by her intimate partner with the objective of injuring, controlling and/or demeaning her regardless of the frequency with which it occurs (Straus et al., 1980; Straus et al., 1996). In 2002, homicide of a family member accounted for 22% of all murders, and nearly 60% of those killed were women (Bureau

of Justice Statistics, 2005). Women in violent relationships may not yet be the 'survivors' that come to mind when one has survived (note the past tense) a plane crash or hurricane, or when one has effectively left a violent relationship, instead women may simply be surviving atrocity leveled by multiple systems and preserving their lives to the best of their ability. For these reasons, the term 'survivor' is used throughout this thesis.

This research project examines assumptions about the world, coping, religiosity, and symptoms of Posttraumatic Stress Disorder (PTSD) in survivors of intimate partner violence (IPV). It is hypothesized that variations in assumptions, coping and religiosity will account for a significant portion of the variability in PTSD symptoms in IPV survivors, particularly variation in PTSD symptoms across African American and European American women. It is further hypothesized that shattered assumptions will delimit the coping strategies used by IPV survivors, which will in turn impact the expression of PTSD symptoms.

IPV can have enduring consequences, affecting women's financial, interpersonal, and mental health (Byrne et al., 1999; Golding, 1999). One common outcome of IPV is PTSD (Astin et al., 1993; Axelrod et al., 1999; Chemtob & Carlson, 2004; Kemp et al., 1991; Mertin & Mohr, 2000; Nixon et al., 2004). In fact, a meta-analysis conducted by Golding (1999) found a 63.8% weighted mean prevalence of PTSD in IPV survivors. This is a remarkable number considering that epidemiological work has shown only a 7.8% prevalence rate of PTSD in the general population (Kessler et al., 1995). For a complete list of PTSD diagnostic criteria, please see Figure 1.

Figure 1: PTSD Diagnostic Criteria

Diagnostic criteria for PTSD are outlined in the DSM-IV-TR (APA, 2000, p. 467-468).

A. The person has been exposed to a traumatic event in which both of the following were present:
   (1) The person experienced, witnessed, or was confronted with an event or events that involved actual or threatened death or serious injury or a threat to the physical integrity of self or others (Criterion A1)
   (2) The person's response involved intense fear, helplessness, or horror (Criterion A2)

B. The traumatic event is persistently reexperienced in one (or more) of the following ways:
   (1) Recurrent and intrusive distressing recollections of the event, including images, thoughts, or perceptions
   (2) Recurrent distressing dreams of the event
   (3) Acting or feeling as if the traumatic event were recurring (including a sense of reliving the experience, illusions, hallucinations, and dissociative flashbacks episodes, including those that occur on awakening or when intoxicated)
   (4) Intense psychological distress at exposure to internal or external cues that symbolize or resemble an aspect of the traumatic event
   (5) Physiological reactivity on exposure to internal or external cues that symbolize or resemble and aspect of the traumatic event

C. Persistent avoidance of stimuli associated with the trauma and numbing of general responsiveness (not present before the trauma), as indicated by three (or more) of the following:
   (1) Efforts to avoid thoughts, feelings, or conversations associated with the trauma
   (2) Efforts to avoid activities, places or people that arouse recollections of the trauma
   (3) Inability to recall an important aspect of the trauma
   (4) Markedly diminished interest or participation in significant activities
   (5) Feeling of detachment or estrangement from others
   (6) Restricted range of affect (e.g., unable to have loving feelings)
   (7) Sense of a foreshortened future (e.g., does not expect to have a career, marriage, children, or a normal life span)

D. Persistent symptoms of increase arousal (not present before the trauma), as indicated by two (or more) of the following:
   (1) Difficulty falling or staying asleep
   (2) Irritability or outbursts of anger
   (3) Difficulty concentrating
   (4) Hypervigilance
   (5) Exaggerated startle response

E. Duration of the disturbance (symptoms B, C, and D) is more than 1 month

F. The disturbance causes clinically significant distress or impairment in social, occupational, or other important areas of functioning

The research literature has provided ample documentation of the link between IPV and PTSD. However, few researchers have theorized or empirically examined why PTSD seems a common outcome of IPV. Ronnie Janoff-Bulman's (1983; 1992) theory and empirical work on shattered assumptions may be one way of understanding the development of PTSD in IPV survivors. The theory of shattered assumptions maintains that individuals daily carry with them three fundamental assumptions: the world is benevolent, the world is meaningful, and the self is worthy. These assumptions aid people in making sense of a world marked by potentially over-stimulating and overwhelming input while simultaneously providing them with a sense of safety and self-worth. Without these assumptions, people could be easily overcome by a world that in many respects is chaotic and unsafe. Janoff-Bulman's theory contends that trauma can shatter these basic assumptions, disintegrating a person's beliefs in how the world should, can and does operate. When this occurs, symptoms of PTSD and/or depression may emerge until the individual can restore previously held assumptions.

It is at this juncture that coping strategies emerge as an important piece in restoring assumptions. Lazarus (1993) argues that individuals develop coping strategies that are malleable and change over time in response to stressful events. In regards to trauma, successful resolution of the challenges presented by a traumatic event (i.e., shattered assumptions) is due to active attempts to mediate these effects through a variety of coping strategies. Lazarus argues that individuals will attempt to engage in many different coping strategies until distress is mediated, and that these strategies are context-dependent. For example, when people do not have control over their environment, they may use coping strategies that are aimed at simply making him or her feel better. When

control of the situation is possible, then more action-focused coping may be a more viable strategy.

Work on shattered assumptions in IPV survivors has not been conducted and may be one area that can improve our understanding of PTSD in IPV survivors. The research on coping in battered women has shown that women use a variety of coping strategies to deal with the distress produced by IPV (Clements & Sawhney, 2000; Davis, 2002; Hage, 2006; Kocut & Goodman, 2003; Waldrop & Resick, 2004). In particular, several researchers have found that religious involvement acts as an important method of coping with IPV (Gillum et al., 2006a; Humphreys, 2000; Senter & Caldwell, 2002). The connection between shattered assumptions and religious involvement has also not been previously examined in the research literature.

In addition to providing new information on PTSD in IPV survivors, the present study explores whether interethnic variability in PTSD is accounted for by differences in violence exposure, shattered assumptions, coping and religiosity. For example, ethnicity has been implicated in rates of IPV with African American women reporting more frequent and severe IPV than European American women (Caetano et al., 2005; Frias & Angel, 2005; Hall Smith et al., 2002; Krishnan et al., 1997; Rennison & Welchans, 2000; Straus et al., 1980; Straus & Gelles, 1986). Ethnicity has historically been shown to predict rates of PTSD with African Americans reporting higher risk for PTSD than European Americans in the general population and military samples (Egendorf et al., 1981; Green et al., 1990; Kulka et al., 1990; Norris et al., 2002; Perilla et al., 2002; Pole et al., 2001), but with African American female IPV survivors and Medicaid recipients revealing lower levels of PTSD than European American women (Lilly & Graham-

Bermann, 2006; Seng et al., 2005). In addition, the literature has documented several variations in coping and religiosity as a function of ethnicity. For example, researchers have found that African American IPV survivors are more likely to use religious coping and/or spirituality than European American IPV survivors (El-Khoury et al., 2004; Fallot & Heckman, 2005; Gillum et al., 2006a). To date, no studies have examined interethnic variability in shattered assumptions, a contribution that will arise from the present study. Given that ethnicity has been implicated in all levels (save shattered assumptions) of the current work, it is hypothesized that variations in IPV rates, shattered assumptions, coping and religiosity will account for differences seen in rates of PTSD across African American and European American IPV survivors.

This study is conducted in order to provide a more contextualized understanding of women's experience of IPV with the belief that intersections of gender and ethnicity have an important impact on a woman's lived experience. In a world that would otherwise overwhelm and paralyze the human perceptual system, individuals encounter others with preset expectations for behavior. Gender is certainly one construct that informs expectations, and another is ethnicity. In a social hierarchy where women and ethnic minorities represent 'otherness', ethnic minority women are placed in double jeopardy. Where all women may be at risk for violence stemming from a plethora of interpersonal, social and organizational systems, ethnic minority women in particular are situated in the crosshairs of systems that justify oppression through stereotypes. These oppressions can have profound consequences for not only the structure of male-female relationships (Aldridge & Hemmons, 2001), but also for the inception and perpetuation of IPV. Multiple oppressions may make ethnic minority women not only more vulnerable

to interpersonal violence, but also restrict available alternatives and choices for these women in the aftermath of IPV. It is important to therefore consider how gender *and* ethnicity intersect to affect women's experience of, and recovery from, IPV. This includes walking a fine line between making generalizations about ethnic groups while avoiding a complete reductionism that would result from disposing of ethnic categories altogether (Sokoloff & Dupont, 2005). Though a perfect design would include women at all intersections of gender and ethnicity, African American and European American women will be the focus of this work[i].

Each section of this chapter presents data on what is known generally about IPV, PTSD, shattered assumptions, coping and religiosity. The sections begin with a brief discussion on the methodology and measures that are typically used to assess these constructs in research populations, followed by what has been found using these measures and methods. The conclusion of each section includes an examination of what is known about each of these topics in African American women in particular. This may strike the reader as a form of 'othering' in which European American women are taken as the norm and African American women are considered 'other' or 'post hoc' to the analysis. It is not intended to imply that what is known about European American IPV survivors be taken as normative. Rather, early research on IPV was commonly conducted with predominantly European American women with research on African American (and other ethnic minority) women coming into focus only in the last decade (Root, 2001). Where possible, attempts have been made to integrate research across ethnicity within each discussion topic more generally. However, several research studies have been comprised of entirely African American women, which seems to suggest that

specific attention be afforded these studies separately from the general discussion. The first review focuses on IPV and then PTSD is discussed. The final review topic addresses the theory of shattered assumptions, coping and religiosity in relation to IPV before presenting the hypotheses, methods, results and discussion for the present study.

Intimate Partner Violence: Methodology, Results and Implications

Violence Against Women: A Snapshot of Partner Violence Rates

In 2002, there were 2.1 survivors of family/partner violence per 1,000 U.S. citizens aged 12 or older and these rates accounted for 1 in 10 violent victimizations (Bureau of Justice Statistics, 2005). Women comprised the overwhelming majority of *survivors* in spouse abuse (84%) and abuse by a boyfriend or girlfriend (86%). Men constituted three-fourths of the *assailants* in cases of family violence (Bureau of Justice Statistics, 2005). These statistics paint a somewhat specific picture of violence in the home; namely, that women are at particular risk for partner violence at the hands of the men in their lives. Of those affected by partner abuse, 47% of wives and 53% of girlfriends were injured at some point by the abuse. In addition to physical abuse, researchers have learned that psychological abuse accompanies physical abuse in most cases, with rates of psychological abuse as high as 80% in court-involved battered women (Henning & Klesges, 2003).

Rates of IPV can be broken down further as a function of race. Contrary to popular media, which may suggest ethnic minorities are at the highest risk for IPV, the Bureau of Justice Statistics (2005) found that the majority (74%) of survivors of family violence between 1998 and 2002 were European American, followed by African

Americans (13.6%) and then Hispanic Americans (10.1%). As for offenders of family violence, 78.5% were Caucasian, 14.9% were African American and 6.6% were some other race. Though research suggests that family violence afflicts individuals of all ages and races, as well as both genders, women between the ages of 25 and 64 are at greatest risk for family violence (Bureau of Justice Statistics, 2005).

IPV, Race and Gender: Contextualizing Violence in Women's Lives

Rates of IPV reported by the Bureau of Justice Statistics mentioned above suggest that rates of IPV are higher in European American and African American women in comparison to Hispanic American women when compared to population estimates. For example, European American women were the majority of survivors, with the 74% affected by partner violence significantly greater than the 72.9% of the population that self-identified as European American. Similarly for African American women, the rate of 13.6% of partner violence survivors is significantly greater than the 12.1% represented by African Americans in the U.S. population. For Hispanic American women, family violence rates (10.1%) were significantly lower than the population estimate of Hispanic Americans (10.9%). The results suggest that European American and African American women are at particular risk for IPV.

Closer inspection of the bureau's methodology, however, reveals some room for misrepresentation. These data are based on annual interviews conducted with nationally representative samples in which participants are asked if they were the "victims of a crime" and then further queried regarding whether they knew the offender and where the crime occurred. As such, it is necessary for the participant to first consider him/herself a "victim" and then consider any partner violence that has occurred a "crime" in order for

the interview to detect the presence of partner violence. It is therefore reasonable to assume that (a) the statistics reported underrate partner violence, and (b) this line of questioning opens the door for varied interpretations of what constitutes a "victim" and a "crime" and subsequent misrepresentation of the prevalence of partner violence among sub-samples based on gender, ethnicity, and class.

The problem of defining violence and asking about it in research populations is a continual problem in IPV research. As seen above, screening for IPV can hinge on just one or two words and a woman's endorsement of that word, in this case "victim" and "crime". These words can certainly be problematic for a woman who considers her violent experiences in the home as "arguing", "disagreements" or "fighting". It is therefore important in reviewing the research on IPV to consistently ask how and which women are being enrolled in studies, as well as to consider a broad definition of what may constitute violence in women's lives.

Before continuing, however, it is important to address male under-reporting of violence. The bulk of the current work has focused on women as survivors, often endured at the hands of male partners. This can be somewhat dubious in that it fails to recognize the literature that suggests more gender equivalent rates of violence perpetration (McNeely & Mann, 1990; McNeely & Robinson-Simpson, 1987; Schupe et al., 1987), as well as research that has shown women to perpetrate more violence against their male partner than vice versa (McDonald et al., 2006). Researchers have argued that women perpetrate violence at nearly the same frequency as men perpetrate violence, and that if couples had to match in regards to reports of a violent act and who perpetrated it, that reports of violence would be cut in half (Caetano et al., 2002). Said differently, this

study found that partners do not show agreement in their reports of violence and perpetration on the Conflict Tactics Scale. The crux of the problem, however, remains in the severity and consequences of the violence. While it may be true that men and women commit violence at similar rates, research has also shown that women report more frequent and longer victimization, more injuries, more fear of injury, time lost from work due to violence, and use of medical, mental health, and or justice system services (Saunders, 2002; Tjaden & Thoennes, 2000). This is further complicated by the fact that the motivation behind and/or intention of violence utilization is rarely measured. One example is the case of self-defense, which women report as their primary intention when using violence (Saunders, 1988). While these relationships certainly deserve further attention, for the purposes of this work, male-to-female violence remains the focal point.

Defining IPV in Women's Lives: Screening and Measurement

To arrive at a definition of IPV one needs to examine ways in which violence has been defined and surveyed in the research. For example, how is IPV measured? What questions are asked of participants? How are women recruited? Women are generally recruited in one of three ways: (1) survivors and perpetrators are identified as a sub-sample of a larger population participating in epidemiological research, (2) survivors are recruited from hospitals, emergency rooms, other health-related services, or domestic violence shelters, or (3) survivors in the community respond to more informal methods of local recruitment such as replying to flyers or brochures found in social service agencies or any number of commercial locations (grocery stores, laundromats, etc.). Each of these methods poses potential problems. For example, the detection of IPV in epidemiological research often hinges on the participants' interpretation of a particular word or question,

and in addition, some participants are expected to divulge information over the phone to an unknown individual. Survivors recruited from health-related services represent only those survivors for whom medical attention is necessary following violence, a group whose profile of violence is likely more frequent and in the moderate to severe range. This may leave out a large contingency of women who either do not suffer injuries or do not seek out services for financial, social, or personal reasons. In fact, only 2% of women who experience IPV report having used a domestic violence shelter (Straus & Gelles, 1995), which complicates matters given that researchers have found a variety of differences between women who do and do not use shelters, including differences in willingness to leave the abuser, financial resources, and frequency/severity of violence (Strube, 1988). Finally, women recruited through flyers and brochures must first take the initiative to contact the research group, which can be thwarted by any number of issues such as embarrassment or the chaos that ensues from involvement with a violent partner. In addition, women recruited through this method are often extremely financially strained and may respond to advertisements out of financial desperation, bringing in ethical issues of whether these women are really willing participants. Because the majority of research stems from such methodology, our understanding of the prevalence and consequences of IPV remains limited despite the best of intentions.

Once women have been identified as survivors of violence for research purposes, the range of violence tactics and the extent to which women have endured violence is assessed in several ways. Quantitatively, the vast majority of research on IPV relies upon the Conflict Tactics Scale (Straus, 1979) and the Conflict Tactics Scale – Revised (Straus et al., 1996). The original scale was developed to quantify the extent and frequency of a

variety of physical abuse tactics. The scale was revised almost twenty years later as definitions of family violence were broadened and reconceptualized. The revised scale improves upon the previous version by including psychological aggression and negotiation, violence perpetrated by both partners, violence that occurs in dating, cohabiting and marital relationships, and scales to measure sexual coercion and injury. The revised scale therefore advanced violence assessment by incorporating new forms and definitions of violence that can offer a more nuanced understanding of an individual's experience of IPV. This measure is so widely used that reading an empirical piece without it is rare. In addition, the measure has shown strong reliability for the five subscales (Cronbach's alphas ranged from .79 to .95) and discriminant validity in relation to other measures of sexual coercion, assault/injury, psychological aggression and physical assault, and relationships with social integration (Straus et al., 1996). (More detail regarding the psychometric properties of this scale can be found in the Methods section of this thesis).

Similar to recruitment, methods of assessing violence in women's lives have strengths and weaknesses. In consideration of recent revisions to the CTS, researchers can now build a stronger depiction of the prevalence and types of violence in women's lives, as well as identify the perpetrator and survivor of violence. The information gleaned from these additions is important as frequency, type and severity of violence has been shown to correlate with many adverse outcomes following IPV, to be discussed in the upcoming pages. As a result of research using this measure, researchers and practitioners can be more informed in their work and public health policy can target individuals who are most in need of intervention. However, there are notable limitations

to the canonical measures of IPV research. In particular, the questions of intention and context are missing. The extent to which the *intention* to harm, threaten or injure is not examined. This is important in instances of self-defense such that either partner may be the main perpetrator of violence with the other partner committing violence primarily in self-defense, yet the results of a CTS-R scale assessment may instead suggest that partners' use of violence is equivalent. Other problems are the questions of context and quantity. Whether violence occurs in a relationship due to jealousy, job strain, drinking, or psychopathology, or happens in one context and not another, or arises as a function of cultural expectations, has only begun to be explored and deserves future study with alternative methodology and measures. Currently, measures such as the CTS-R yield a profile or pattern of violence in a particular relationship at best while many, many questions about context and intention are left out. It is reasonable to assume that violence occurring only when one partner is intoxicated or under the influence of drugs may have different implications and meaning for an individual than violence that is driven by cultural expectations of gender roles.

A separate problem with research on IPV is that the majority of research is retrospective, with few studies incorporating a longitudinal design. In fact, of the studies reviewed here, only two used a longitudinal design (Caetano et al., 2000; DeMaris et al., 2003). Though these studies yield valuable information, it is important to remember that retrospective reporting of violence may be subject to memory impairment resulting from post-trauma pathology. The use of self-report measures can also be problematic when one considers that response bias and social desirability (not wanting to report the experience or perpetration of violence due to social taboo) may affect the results that are found. Few

studies have examined social desirability in relationship to reports of violence. One study, however, did find that reports of violence were not affected by social desirability (Graham-Bermann et al., 2007). These findings merit replication.

Taken together, the research to date beseeches a somewhat broad definition of IPV that includes a variety of acts and tactics that can occur once a year to several times daily. Violence perpetrated by an intimate partner can come in the form of physical threats to the individual or something of value to the individual (such as children or pets), psychological abuse such as name calling and destroying something of value to the individual, physical assault ranging from a push or shove to use of a gun or knife, sexual coercion without force, and sexual assault with force. Survivors of IPV may or may not self-identify as "victims" and may or may not consider their experiences of violence as "violence", "assault", "rape", or "abuse". Though not explicit in current methods and measures, these behaviors can be motivated by a myriad of personal, financial, social or cultural incentives. While current methods and measures are to some extent complicit in limiting our understanding by placing parameters on how researchers ask about violence (and therefore may lead to underestimates and misrepresentations of the scope of the problem of violence), it appears that valuable and sound research continues to provide insight into this problem and methods will progress with time and ingenuity. It is from this critical, yet encouraged, position that the current research on IPV is now examined.

Intimate Partner Violence: A Multilayered Understanding of Rates, Risk and Protection

Though complex, IPV research has shown several commonalities across studies; namely, (1) IPV affects many people across a variety of social locations, (2) women are injured by violence more frequently than men, and (3) IPV can have lasting effects on an

individual's physical, financial, social and emotional health. In order to gain a more nuanced and contextualized understanding, however, one must go beyond these conclusions.

Intimate partner violence occurs in a complex matrix of personal, interpersonal and social constructs. Implicated in the prevalence of IPV are individual, relationship, community, and societal level factors that can serve to predict prevalence rates of, and risk and protective factors for, IPV. One way to conceptualize these factors is to call upon a feminist ecological model, which asserts that IPV exists within a multilayered social system that may sometimes turn a blind eye to, and therefore may be complicit in, the violence that occurs in women's lives. More specifically, this feminist model asserts that patriarchal assumptions regarding women's role and agency support the use of violence (psychological as well as physical) against women as a way for men to retain power and control in an evolving world that threatens to dethrone men (Brownmiller, 1975; Herman, 1990; Oakley, 2002; Russo, 2001).

The ecological approach was first described by Auerswald (1968) as a way to understand how the individual and family were connected to the broader community. In 1979, Bronfenbrenner redefined and expanded the definition of the ecological model as consisting of four levels: the individual and family (Microsystem), homes and school that surround the individual and family (Mesosystem), the community surrounding the home and school (Exosystem), and the broader culture that includes norms, expectations and values (Macrosystem). These various levels or systems are nested within each other and considered transactional, meaning that the various systems interact, influence, limit and enhance the other systems. For example, a woman's income can perhaps best be seen as

an individual level factor such that low income predicts the experience of IPV (Byrne et al., 1999; Cunradi et al., 2002b; Field & Caetano, 2004; Hall Smith et al., 2002; Kessler et al., 2001; Sorenson et al., 1996), and yet a woman's income is also related to other individual level factors such as her education and ethnicity, partner factors such as marital status and cohabitation, community factors such as neighborhood disorganization and disadvantage, and societal factors such as institutionalized sexism and racism. While the interrelationships between factors make separation into levels difficult at times, this model still retains value in its ability to organize and conceptualize the multifaceted nature of IPV. Figure 2 represents the "nested, ecological model" (Bronfenbrenner, 1979) that will be used to discuss the current research on IPV.

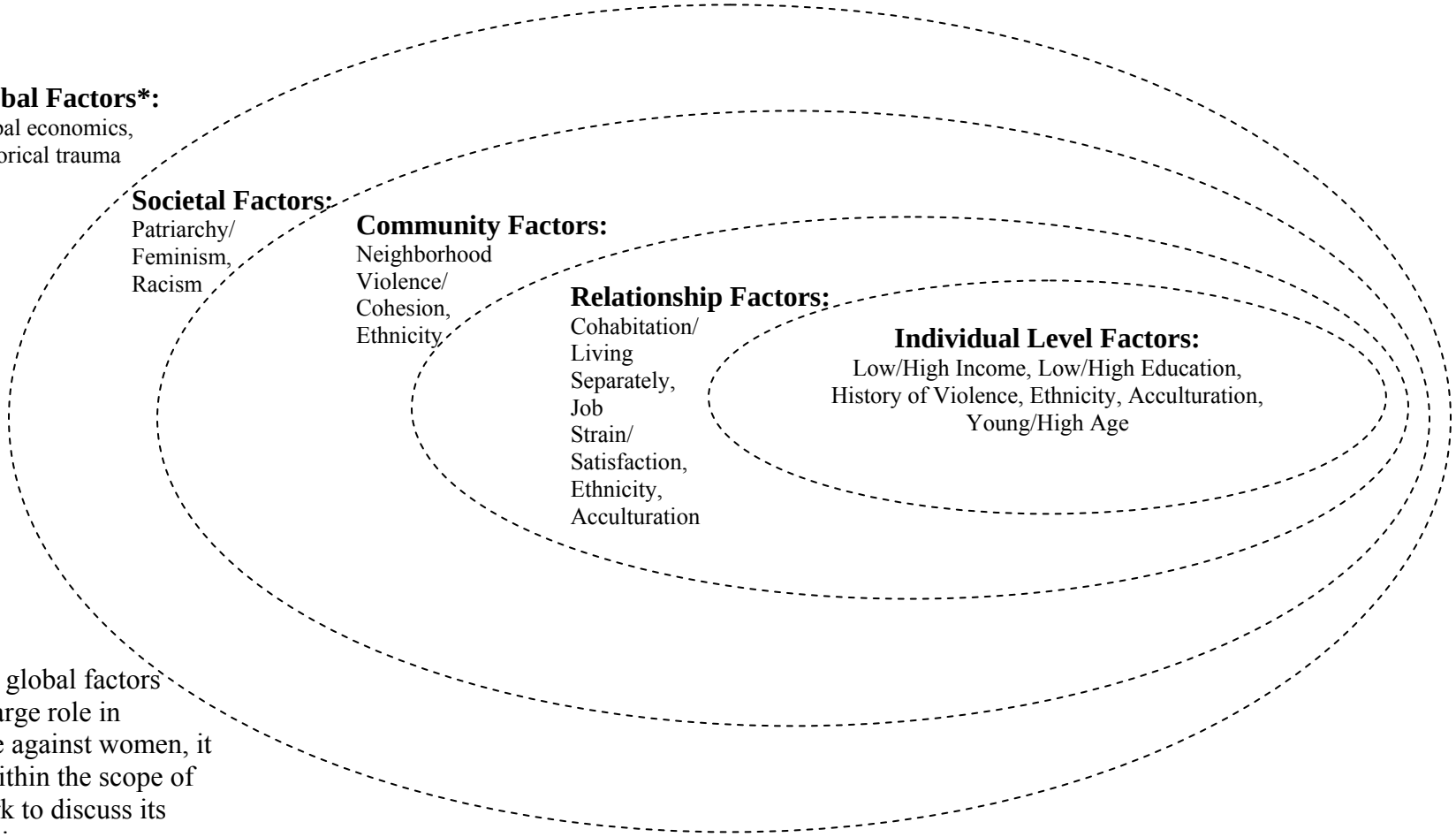
Within the ecological model, various factors serve as risk or protection against exposure to IPV (Graham-Bermann & Howell, in press). By risk factor, it is meant that the presence of that factor increases the possibility that one will be exposed to more frequent and/or more severe violence. Protective factors are those factors that help to buffer the individual from the probability of experiencing IPV. Some factors, such as income, serve as both a risk and protective factor, depending on which end of the spectrum one is located. As discussed below, for example, *higher* income can *protect* the individual from exposure to IPV while *poverty or low income* places the individual at *risk* for IPV.

Individual level factors implicated in IPV: prevalence, risk and protection.

A variety of demographic factors have been implicated in risk and protection for IPV. For example, IPV occurs disproportionately in the most disadvantaged groups

Figure 2: Feminist, Nested, Ecological Model

Feminist, Nested, Ecological Model Used to Organize Research on IPV



* While global factors play a large role in violence against women, it is not within the scope of this work to discuss its implications

where low income (Byrne et al., 1999; Cunradi et al., 2002b; Field & Caetano, 2004; Hall Smith et al., 2002; Kessler et al., 2001; Sorenson et al., 1996), low educational attainment (Hall Smith et al., 2002; Kessler et al., 2001; Sorenson et al., 1996), unemployment (Campbell et al., 2003), and young age (Kessler et al., 2001; Sorenson et al., 1996) delimit the opportunities and resources upon which survivors can call for help and support. These qualities similarly represent a vulnerable population that perpetrators may target due to their vulnerability, as well as factors that may increase overall levels of stress and frustration that may lead to violence when men and women try to provide financial and emotional sustenance to family. One study in particular found that subjective experience related to current economic status, and not income alone, is a salient factor in predicting IPV (Fox et al., 2002). For example, these researchers discovered that IPV was disproportionate in individuals who reported higher job strain (reported more stress and less satisfaction with their current employment), a low income-to-needs ratio, high debt, and in families where the female contributed more to the family income than the male member. In addition, researchers have uncovered that low income is a common result of IPV as much as it is a predictor (Byrne et al., 1999). The longitudinal design of this research may have identified a more nuanced understanding of the role of income in IPV that cross-sectional designs are unable to capture. These results suggest that it is not simply a matter of dollars, but rather a more graded view in which individuals' subjective experience of their available resources is important in predicting IPV exposure.

Socioeconomic factors related to IPV are complicated by ethnicity. Despite results from the Bureau of Justice Statistics, researchers have consistently found that

African American women are at increased risk for IPV in relation to European American women (Caetano et al., 2005; Frias & Angel, 2005; Hall Smith et al., 2002; Krishnan et al., 1997; Rennison & Welchans, 2000; Straus et al., 1980; Straus & Gelles, 1986), and that this risk remains even after controlling for socioeconomic status and substance use (Field & Caetano, 2004; Field & Caetano, 2005). Rates vary, however, depending on the measures used and populations included in the study. Interestingly, some researchers have found that socioeconomic factors are more strongly linked to IPV for African American individuals than they are for European American individuals, for whom socioeconomic status does not predict the presence of IPV (Cunradi et al., 2002b). Still other researchers have found no differences in IPV rates as a function of ethnicity (Bureau of Justice Statistics, 2005) or have not found ethnic minorities to be at increased risk (McFarlane et al., 2005). The study of ethnicity and IPV is complicated and will be revisited in the upcoming pages.

Given the methodological considerations discussed earlier, it is also important to acknowledge before proceeding that while research continues to elucidate complex intersections and interrelationships in relation to IPV, it is reasonable to assume that research continues to examine only a portion of IPV cases. For the most part, researchers have found that income, education, and unemployment can be seen as central to the study of IPV, but given the limitations of recruitment and methodology, it may be that IPV is studied primarily as it occurs in the most sociodemographically disadvantaged groups. There has consistently been little variability in samples, with the predominant profile of an IPV research participant being that of an impoverished, single woman with children. Given the financial incentives to participate in research and the sites where women are

recruited (emergency rooms, community primary care, etc.), it is possible that our methods contribute to our limited views. That said, there is also sound theoretical and empirical support for why IPV may occur disproportionately in disadvantaged groups such as the high levels of stress, frustration and disorganization that poverty, racism, and sexism breeds.

Additional individual level factors have been associated with IPV, including pregnancy (Jasinski & Kantor, 2001), witnessing interparental violence as a child (Bensley et al., 2003; Lang et al., 2004; Schafer et al., 2004), and substance use (Fals-Stewart et al., 2003; Field & Caetano, 2004; Schafer et al., 2004).

Relationship level factors implicated in IPV: prevalence, risk and protection.

The distinction between individual and relationship factors is tenuous. As was shown with income, conclusions made on the interactions of a couple are subject to scrutiny when only cross-sectional designs are used. It is difficult to ascertain whether research conclusions regarding violent couples are predictors of violence or outcomes of the chaos that arises from violence. However, some compelling findings have noted consistent factors associated with violence in couples; namely, in relationship status and patterns of violence (such as duration and cessation).

Relationship level factors implicated in the prevalence and patterns of IPV can be broken down into several aspects. The first is the question of what relationship factors are disproportionately represented in cases of IPV? The second set of questions is, what is the typical pattern of violence and what is the typical course of violent relationships? One variable in particular, relationship status, has earned perhaps the most attention with the somewhat regular finding that cohabitation with or without marriage places women at

risk for IPV (DeMaris et al., 2003; Henning & Klesges, 2003; Kessler et al., 2001; Lipsky et al., 2005a; Lipsky et al., 2006; Tjaden & Thoennes, 2000), though cohabitation without marriage is reported more frequently. This finding occurred regardless of whether the population included an emergency room sample (Lipsky et al., 2005a; Lipsky et al., 2006), an epidemiological sample (DeMaris et al., 2003; Kessler et al., 2001; Tjaden & Thoennes, 2000), or women in the community (Henning & Klesges, 2003). For example, both Lipsky et al. (2005) and Kessler et al. (2001) found a threefold increase in risk for IPV when women were living with the abusive partner. Tjaden and Thoennes (2000) found that living with the assailant heightened women's risk for all forms of violence in comparison to women who had not lived with the assailant. Though it is unknown why cohabitation is consistently related to increased reporting of IPV, possible reasons include (1) when partners live with one another there is more opportunity for conflict, (2) the stresses of financially maintaining a household in which one partner may not work may lead to violence, and (3) cohabiters may have limited resources and be stuck in the position of financially relying on abusive men for shelter. Generally speaking, research has shown that conditions under which men are made to feel inadequate in relation to their partner, financial strain, and the introductory phase of a relationship can lead to violence (DeMaris et al., 2003; Fox et al., 2002).

Research on violent relationships, however, has gone a step further by shedding light on the typical patterns and duration of violence. In a web design survey, Hall Smith et al. (2002) found that specific forms of violence (sexual assault, physical assault, and psychological assault) rarely exist in isolation. Rather, using a population-based sample, the authors found that 18.4% of their sample had experienced some form of IPV and that

only 1.9% and 1.1% of the sample had experienced *only* physical or sexual assault, respectively. Frequently, psychological battering accompanied physical violence and/or sexual violence (in 7.2% of the sample) or physical violence accompanied sexual violence (2.3% of the sample). The profile suggests not only that women in the sample experienced significant levels of violence, but also that various forms of violence rarely exist in isolation. Another study by Henning and Klesges (2003) found that of 3,370 court-involved women, 80% reported former psychological abuse and in only 4.4% of the cases did physical abuse occur in the absence of psychological abuse. Women who experienced both physical and psychological abuse were 25 times more likely to report feeling threatened in the relationship than women who had not been abused, and the odds were 7 times greater if the woman had only sustained psychological abuse.

The pattern of violence in a particular relationship also intersects with relationship duration. For example, research has shown that when qualitative aspects of the violence experienced in a relationship are used to create categories that represent violence patterns that the patterns overlap with relationship duration (Dutton et al., 2005). For example, when violent relationships are grouped into three categories: (1) moderate physical violence, psychological violence, stalking, no sexual violence, (2) high physical violence, psychological violence, stalking, low sexual violence, and (3) high on all forms of violence, and then crossed with time, the authors found that individuals grouped in the third pattern were more likely to have been in the relationship for over 12 months in comparison to individuals with less time in the relationship. Women in the third pattern were also less likely to be employed and to have used a shelter. Of women in the first

pattern of violence, 25% wanted to continue the relationship in comparison to 16% in the second pattern and 5% in the third pattern.

In summary, research has shown numerous relationship factors that contribute to the occurrence of violence, with cohabitation perhaps being the strongest and most consistently supported variable. Though the pattern of violence and duration could have been summarized earlier and perhaps fits imperfectly into the relationship level of IPV, it seems that it is within the context of a particular relationship that violence occurs, and is within the confines and characteristics of that relationship that an individual decides to stay or leave.

Community level factors implicated in IPV: prevalence, risk and protection.

Limited work has been done to examine the interconnections between communities and IPV. However, several researchers have begun to explore this link. Namely, census data have shown that neighborhoods considered "disadvantaged" (high concentration of poverty and unemployment) have the highest rates of IPV with prevalence around 7.9% (Van Wyk et al., 2003). In neighborhoods in the medium range of disadvantage, the rate drops to 4.9% and drops further to 3.5% in neighborhoods not considered disadvantaged. These authors argue that individuals whose demographic characteristics are associated with violence (unemployed, impoverished) may be concentrated in disadvantaged neighborhoods. Other studies have repeated these findings such that poverty-stricken neighborhoods often have heightened levels of IPV (Cunradi et al., 2000; Grisso et al., 1999). Going a step further, several neighborhood level variables in particular have been implicated in IPV such that neighborhoods marked by collective action are a protective factor in incidence of IPV (Browning, 2002) and neighborhoods in

which members move frequently are a risk factor for IPV (Grisso et al., 1999). The effects of neighborhood context have even been strong enough to override variations in IPV across ethnicity such that African American and European American individuals report equivalent rates of IPV within a community context based on disadvantage (Benson et al., 2004). These studies suggest the importance of considering community and neighborhood context in relation to IPV, including local economic factors, mandatory reporting laws, police attitudes and training around cases of IPV, and the availability of legal, financial or housing services[1].

Societal level factors implicated in IPV: prevalence, risk and protection.

There has been little empirical research on societal level factors that influence IPV prevalence directly. While factors such as poverty and unemployment have been identified, and therefore one might extrapolate that capitalism and/or global economies have some bearing on IPV, this work has remained largely theoretical. However, some researchers have surveyed populations to learn about attitudes towards IPV and survivors.

The Domestic Violence Blame Scale (DVBS), for example, was developed to assess how people make sense of domestic violence and to whom or what one assigns blame (Petretic-Jackson et al., 1994). The development of the scale found four blame clusters, including situational blame, perpetrator blame, societal blame and victim blame. The scale revealed that while victims are typically least held to blame, they are in almost no cases considered blameless.

Using this scale, and others, attitudes about violence have been measured in samples of justice department workers, physicians, mental health professionals, religious

[1] Several of these factors have received preliminary attention in the psychology, social work and public health/public policy literatures. However, these factors are out of the reach of the present study and will not be examined here.

leaders and in the community. For example, in a sample of survivors and criminal justice service providers in the rural south, survivors expressed discontent with the services that were rendered by the justice system such as being treated disrespectfully, not receiving adequate protection from assailants, and lack of information regarding legal options, while those on the criminal justice end remained reluctant to make arrests, gave lenient consequences to assailants, and either blamed the survivor for the abuse or questioned the survivors' credibility (Van Hightower & Gorton, 2002). One group of researchers found that physicians considered work associated with assisting survivors of IPV as "significant" and "difficult, low-paying, and stressful" (Garimella et al., 2002). In a survey of practicing psychologists, Wandrei and Rupert (2000) found that while the assailant was typically held responsible for IPV, that most psychologists began to blame the survivor when she continued to stay in the violent relationship.

In a study sample comprised of Christian, Jewish and Islamic religious leaders, participants believed that assailants were more responsible for violence, but also believed that women were not blameless and frequently held responsible for inciting the violence, and further, women were to blame when they did not leave violent relationships (Levitt & Ware, 2006). While the religious leaders blamed women for not leaving violent relationships, they simultaneously expressed a belief that divorce should only be considered as a last resort, placing women in a particularly sticky position between being blamed for staying and condemned for leaving. Finally, in a community based sample of men and women, survivors were assigned causal responsibility in 31% of the sample, as well as assigned responsibility for coming up with a solution by 31% of the sample (perhaps the same 31% was represented in both categories) (Taylor & Sorenson, 2005).

In addition, 52% of the community-based sample stated that solution responsibility lay in the hands of both the assailant and the survivor. That IPV exists within societal subtexts that do not explicitly blame survivors for their lot in life, but continue to make judgments upon survivors, doubtless pervades each level of the ecological model and profoundly impacts the experience of an IPV survivor.

In a study of stereotypes, Wood (2001) demonstrated that IPV survivors were negatively affected by gender normative stereotypes. More explicitly, she found that survivors used gender normative narratives regarding male dominance and superiority as a way to justify relationship violence. The stereotype of women submitting to male authority served to keep these women in violent relationships. Work by Graham-Bermann and Brescoll (2000) discovered that in homes where there is physical and psychological violence, children are more likely to report beliefs in male power and violence as a privilege of parents to be wielded at will. Broader cultural stereotypes regarding gender captured in these studies may suggest that societal beliefs regarding violence and male privilege may influence women's decisions to stay or leave violent relationships.

This discussion has covered the multiple levels through which female survivors experience IPV. From basic demographic characteristics to relationship factors to neighborhood context and societal beliefs, risk and protection for IPV remains a complicated and multifaceted social problem. Given the nature of the current paper, however, it is important to examine more closely interethnic variability in IPV prior to reviewing outcomes such as PTSD.

Interethnic Variation in IPV Profiles

In relation to IPV, researchers have previously focused almost exclusively on female survivors[2] and have only begun to explore the ways in which ethnicity is related to the experience of IPV. There are three methods in which interethnic variations in IPV are discussed in the research literature: empirical work across ethnicity, empirical work within ethnicity, and theoretical work. First, discoveries gleaned from empirical work across ethnicity will be discussed, followed by empirical and theoretical discussions on African American survivors of IPV.

Empirical work across ethnicity.

Every research method carries strengths and weaknesses, with empirical work across ethnicity no exception. Notably, empirical work that uses an ethnically diverse sample can offer interethnic comparisons using the same measures, methods, and recruitment strategies. This allows researchers to decrease the possibility that interethnic variations are a spurious result of the different methodologies used. However, this methodological choice frequently makes several problematic assumptions, including the assertion that an individual within a particular group will 'act like' and 'be like' other members of the same ethnic group, averaging across the many intraethnic variations in individuals' experience IPV. In addition, this work frequently uses European American women as the normative group and conducts analyses based on European American groups as the dummy variable. The statistical procedure may not be problematic in and of itself; however, this method precludes a certain theoretical assumption that European American women are the standard to which other groups are compared. Despite these

[2] It is important to acknowledge here, however, that research has just begun to explore male survivors, as well as violence in the context of homosexual relationships.

strengths and weaknesses, many interesting and important observations concerning ethnicity and IPV have been made across each level of the ecological model.

In terms of individual level variables implicated in interethnic variations in IPV, researchers have found that the relationship between sociodemographic factors and IPV vary as a function of ethnicity. More explicitly, in a study of individuals reporting intimate partner violence, differences in income, age and unemployment across three ethnicities (European American, African American, Hispanic American) were observed (Caetano et al., 2005) with European American individuals reporting the highest income ($47,917 per year), the oldest age, and the lowest unemployment (2%), followed by African Americans who reported the next highest income ($33,680 per year), the next highest age, and an unemployment rate of 4%[3]. Using the same sample, researchers found that mean income was significantly lower in African American couples that reported male to female intimate partner violence and that the rate of IPV did not vary within European Americans as a function of income (Cunradi et al., 2002b). For this sample, income combined with ethnicity to place poor, minority women at particular risk for violence.

Variations across ethnicity in violence-related patterns have also been observed. Using a longitudinal design that assessed the presence of violence across a five year span, researchers found that recurrence of severe violence was six times greater for African Americans (and four times greater for Hispanic Americans) in comparison to European Americans (Caetano et al., 2005), and that remission of violence in the span between interviews was lowest for African Americans. Aside from initiation and cessation, the

[3] Hispanic Americans were the worst off, reporting the lowest income ($24,100 per year), the youngest age, and the highest unemployment rate at 8%.

form that IPV takes also varies by ethnicity. While African American women have been shown to encounter more violence generally, these women are also at heightened risk for particular forms of violence relative to European American women, including sexual assault/rape from an intimate partner (Campbell & Soeken, 1999; McFarlane et al., 2005), severe physical violence (Caetano et al., 2005), and more frequent violence (Krishnan et al., 1997). In addition, African American women are more likely to be killed by an intimate partner than European American women (Goetting, 1991; Lee et al., 2002; Mann, 1996). Not only do African American women experience more violence at the hands of their male intimate partners, but the form of the violence is more frequent, severe, and more likely to end in femicide.

On a community level, variations in IPV occurrence can be seen differently by examining ethnicity. To revisit briefly, neighborhoods characterized by high unemployment, disadvantage and mobility increase risk for IPV (Van Wyk et al., 2003) and when one study controlled for these variations across ethnicity in relation to IPV, interethnic differences in rates of IPV disappeared (Benson et al., 2004). Put differently, neighborhood context overrode the effects of ethnicity on rates of IPV. On a societal level, empirical work on variations across ethnicity is rare. One study found that gender and ethnicity influenced the ways in which undergraduates assigned blame to individuals represented in a written domestic violence scenario (Ferguson & Negy, 2004). Given that racism and classism permeate all facets of U.S. culture, it is reasonable to assert that ethnicity may have an impact on an individual's perceptions of an intimate partner violence scenario.

African American survivors of IPV: Empirical work and theoretical extensions.

The literature on IPV has consistently suggested that African American women are an at-risk group not only in terms of incidence of IPV, but also for more severe and frequent forms of IPV including severe physical assault, marital rape and femicide. In the last decade, research has attempted to extend the understanding of IPV in African American women, working to contextualize why these rates appear as they do within this group of women who are frequently jeopardized further by limited access to financial resources and societal racism. A review follows of IPV in African American women using empirical work that employs samples of exclusively African American individuals as well as theoretical discussions that have tried to make sense of the empirical findings.

In a sample of African Americans recruited in an academic setting in North Carolina, Huang and Gunn (2001) found that when asking undergraduates and faculty/staff regarding their beliefs about intimate partner violence that female respondents identified the following factors as being related to having experienced IPV: having a poor relationship with one's family and having low self-esteem. Women in this study who experienced IPV were more depressed, reported higher levels of stress, and higher levels of alcohol abuse. The researchers used social learning theory to discuss how high rates of IPV in the African American community may be a vestige of a long standing history of racism, oppression and violence that contributes to stress and the use of partner violence. They further posit that violence is then transmitted through generations with limited economic advancements made between generations. The authors used social control theory, which suggests that racial oppression condones the use of violence in order to maintain the disenfranchised status of ethnic minorities, to explain the lack of economic advancements. Within a sub-sample of African American women,

Wyatt et al. (2000) found that low income was related to more physical conflict between couples and less education was related to both physical and non-physical IPV.

Other work has found that African American women are more hesitant to leave abusive relationships, placing them at risk for more frequent and severe forms of violence (Nash, 2005), as well as less likely than European American women to seek out support from social services, including the police. Using semi-structured interviews with nine women, Nash (2005) calls upon a 'womanist' analysis to frame her questions regarding the role that racism places in the decisions that African American IPV survivors make regarding abuse disclosure and ending the relationship. She theorizes that racism impacts African American women's experience of IPV in several ways; namely, African American women do not want to 'tell on' their abusers and provide further ammunition to individuals who view African American families as pathological; that stereotypes of African American women as "sapphires" ("hostile African American woman who are iron willed, ineffectual, and treacherous toward and contemptuous of Black men") or "matriarchs" ("a woman who is overly aggressive and unfeminine and who emasculates Black men") (Gillum, 2002, p. 65) make these women vulnerable to abuse; that due to the treatment of African American men by the court system, police, and other social service agencies that African American women do not wish to provide fodder for further systemic abuses against African American men and instead receive support from clergy, peers, and/or family members; and that African American women do not disclose abuse to therapists to escape judgment for not leaving men who are abusive. Her conjectures were supported in themes coded in the interviews. She also observed that women frequently saw racism as having a direct impact on the occurrence of IPV such that

perceived and experienced racism increased overall levels of frustration that increased the likelihood of conflict and subsequent violence. Further, she found that African American women perceived African American men to be frustrated with African American women's achievements economically and in education, and that abusive men frequently used racial stereotypes of African American women as promiscuous or domineering to explain away abuse.

Additional work has supported Nash's (2005) conclusions. For example, Bent-Goodley (2004) used focus group methodology to explore themes related to IPV in African American women. Notably, her work found that African American women had different perceptions of what constitutes 'abuse' than what researchers believe falls in the scope of IPV. For example, African American women considered pushing, slapping or shoving to not fall under the category of domestic violence where 'beatings' (in which a woman was physically beaten up) did constitute domestic violence. These women were also frustrated by the inaccessibility of services (such as housing and employment), which they perceived to be related to ethnicity, and by the lack of public education regarding IPV. In regards to help-seeking behaviors, African American women also reported feeling less understood and accepted in primary care settings, as well as having a lower quality of communication with their health care providers (McNutt et al., 2000).

Following Nash's assertion that stereotypes of African American women make them vulnerable to IPV, Gillum (2002) conducted an empirical study with an African American male sample approached in public/commercial places for participation. This researcher hypothesized that men who endorse stereotypes of African American women as Jezebels (i.e., whores, easily aroused, sexually aggressive) or Matriarchs (aggressive,

unfeminine, emasculators of African American men) would be more likely to condone violence against African American women than men who did not hold these stereotypes. The results showed that a significant proportion of the sample endorsed the Jezebel image of African American women (48%) and the Matriarch image (71%), with 33% of the sample endorsing both images. Further, stereotype endorsement was related to subject's justification of the use of violence against women such that individuals who held negative stereotypes believed the use of violence to be appropriate in certain situations, especially individuals who endorsed the Jezebel image of African American women. The results of this study provide support for Nash's (2005) theoretical contention that stereotypical images of African American women place them at risk for violence.

There are few studies comprised of an entirely African American sample. However, researchers have worked from an interdisciplinary perspective to offer further contextualization of African American women's experience of IPV, using empirical support within and across ethnicities to offer hypotheses ripe for testing. In a review of the literature, Hampton, Oliver and Magarian (2003) locate African American women's experience of IPV within situational, structural and community-cultural contexts that function to place these women at continued risk. Situational factors include the fact that IPV is a private issue that occurs in the home and therefore requires disclosure in order to be revealed, a behavior that is not deemed an appropriate response for African American women for the reasons discussed earlier. Another situational factor includes the problem of drug and alcohol use, which is disproportionately high among African Americans. Structural factors include a history of gender and racial oppression that is laced throughout multiple systems and that limits the opportunities for African American

women in regards to education, employment, and use of social services. Community-cultural factors include the social isolation of urban, African American communities and stereotypes of African American women. In the end, these authors suggest that African American women live with a bicultural identity marked by the necessity to give in to family needs while grieving the loss of a resilient identity expected of African American women. This may lead African American women to choose abuse over within group ostracization. They further recognize the double bind of religion as a source of support and healing for African American women, but also a force which privileges the family in ways that may make it difficult for African American women to leave abusive spouses and fathers to their children. These same factors, iconography of African American women, limited access to resources, institutional/social policy factors, and religion, were similarly noted by Bell and Mattis (2000) who suggest that these ecophenomenological reasons may be partially responsible for African American women's continued risk of IPV.

In closing this brief discussion on African American survivors of IPV, it is essential to recognize that African American women experience disproportionately high rates of IPV, and particularly severe forms of violence. These experiences occur within an intricate and solipsistic matrix of social locations that delimit the choices that these women have available and the decisions that these women make to stay in or leave abusive relationships.

IPV: An 'Everywoman' Problem that Affects Some Women More than Others

This review of literature exposes IPV as an 'everyman' problem, affecting men and women across race, class, and education. However, the extent to which IPV occurs

against women, and the ramifications of this violence, are more aptly understood as a problem of 'everywoman'. While research has consistently shown that the most sociodemographically disadvantaged women are at highest risk for IPV, including individuals who are considered ethnic minorities, understanding why these differences exist has not ventured far from the safety of co-occurring demographic factors. There is a similar problem that exists in relation to mental health outcomes for women who have been traumatized (or at least, have experienced) by IPV. The next section reviews research on PTSD as a common outcome of IPV, as well as interethnic variations in the expression of this disorder following trauma.

Posttraumatic Stress Disorder and IPV: Methodology, Results and Implications

Posttraumatic Stress Disorder (PTSD) made its debut in the Diagnostic and Statistical Manual of Mental Disorders (3rd ed.) in 1980 (American Psychiatric Association, 1980). Developed primarily from observations of war veterans whose combat exposure resulted in a syndrome formerly called "Shell Shock", the disorder was conceived as the result of reaction to extreme trauma such as a war atrocity. Work with rape survivors (and 'rape trauma syndrome') also lent a voice to the derivation of the diagnostic criteria. In 1994, the fourth edition of the DSM (DSM-IV; APA, 1994) was disseminated with revisions to the PTSD diagnostic criteria; namely, the definition of trauma was expanded to include events that were not simply "out of the range of normal human experience" (the language included in the DSM-III) and individuals who experienced a trauma must have reacted to the traumatic event with extreme horror,

helplessness or terror. In the aftermath of the event, individuals must have had symptoms of reexperiencing, avoidance and hypervigilance.

PTSD: Prevalence in the General Population and IPV Survivors

Research on PTSD has been gathered using similar recruitment methods as IPV, falling into three categories: epidemiological surveys, individuals in primary care, urgent care, emergency room or shelter services, and individuals recruited through local advertisements. As mentioned previously, each of these methods has strengths and weaknesses. Epidemiological work estimates that 7.8% of Americans will suffer from PTSD in their lifetime (Kessler et al., 1995), which is a relatively small number considering that 61% of men and 51% of women report having endured a traumatic event. Like many DSM axis I disorders, there is a gender disparity in rates of PTSD. More specifically, women outnumber men in PTSD diagnoses 2:1, regardless of whether one considers lifetime prevalence (11.3% to 6%; Norris et al., 2002), current prevalence (3% to 1%; Stein et al., 1997), conditional lifetime prevalence (13% to 6%; Breslau et al., 1998) or conditional current prevalence (12% to 6%; Norris, 1992). 'Conditional' in these contexts means that the prevalence rate is conditioned on having been exposed to a traumatic event (i.e., rate is only considered among those exposed). In response to these differences, authors have put forth a variety of both empirical and theoretical possibilities (for review, see Pole and Lilly, in press). In a summary of research on PTSD, however, Breslau (2001) concluded that "the heaviest burden of PTSD is likely to be borne by women in late adolescence and early adulthood when their risk for exposure to assaultive violence is at its peak", adding that "risk for exposure to assaultive violence increases the

vulnerability of both males and females to the PTSD effects of subsequent traumas for many years" (p. 21).

Given women's high risk for PTSD, and that trauma experienced in late adolescence and early adulthood increases risk for PTSD, it is not surprising that survivors of IPV report disproportionately high levels of PTSD and PTSD symptoms relative to the general population. More specifically, rates of PTSD in female IPV survivors have been estimated between 33% (Astin et al., 1993) and 84% (Kemp et al., 1991). This range has been supported by a number of researchers who found PTSD or PTSD symptoms in 58% of a primary care sample of battered women (Axelrod et al., 1999), in 46% of a sample of social service users (Chemtob & Carlson, 2004), in 75% of a sample of shelter users (Nixon et al., 2004), in 45% of shelter users in Australia (Mertin & Mohr, 2000), in 28% of agency users in Spain (Pico-Alfonso, 2005), and in 50% of IPV survivors from the community (Stein & Kennedy, 2001). One meta-analysis on the overlap between IPV and PTSD found a 63.8% weighted mean prevalence of PTSD in eleven studies on the topic (Golding, 1999). These observations are important given the research showing that PTSD resulting from trauma exposure is associated with an array of other negative behaviors (i.e., substance use/abuse) and lack of preventative health behaviors such as exercise, diet, safe sex, and seeking health care (Rheingold et al., 2004). In relation to IPV, survivors with PTSD reported more impairment in general functioning, mental health and social functioning compared to survivors without PTSD (Laffaye et al., 2003).

Though research has consistently shown high rates of PTSD in IPV survivors, the range of incidence and prevalence rates remains rather large. There are no easy

explanations for these variations. However, a large portion of the variability is likely due to differences in PTSD definition and methodology/measurement differences across studies, which is reviewed next.

Implications of Definition on Rates of PTSD in IPV Survivors

The expanded definition of PTSD between DSM-III and DSM-IV had both helpful and harmful consequences for female survivors of IPV. One benefit of the new language surrounding trauma was that trauma by definition no longer had to be considered outside the range of normal human experience. For survivors of IPV, whose experience is all-too-common in its pervasiveness, this extension of the definition finally incorporated IPV as a possibly traumatic event. However, the diagnostic criterion for PTSD continues to overlap somewhat unevenly with the experience of IPV. For example, criterion A1 of the diagnosis includes whether the individual has encountered *an event* and goes on to offer a list of possibly traumatic experiences. The problem for IPV survivors is that partner violence is seldom a single event, but rather is a daily threat to oneself and possibly one's children, both of which are examples in the list of possibly traumatic experiences. Because of this, researchers have challenged the mental health field to think more broadly about the mental health implications of IPV to include a more contextualized understanding of how continued threat and exposure affects women (Herman, 1997; Mechanic, 2004).

Lenore Terr (1991) is one author that has discussed variations in symptoms of trauma as a result of the qualitative aspects of the traumatic event. She labels trauma as either Type I, which are traumas in which there is a 'single blow' to the individual, or Type II, which are traumas that are repeated and longstanding. Subsequent to the type of

trauma endured, trauma symptoms develop differentially. For Type I traumas, individuals may have more detailed, full memories of what occurred and misconceptions of the event. Following Type II traumas, a different array of symptoms develop that are marked by numbing, dissociation, denial and rage. In the case of IPV, more typically a Type II trauma, the latter symptoms may be more expected. Herman (1997) has even proposed a secondary diagnostic paradigm for individuals who endure repeated abuse entitled Complex PTSD, which may be integrated into future versions of the DSM classification system. Research that involves an expanded definition of trauma that includes repeated, longstanding trauma rather than single events, and an exploration of how this affects PTSD symptoms and PTSD symptom development, are warranted and underway. These studies may be especially helpful in understanding women's psychological reactions to IPV.

Another problem with the expanded version of the PTSD diagnostic criteria is the requirement that the individual react to the traumatic event with horror, terror or feelings of helplessness. Though the inclusion of this diagnostic requirement has been empirically supported by showing the significant correlation between those who experience intense emotions and the development of PTSD (Breslau & Kessler, 2001; Brunet et al., 2001), it may not be applicable to women who endure multiple traumas and may react to violence with self-defense or emotional suppression/numbing for the sake of themselves or their children. The problem of this mandatory criterion may exclude cases of PTSD that may otherwise fulfill the diagnostic criteria.

Other problems with the PTSD diagnostic criteria in relation to IPV survivors include the criteria of duration and impairment. In order to qualify for a diagnosis of

PTSD, individuals must experience a variety of symptoms over the course of a month. For women who must summon their resources in order to leave abusers, move, care for children, etc., the option of letting such symptoms endure and/or cause impairment may not exist. The definitional problems discussed above may be partially (if not fully) responsible for the large variability in rates of PTSD in battered women. Because of the precision of the PTSD diagnosis set forth by the DSM system, many researchers have chosen instead to examine symptoms (presence and severity) of PTSD regardless of whether an individual fulfills the criteria for a diagnosis. This has yielded a promising alternative that goes beyond PTSD diagnosis alone and examines the ways in which IPV affects women's lives and mental health, yet can become confusing when reading through the mushrooming research in this field.

Implications of Methodology on Rates of PTSD in IPV Survivors

Many of the problems discussed in relation to definition expand to the discussion on methodology and measurement. Because the diagnostic criteria of PTSD are problematic for IPV survivors, many of the measures based of DSM criteria may not produce the most valid and/or accurate levels of PTSD and PTSD symptoms in this population. In addition, different measures of PTSD offer different factors: some offer the ability to produce a diagnosis while others do not offer the ability to make a diagnosis, some are given by a clinician while others are simply checklists of symptoms filled out by an individual. Some instruments measure symptom severity while others simply measure symptom presence. Some include alternative or additional items/criteria outside of the DSM criteria while others remain strictly attached to the DSM criteria.

The diversity of these measures makes the results that follow their administration difficult to generalize and compare to other studies.

In addition to the problem of measurement, the methods used to collect information on PTSD in IPV survivors are subject to the same critique as methods used to collect information on IPV. For example, epidemiological research provides information on the correlation between PTSD and IPV in the general population, but individuals may be forced to divulge information over the telephone to a complete stranger who is rarely a clinician encharged with making clinical decisions on the presence/absence of a particular symptom. Individuals recruited from emergency rooms, primary care facilities and/or shelters represent a skewed population in which violence and its sequelae may be more severe, or in which the ability to use hospital services is mediated by income and insurance. Finally, recruitment through the community may also represent a skewed population in relation to PTSD in several ways. It may represent a population that has endured more severe trauma/violence and is seeking services. Alternatively, given the avoidance of talking about, thinking about or being reminded of the trauma often observed in individuals with PTSD, it is also likely that samples recruited from the community represent a population with low to moderate levels of PTSD as those with severe PTSD may never present for help for fear of having to confront painful experiences and memories. It is likely that the discrepancy between measurement/methodology and definition/criteria of PTSD accounts for the majority of the differences in rates of PTSD observed in the literature.

Measures of PTSD

There is a large selection of PTSD measures from which a researcher can choose. Given the number of measures, it is not sensible to review each individually. Rather, these measures are presented in Figure 3 and sorted by whether information is gathered by self-report or administered via a clinician. For the purposes of the present study, the Posttraumatic Stress Diagnostic Scale (PDS) (Foa, 1995) was chosen given its ability to provide both a clinical diagnosis of PTSD, as well as PTSD symptom presence and severity. In addition, this measure is self-report and could therefore be completed by the participant without a trained clinician, resources that were not available for the current study. Finally, the measure has shown strong reliability and validity, which is presented in the Methods section of this thesis. The following section reviews what has been found in relation to PTSD in IPV survivors using the measures listed in Figure 3 with a brief discussion on ethnicity to follow.

PTSD in IPV survivors: Risk/protection and Ethnicity

Risk and Protection for PTSD.

Akin to the general population and military samples, several factors in particular have been identified as increasing risk for PTSD following IPV. Two of these factors mirror findings in the general population and military samples; namely, frequent exposure to violence (i.e., a woman who encounters some form of violence every day as opposed to once a month) and more severe violence (i.e., beaten up or injured versus being pushed) consistently show positive correlations with PTSD. Though several of the studies to be reviewed here are epidemiological, many of the studies come from shelter, emergency room and court-involved populations, populations whose IPV and PTSD profiles may be biased towards more severe violence exposure.

Figure 3. Measures of PTSD Used in Research Literature

Measure	Author
Clinician Administered	
Clinician Administered PTSD Scale (CAPS)	(Blake et al., 1995)
Composite International Diagnostic Interview – PTSD portion (CIDI)	(Wittchen, 1994)
Diagnostic Interview Schedule (DIS)	(Robins et al., 1981)
Structured Clinical Interview for DSM (SCID) – PTSD subscale	(Spitzer & Williams, 1983)
Structured Interview for PTSD (SI-PTSD)	(Davidson et al., 1990)
Self-Report	
Brief Symptom Inventory (BSI)	(Derogatis & Melisaratos, 1983)
Impact of Events Scale (IES)	(Weiss & Marmar, 1997)
Mississippi Scale for Civilian PTSD	(Lauterback et al., 1997)
Mississippi Scale for Combat-Related PTSD	(Keane et al., 1988)
Posttraumatic Stress Diagnostic Scale (PDS)	(Foa, 1995)
Posttraumatic Stress Disorder Symptom Scale	(Foa et al., 1993)
Posttraumatic Stress Inventory (PTSD-I)	(Solomon et al., 1993)
PTSD Checklist (PCL-C)	(Blanchard et al., 1996)
Trauma Symptom Checklist – 40 (TSC-40)	(Elliot & Briere, 1992)
Traumatic Stress Inventory (TSI)	(Briere et al., 1995)
Traumatic Stress Schedule (TSS)	(Norris, 1990)

A dose-response relationship between frequent IPV and PTSD development has been reliably shown in a variety of studies. In epidemiological work, Coker et al. (2005) used the National Violence Against Women Survey to explore predictors of PTSD in IPV survivors. The authors found that higher scores on the CTS placed women at risk for moderate to severe symptoms of PTSD. In the Women and Family Project in southern California (Axelrod et al., 1999), more frequent violence was shown to predict PTSD over and above income and ethnicity. In these two studies, a diagnosis of PTSD was not yielded from the measures used. However, Mertin and Mohr's (2000) study of shelter residents in Australia found a positive correlation between IPV and PTSD diagnosis. Given these results using various measures across several populations, it is reasonable to assume that the relationship between frequent IPV and PTSD symptoms or diagnosis is quite strong.

Once again, however, it appears that PTSD development is not just a numbers game. Rather, qualitative aspects of IPV have been shown to impact rates of PTSD, including sexual violence, severe physical violence, and psychological violence. For example, researchers have discovered that the experience of sexual violence in combination with other forms of violence from an intimate partner increases risk for PTSD in emergency room populations (Lipsky et al., 2005b) and in the Women and Family Project (Coker et al., 2005), both of which used a diagnosis of PTSD as the outcome variable. On the same note, physical violence that is severe (being beaten up, being attacked with a knife or gun) increases risk for PTSD and/or PTSD symptoms in emergency room populations (Lipsky et al., 2005b) and shelters (Pico-Alfonso, 2005),

with Mertin and Mohr (2000) showing that the belief that one could be killed by the violence an especially strong predictor of a PTSD diagnosis.

While physical violence has been shown to be an important factor in PTSD development, other researchers have reported slightly different results. For example, Basile et al.'s (2004) analysis of the National Violence Against Women Survey (NVAWS) revealed that while all forms of IPV (physical, psychological, sexual and stalking) independently increased risk for PTSD symptoms, when factored together, physical, psychological and stalking forms of violence still predicted PTSD symptoms while sexual violence did not. These results were found, however, after factoring out age, education, employment, race, ethnicity and marital status, where differences between women on these measures may have changed the results. Also, a diagnosis of PTSD was not provided in this study and could account for why sexual violence, a well-established predictor of PTSD in the general population (Bennice et al., 2003; Cortina & Pimlott-Kubiak, 2006; Norris, 1992), did not increase risk for PTSD. Still, both psychological violence and stalking accounted for independent variance in PTSD.

Psychological violence has also been shown to increase risk for PTSD symptoms in agency-referred populations (Pico-Alfonso, 2005) and court-involved populations (Stuart et al., 2006), and for a PTSD diagnosis in a locally recruited population in Dallas, TX (Vitanza et al., 1995). Other authors have gone further to demonstrate that psychological violence not only increases risk for PTSD and PTSD symptoms, but predicts PTSD better than physical violence. In a study of women whose abusers took part in a court-mandated intervention program for IPV, Taft et al. (2005) found that symptoms of PTSD correlated with frequency of psychological abuse at levels between

.53 and .56, correlations that were significantly higher than between PTSD symptoms and other forms of violence. In a review article, Dutton et al. (2006) situates these findings among others and concludes that psychological abuse consistently predicts PTSD symptoms better than physical abuse. Given the evidence, it is likely that increased frequency of any kind of violence also increases risk for PTSD and/or PTSD symptoms, but different measures, populations and whether the researcher uses a diagnosis of PTSD has implications for what form of violence is revealed as the most integral to PTSD development. Future work should continue to delineate these interrelationships in a more systematic way.

Characteristics of IPV and the survivor's mental health have been shown in the trauma literature to increase risk for PTSD, including a history of depression or a pre-trauma psychological disorder (Acierno et al., 1999; Brewin et al., 2000). In addition, while a number of demographic factors have been correlated with increased risk for PTSD development following trauma as discussed earlier (low educational attainment and younger age), only low socioeconomic status has been shown to increase risk for PTSD following the experience of IPV in particular (Vogel & Marshall, 2001).

Ethnicity and PTSD in IPV survivors.

Perhaps the most consistent interrelationship between ethnicity, IPV and PTSD is no finding at all. More specifically, authors have found that while absolute differences in rates of PTSD and/or PTSD symptoms may vary as a function of ethnicity among IPV survivors, these differences disappear once other factors related to PTSD are taken into account, such as level of violence exposure (Axelrod et al., 1999) or socioeconomic status (Jasinski & Kantor, 2001). The results of other studies have reported no

differences in rates of PTSD across ethnicity (Lipsky et al., 2005b). In contrast, Lilly and Graham-Bermann (in press) documented heightened levels of PTSD symptoms in European American women in comparison to African American women, despite the fact that African American women reported more violence, lower income, and higher unemployment. Though not in the field of IPV in particular, Seng, Kohn-Wood and Odera (2005) used a sample of Medicaid recipients to find lower rates of PTSD in African American women in comparison to European American women.

It is difficult to determine why differences appear between studies on this topic. While variations in methodology and measurement can certainly be partially responsible for differences in research outcomes, it is also possible that different populations of battered women will have different profiles. For example, it may be that European American women recruited from shelters are different than European American women recruited via local advertisements, and that these differences are not consistent as a function of ethnicity. Put more simply, it is possible that intraethnic differences in IPV survivors confound the results, and that these differences are amplified by methodological and/or measurement choices made by researchers.

An intricate and complex picture has therefore developed surrounding interethnic differences in the development of PTSD. The present study hopes to contribute further to this debate. What has been more steadily shown, however, is that resources such as income and education, as well as qualitative aspects of the traumatic event (frequency, severity, and form) play a significant role in the development of PTSD in IPV survivors. Individuals who endure frequent, severe violence (whether physical or psychological) are more likely to develop PTSD; yet the availability of resources such as financial and social

resources may mitigate some of the deleterious post-trauma effects. In the next section, an alternative way to thinking about PTSD symptoms in IPV survivors based on Ronnie Janoff-Bulman's (1992) theory of shattered assumptions, as well as the role that coping plays in the relationship between IPV, shattered assumptions and PTSD is presented. Religiosity as a form of coping also is considered.

Trauma in IPV Survivors: Shattered Assumptions, Coping and Religiosity

Thus far, intimate partner violence and posttraumatic stress disorder have been reviewed, as well as the connection between exposure to IPV and PTSD. Still, factors that exacerbate or mitigate the chances of developing PTSD have rarely been explored outside of qualitative aspects of the traumatic event. In addition, some researchers have challenged the current paradigm for conceptualizing what PTSD symptoms mean for women in violent relationships. This section highlights a different paradigm for thinking about PTSD development called shattered assumptions, as well as addresses what coping and religiosity represent within the context of this paradigm. Following this, a discussion on empirical support for these constructs in IPV survivors is investigated.

A Paradigm for Thinking about PTSD

Since its inception and conceptualization, the PTSD diagnosis has pathological fear as its driving force (DePrince & Freyd, 2002). Said differently, PTSD is said to result when an individual's brain/mind repeatedly tells the body that it is at risk or in danger when in fact danger does not continue to exist. The fear response is 'pathological' because it is no longer considered adaptive, providing the body with inappropriate physiological and psychological cues. When the body continues to think it is at risk, an

array of symptoms such as seen in PTSD are expressed, including vigilance to one's surrounding, hyperarousal, and avoidance. These symptom clusters roughly match the flight-or-fight response, preparing the body to fight, run or freeze in the face of danger. For an individual who has had a motor vehicle accident, this reaction may indeed seem strange given that the probability of a motor vehicle accident recurring in a short span of time is rather small. For IPV survivors, however, the threat is all too real. As discussed previously, it is unusual for IPV to exist as a single, isolated event. Rather, IPV typically is a recurring and pervasive trauma that comes in many forms (physical, psychological or sexual). More importantly, assailants manipulate fear through threats of physical violence to the survivors (or others important to her) as a tactic to control IPV survivors and maintain the abusive relationship. For IPV survivors, listening to physiological or psychological fear cues may in fact help them negotiate their relationship and/or keep them alive.

Given the limitations in the predominant paradigm for understanding PTSD symptoms in IPV survivors, several authors have offered alternative ways for thinking about PTSD development. DePrince and Freyd (2002b), for example, have proposed *betrayal trauma theory* as a way to understand reactions to traumas more typically experienced by women. They argue that traumas experienced at the hands of intimate others, upon whom the individual must rely for resources, can lead to the heightened levels of denial or dissociation found in individuals with PTSD. Individuals are also forced to navigate the difficult and confusing emotion of betrayal. These authors have argued that going past the fear paradigm of PTSD can broaden the research questions asked and the understanding that will result from thinking differently about PTSD

symptoms in IPV survivors (DePrince & Freyd, 2002). In the same piece, these authors also suggest Janoff-Bulman's (1992) theory of shattered assumptions as an alternative paradigm for thinking about trauma reactions in survivors of IPV.

If symptoms tell a story about the path that an individual has traveled in life, the theory of shattered assumptions offers a different way to think about the implications of PTSD symptoms for IPV survivors. Janoff-Bulman's (1983, 1992) theory of shattered assumptions uses a mix of cognitive and dynamically-oriented theories to discuss how trauma becomes traumatizing. Janoff-Bulman states that "a network of diverse theories and representations constitutes our assumptive world" (1992, p. 6). More specifically, theories are hierarchically organized from the least abstract (i.e., one must follow the rules of the road) to more abstract (i.e., I'm a good person), with the most abstract theories constituting the most fundamental. She identifies three fundamental assumptions as underlying the majority of human thought and behavior: the world is benevolent, the world is meaningful, and the self is worthy. Janoff-Bulman points to research from social and cognitive psychology that shows that people are generally positive about their future (benevolence of the world), believe that they have more control than they do (meaningfulness of world), impose contingencies between people and their outcomes as a method of meaning-making (meaningfulness of world), and generally perceive themselves as good, capable and moral (self worth). These three assumptions allow people to walk through a world without constant fear for one's safety, as well as aid them in organizing what would otherwise be a vast and confusing array of input from the external world. Janoff-Bulman leans on a substantial field in social psychology research to explain how individuals use attentional biases, self-fulfilling prophecies, and primacy

effects to shape external input in ways that are consistent with internal assumptions about how the world can, does and should operate. Generally speaking, these assumptions are resistant to change.

The assumptive world that an individual builds, uses, and perpetuates can be challenged by information that is extraordinary and highly contradictory to these principles, often conceptualized as traumatic events. Janoff-Bulman contends that it is the traumatic events that most threaten survival of the self and one's belief that he/she can survive, and attacks both biological and symbolic systems, that result in the most adverse outcomes. This happens, she argues, because one's inner world can no longer depend on assumptions that have become unreliable; the assumptions can no longer make meaning of the world, confer a sense of safety or promote the self as worthy. For individuals who experience dramatic shifts in their assumptions, one's inner world becomes disintegrated. Given the contingencies between behavior and outcome and the belief that the world is benevolent, individuals often come to blame themselves for misfortune as a way to restore control over a situation that is otherwise uncontrollable and meaningless[4]. Janoff-Bulman (1992) also argues that the way in which one's assumptive world disintegrates often corresponds to specific traumas. Like DePrince and Freyd, Janoff-Bulman asserts that human induced trauma comes with its own set of psychological matters with which to wrestle, such as the concept of evil, thoughts of another having done something horrible *to me*, and questions of the trustworthiness of others. In addition, for individuals with human-induced trauma, randomness and controllability are reframed in terms of human intent.

[4] This is also observed in victim-blaming such that outsiders do not wish to threaten their own assumptions and instead attach fallibility to the victim as a way of making meaning of a world that no one wishes to believe is out of one's control.

That an individual's fundamental assumptions about how the world operates are challenged and sometimes forced to dramatically shift following trauma begs the question of what this might 'look like' on the outside. How does inner turmoil resulting from disintegration of assumptions become expressed? Janoff-Bulman (1992) ties the shattering of assumptions to symptoms of PTSD in several ways. For example, the hyperarousal found in PTSD is considered the basic, fundamental, physiological response that is consistent with any scenario in which one is in danger. Given that an individual continues to believe that he/she is in danger, and that this is likely mediated by an assumptive world that cannot soothe an anxious brain conditioned to danger cues, an individual continues to experience symptoms of hyperarousal. Past this physiological response, an individual must also grapple with cognitive aspects of the traumatic event. More specifically, an individual is motivated to avoid forceful new messages of uncontrollability and meaninglessness that might challenge fundamental assumptions, while the brain simultaneously attempts to reconcile new information represented by the traumatic event. This can come in the form of denial that the event occurred with concomitant emotional numbing in the case of the former, or in intrusive thoughts which may become too cognitively dissonant for the individual to handle (but temporarily ease fearful and avoidant affect) in the case of the latter.

Support for the overlap between shattered assumptions and PTSD symptoms has been provided by several authors. In a sample of Black South African individuals with PTSD, Magwaza (1999) found that traumatic events significantly changed individuals' beliefs in the meaningfulness and benevolence of the world. For example, those with high trauma exposure were more likely to believe that the world was meaningless and the

environment was threatening. In a community sample in the U.S., authors found that individuals with more positive inner representations of the world reported fewer posttraumatic stress symptoms, as well as more active coping strategies (Goldenberg & Matheson, 2005). Researchers have also noted overlap between shattered assumptions and symptoms of depression. In the construction of the World Assumptions Scale (WAS), Janoff-Bulman (1989) found that depressive symptoms accurately discriminated trauma survivors from non-survivors, and that non-survivors had significantly more positive assumptions than survivors. In a sample of undergraduate students, Harris and Valentiner (2002) found that scores on the World Assumptions Scale accounted for nearly 41% of the variability in depressive symptoms measured by the Beck Depression Inventory. It is important to note before going on, however, that to date there is only one measure of shattered assumptions used in psychological research, the World Assumptions Scale (WAS) that was developed by Janoff-Bulman (1989). While there is strong preliminary evidence of the overlap between shattered assumptions and mental health outcomes (symptoms of posttraumatic stress and depression) following trauma, this research remains limited and in need of further exploration.

Coping with Trauma: Restoration of Shattered Assumptions and Different Strategies

If shattered assumptions represent one link between trauma and adverse mental health outcomes post-trauma, then it is reasonable to assume the existence of factors that may mediate the strength of this relationship. The way in which one copes, for example, may be one missing link to making sense of the interrelationships between trauma, shattered assumptions and mental health outcomes. Within the theory of shattered assumptions, coping represents an effort to restore balance to damaged assumptions

(Janoff-Bulman, 1992). Therefore, individuals who are the most distressed or experience great inner turmoil may use a variety of coping methods in order to attempt to restore previously held assumptions (Smith Landsman, 2002). However, some methods of coping may not effectively lend themselves to recovery. As mentioned previously, avoidance of a problem may be one way that an individual is coping with the distress of their situation and may be tied into symptoms of PTSD. This is done in order to minimize the threat of having to change one's assumptions (Vitanza et al., 1995). This strategy, however, comes at the price of being unable to integrate new and important information into one's symbolic system, a process important in recovery (Smith Landsman, 2002). It may also lead to individuals staying in abusive relationships, placing them at continued risk for further abuse and more severe PTSD symptoms. Given the atrocity of IPV, as well as the tenuous social position of many women in abusive relationships (often impoverished, undereducated, ethnic minority), it is understandable why avoidance of the trauma may be a common strategy used by IPV survivors. Ultimately, however, these methods may fail to help women leave and/or recover from abusive relationships.

As stated above, there are many forms and strategies for coping. Perhaps the most prominent researcher in the area of coping is Richard Lazarus. A review article written by Lazarus (1993) examines theories of coping and the many ways in which it has been studied. To begin, he asserts that there are two separate ideas in coping research: style and process. Style represents characterological traits that are either conducive to or ineffective in coping with a stressful situation. These traits develop within the context of one's upbringing and development. Lazarus argues, however, that coping has more

recently been conceptualized as a process that is malleable over time and is driven by the context of a particular situation. For example, he states that coping will change over time as threats to a person change. For battered women, what may begin as avoidance coping when abuse is relatively mild and infrequent may become problem solving coping (i.e., making plans to leave the relationship) as abuse becomes more severe and frequent.

Generally, strategies for coping have been divided into bipoles with different names, but similar meanings: active versus passive, engaged versus disengaged, problem-solving versus emotion-focused, or primary versus secondary. Active, engaged, problem-solving or primary coping is conceptualized as behaviors (loosely defined) directed at the external environment that attempt to somehow change the world around an individual (Heckhausen & Schulz, 1995). Passive or disengaged coping is conceptualized as not taking active steps to change the external environment, but rather hope, wish, pray or avoid the stressful situation (Heckhausen & Schulz, 1995). Emotion-focused or secondary coping is theorized as efforts to bolster failures made by the individual either when trying to use active coping strategies or when a situation is uncontrollable (Heckhausen & Schulz, 1995). While United States ideals might promote the first, i.e. 'picking oneself up by the bootstraps and moving on', Lazarus (1993) reminds readers that "there is ample evidence that under certain conditions – particularly, those in which nothing useful can be done to change the situation – rational problem-solving efforts can be counterproductive, even likely to result in chronic distress when they fail; then emotion-focused efforts would offer the best coping choice" (p. 238). As Lazarus states, individuals with limited control of the external environment may at times be better off opting for more passive coping strategies. This may be particularly relevant for IPV

survivors whose limited resources may make reliance on the batterer necessary until sufficient resources allow the survivor to take active steps to leave. This has, in fact, been shown in the research and is reviewed in the upcoming pages. Though passive strategies may at times be warranted and effective, other researchers still maintain that "successful resolution of stressful life events is due to active attempts to mediate them" (Davis, 2002).

Though theories of coping process can tie together trauma, shattered assumptions and PTSD in interesting ways ripe for study, the question still remains whether shattered assumptions represent an outcome of trauma or a mediator between trauma and PTSD. Furthermore, does coping then mediate the relationship between trauma and shattered assumptions, or does it play a different role in the interrelationships between trauma, shattered assumptions and PTSD? Luckily, one study has examined this question, though not in IPV survivors. In a community sample, Goldenberg and Matheson (2005) assessed PTSD symptoms, world assumptions, coping strategies and lifetime trauma. The authors first found that the relationship between assumptions and PTSD symptoms was mediated by passive coping. After testing several alternative models, the authors concluded that it is more likely that shattered assumptions limit an individual's ability to cope with trauma in effective ways, opening the door for the development of symptoms of PTSD. Similar findings have also been shown by Clements and Sawhney's (2000) study of seventy IPV survivors recruited from domestic violence agencies. These authors assessed coping strategies and attributional style, finding that problem-focused coping was related to decreases in dysphoria while self-blame was related to increases in dysphoria. Using a regression analysis in which both coping strategies and attributional style were entered,

the authors concluded that coping strategies seemed a better predictor of dysphoria than attributional style. Though attributional style is slightly dissimilar to shattered assumptions, these authors seem to make a case for assumptions/attributions delimiting coping strategies, which in turn increase risk for dysphoria. Results of these studies have yet to be replicated, or be tested with specific traumas such as IPV in the case of the Goldenberg and Matheson study. However, the findings do suggest that shattered assumptions and coping may act as intermediaries between trauma exposure and PTSD symptoms.

Religiosity: A Particular Form of Coping

Religion provides many things for devout individuals, such as a way to make meaning of the world, opportunity for fellowship and social contact, and emotional comfort. This is an extremely short list of the many ways in which religion and religious conviction impact people's lives. For the purposes of this thesis, religion is conceptualized as a factor that can help to restore meaning in individuals' lives after trauma, and is therefore, an additional method of coping. The idea of spirituality/religion as a vehicle for recovery in traumatized individuals has been discussed in Ai and Park's (2005) article on moving away from pathological paradigms of PTSD to promote adaptation, development and resurgence. Like coping, these authors argue that the use of spirituality may be a secondary control strategy used to help individuals find a system of meaning after their own has been damaged, an idea originally discussed by Heckhausen and Schulz (1995). Religion may offer emotional support in the face of a trauma that threatens to claim the world as meaningless or malevolent. Interestingly, in Ai and Park's review, they note a trend in the research that shows high PTSD symptoms as

positively correlated with heightened reports of religiosity in the more immediate aftermath of trauma. According to coping theory and shattered assumptions, this correlation makes sense in that individuals who are most distressed will attempt to cope in a variety of different ways. However, the authors note that there is a time effect such that high religiosity in the aftermath of trauma may lead to lower symptoms of PTSD in the six months to a year after trauma exposure. This time effect has been noted in cases of bereavement (Park, 2005) and in parents who lost a child to Sudden Infant Death syndrome (McIntosh et al., 1993). Once again, this is not contradictory to coping theory and shattered assumptions, which would argue that religion acts as a system of assumption restoration in the aftermath of trauma that in turn leads to long term mental health gains.

Religious coping has been observed across cultures and ethnicity, however, it is important to note that this has been reported more frequently in ethnic minorities. Bell and Mattis (2000), for instance, argue that therapeutic work with African American individuals must privilege religion as a preferred vehicle for recovery and resilience in this population. They cite epidemiological work by Neighbors et al. (1998) that found heightened levels of religious coping as correlated with reports of distress in African American individuals, and evidence that African Americans are more likely to seek help from a minister or church official than a mental health professional. Bryant-Davis (2005) similarly found that African American survivors of childhood physical and/or sexual abuse recruited from the community reported using spirituality as a coping strategy in 55% of the cases. In fact, it was the most frequently cited coping strategy in this

qualitative piece and encompassed a wide array of cognitive and behavioral strategies, including organized religious involvement and personal spiritual ideology.

Women who experience IPV may be forced to confront a variety of challenges to themselves, to their assumptive world, and to their ability to cope effectively with trauma. When viewing PTSD in IPV survivors from an alternative paradigm that de-pathologizes fear and recognizes the pervasive effects of trauma on women's lives, it is possible to begin thinking differently about PTSD in IPV survivors and the role of coping. It also opens up the possibility to think in more contextualized ways about what PTSD symptoms may mean across different ethnic groups. For example, does the experience of trauma not shatter assumptions in African American women as dramatically as for European American women? Might the long term, intersecting effects of racism, classism and sexism produce a relative resistance to a shattering of assumptions for ethnic minority women? Do ethnic groups differ in their use of coping strategies, which in turn exacerbates or mitigates PTSD symptoms? Before presenting a model and hypotheses for the current study, however, it is important to address what empirical work has been done on shattered assumptions and coping/religiosity specifically in battered women.

Empirical Work on Assumptions, Coping and Religiosity in IPV Survivors

Shattered assumptions in IPV survivors: Measurement and findings.

In terms of methodology, to date there are only two ways to assess shattered assumptions in empirical work. The first is by using the World Assumptions Scale (WAS) (Janoff-Bulman, 1989) and the second is using qualitative methods. The WAS was developed to assess shattered assumptions in trauma survivors. The WAS is the only

quantitative measure of shattered assumptions and is therefore used in the current study. Psychometric properties of the WAS can be found in the Methods section.

Another way to assess shattered assumptions is through qualitative methods. Though an empirical study that specifically assesses shattered assumptions in the semi-structured questions that were asked cannot be found in a search of psychology databases, the outcomes of several authors' work on IPV survivors reveals that shattered assumptions may be an appropriate construct for use with this population. For example, Beth Richie's (1995) sociological study of formerly battered women prisoners found that women were more traumatized by the violence in their lives when they were treated preferentially as children. Said differently, compared to women who either witnessed IPV as kids or were the victims of child abuse, women with relative privilege in childhood were more paralyzed when IPV began in early adulthood. The latter women had visions of what their lives, marriages and families would be that did not include violence and abuse, so when violence began to occur these women experienced shifts in their thinking about themselves and their relationship that resulted in continued attempts to make the relationship work and therefore opened the door for the escalation of violence. Another example of a study that did not specifically explore shattered assumptions is Senter and Caldwell's (2002) study of battered women who left relationships. These authors' qualitative methods yielded two responses that could be seen as proof of shattered assumptions that were restored; namely, they found that women who reported an awakening of the self/rediscovery of self and women who embraced a new perspective of self, others and life were able to leave abusive relationships. Despite several authors citing shattered assumptions as a new direction for

research on trauma and its effects (DePrince & Freyd, 2002; Smith Landsman, 2002), empirical data in relation to shattered assumptions has remained limited.

Coping in IPV survivors: measurement and findings.

As discussed, Richard Lazarus's work on coping is perhaps the most well-known. Not surprisingly, his measure of coping, The Ways of Coping Questionnaire (WOC) (Folkman & Lazarus, 1985), has been noted as the most widely used in coping research (Waldrop & Resick, 2004). Factor analyses using a community sample found seven subscales with this measure: problem-focused, wishful thinking, growth, minimize threat, seeks social support, blamed self, and a mixed scale that has both avoidant and help-seeking strategies. Despite its wide use, Lazarus warns that coping cannot be considered outside of the context in which it occurs due to the constraints that situations place on individuals across circumstances (Lazarus, 1993). The WOC scale does not consider context. This appears to be a limitation of quantitative measures for coping across the board, as none of the popular measures assess contextual factors that may constrain the coping choices that an individual can and does make. Banyard and Graham-Bermann (1993) specifically critique the acontextual nature of the WOC scale, stating that women's ways of coping and the context variability across gender (women's coping occurs in a gendered context that delimits behavior and expectations) and ethnicity (different ethnic groups similarly cope within racialized contexts) make this scale problematic for use with women and ethnic minority women in particular. In addition, the authors call into question the development of the WOC scale because it was originally normed using a sample of 100 middle aged individuals in the community that was not diverse in terms of gender, age or ethnicity.

Other authors similarly critiqued the development of the WOC scale, stating that the original sample did not represent a distressed group. Vitaliano et al. (1985), for example, revised the scale using three distressed groups (psychiatric outpatients, spouses of individuals with Alzheimer's, medical students) that were more diverse across gender, age and education than the original sample. These authors re-examined the psychometric properties of the original scale and found that the subscales continued to hold and showed improved reliability in this sample and shared less variance between subscales. In addition, the revised scale was related to scores of depression (particularly the Wishful Thinking subscale), anxiety (particularly the Problem-Focused subscale), and both depression and anxiety (particularly the Mixed subscale). Given the psychometric improvements evidenced in the revised scale, the reduced number of scale items, and the fact that the scale was normed with a more gender equivalent sample, the revised version provided by Vitaliano et al. (1985) was chosen for use in the current study. Details regarding the psychometric properties of this scale can be found in the Methods section.

Perhaps the most striking feature of the coping literature on IPV survivors is the extent to which women use a variety of coping strategies in the face of horrific conditions. IPV survivors from domestic violence agencies had expectations that they could control their future and showed problem-solving coping in the face of IPV, which in turn was correlated with lowered levels of dysphoria (Clements & Sawhney, 2000). In qualitative work, IPV survivors have identified great inner strengths and active strategies to keep them safe. For example, Davis's (2002) study of IPV survivors recruited from shelters and domestic violence agencies found that women used a variety of coping strategies, both problem-solving and emotion-focused, in dealing with abuse. She found

three themes emerge in the study: women would survive for many years until they had built the resources to leave ("the strength to survive"), would find sites of resilience through spirituality, humor, use of social support, and hope, and would use their bodily intuitions and build new boundaries around themselves to stay safe. This was reiterated in the qualitative piece by Hage (2006), who found that IPV survivors who reported using internal strength and spiritual resources to cope with abuse developed self-agency as they watched the patterns of abuse in order to survive, and used the support of friends and family to get through the situation.

Researchers, however, have pointed out that active coping in IPV survivors is mediated by several factors. Kocut and Goodman (2003), for example, found that active coping is mediated by social support in IPV survivors such that women with higher perceived social support were more likely to engage in problem-focused coping. They conclude that social support acts as "coping assistance" for other forms of coping in IPV survivors. Waldrop and Resick (2004) also address catalysts for active coping in their review of coping in IPV survivors. The authors found that active coping increased for this population as the frequency of violence increased. This makes sense when thinking about coping as a process and shattered assumptions such that individuals may use avoidant coping early in an abusive relationship because it is highly contrary to their views of what their relationship can and should be. As violence increases, however, individuals may engage more coping strategies to preserve their safety and deal with their subsequent distress.

Another factor that has received attention in delimiting coping strategies is the severity of violence. In a qualitative study of older women in long-term, severely abusive

relationships, IPV survivors frequently used emotion-focused coping in order to manage a situation they believed they could not change (Zink et al., 2006). This included using reappraisal of self, the abuser, or the relationship in order to help the women feel better. Though these women reported using several active strategies to keep them safe, including calling male family members, the women frequently used strategies to help change the way they thought or felt about the abuser rather than take active steps to leave. In a quantitative study by Lewis et al. (2006), they found that the most frequently reported coping strategy of IPV survivors was wishful thinking, a coping strategy that increased as violence escalated in severity and with more threats and intimidation from the batterer. In this study, women that used emotion-focused coping were more likely to also report depressive symptomatology and lowered self-esteem. Waldrop and Resick's review article on coping in battered women similarly reports that coping becomes more avoidant as the severity of violence increases. However, they also noted that as severity of violence increases, social support from friends decreases. Given the results earlier by Kocut and Goodman (2003), which pointed out that social support opens the door for more active coping strategies, these results must be taken with a grain of salt as this relationship is likely more complicated and in need of examination.

Another factor that deserves attention is changes in coping over time for IPV survivors. While increases in frequency of violence seem to spark more active coping strategies, and severity of violence incites the use of more passive strategies, Lerner and Kennedy (2000) point out that leaving a relationship is likely the time of highest distress, and therefore, the highest need for a variety of coping strategies. Their study separated women into groups based on whether they are still in a violent relationship, or whether

the woman is out of the relationship by less than 6 months, 6 months to a year, 1 to 3 years, or over 3 years. They found that over time, women's coping scores on the Ways of Coping questionnaire gradually decreased. However, women out of the violent relationship for less than 6 months, cope more than women still in the relationship or women out of the relationship for more than 6 months. During the first six months after leaving an abusive relationship, it is likely that women are highly distressed due to continued threats to their safety, as well as the need to cope with a variety of concerns such as employment, finances, and children's needs. While it is important to study women still in violent relationships to see how they cope with the violence, this research suggests that actually experiencing physical violence may not be the strongest predictor of how and to what extent women are coping with IPV. Future work should include a longitudinal design to assess true changes in coping rather than grouping women in a cross-sectional design.

Religiosity in IPV survivors: measurement and findings.

Across many studies of IPV survivors, religion and spirituality have been reported as integral to women's coping, leaving relationships and/or recovery from abuse. Religion and spirituality, however, should not be conflated. Religion, for the purposes of this study, is considered a more organized set of principles, behaviors and involvements based upon a particular church or theology (Giesbrecht & Sevcik, 2000). Spirituality is conceptualized here as more diffuse and personal, based not on a particular teaching or religious affiliation (Humphreys, 2000). For this study, the predominant focus will be on religiosity given that it has been shown more frequently to be implicated in IPV

survivors' coping strategies (El-Khoury et al., 2004; Fallot & Heckman, 2005; Gillum et al., 2006a). Studies on spirituality will be discussed where relevant.

There are scales that assess religiosity, scales that assess spirituality, and scales that assess both. For the purposes of this study, the Multidimensional Measure of Religious Involvement (MMRI) (Levin et al., 1995) was selected. Psychometric properties of this scale can be seen in the Methods section. The scale offers the ability to look at several indices of religious involvement (organizational, nonorganizational and subjective religiosity) and was validated using an ethnic minority population. Similar to measuring PTSD and PTSD symptoms, there is no one scale that is used most frequently. In fact, in reading the literature on this topic in IPV survivors, no two studies used the same measure.

What is consistent in reviewing literature, however, is the conclusion that religion and/or religious involvement is often an essential component of women's decision to leave an abusive relationship, her coping and her mental health/recovery. For instance, in a community sample of IPV survivors, 97% of the women identified spirituality or God as a source of strength, support and/or comfort (Gillum et al., 2006a). These authors also found that the more these women attended church and described their involvement as supportive, the fewer symptoms of depression they reported. In Senter and Caldwell's (2002) qualitative study of women who had left abusive relationships, many women reported that they had reaffirmed faith-based beliefs and practices in order to gather the strength to leave the assailant. In a sample of IPV shelter residents, one author found that religion was related to decreases on several subscales of the Symptom Checklist- 90 (SCL-90) (Derogatis, 1994), including lower scores on global severity scale score (a

measure of overall distress), lower obsessive-compulsive scores, lower interpersonal sensitivity scores, and lower hostility scores (Humphreys, 2000).

An interesting finding also comes from Fallot and Heckman's (2005) study of religious coping in IPV survivors; namely, trauma symptoms were positively related to negative religious coping. Negative religious coping was exemplied with the following quote: "an individual may believe that the event represents God's punishment or abandonment or may elect to deal with the situation without God's assistance" (Fallot & Heckman, 2005, p. 216). While this may seem contradictory to those of Gillum et al. (2006) and Senter and Caldwell (2002), this makes sense in light of shattered assumptions and coping. More specifically, individuals who are most distressed, or whose symbolic systems are most damaged, will engage in more overall coping strategies that may include negative religious coping. Women who are less distressed may not use negative religious coping because their symbolic systems have remained less challenged, or because they have already found alternative methods of coping that have aided in their recovery from PTSD symptoms.

It is also important to pause briefly and note that several studies have suggested a contradictory role of religion for IPV survivors. Giesbrecht and Sevcik (2000) found that for a population of evangelical church members who experienced IPV, the church sometimes functioned as a meaning-making framework that led to shame and guilt. As discussed earlier, religious leaders hold a powerful position that sometimes serves to advise women to stick out a marriage in which there is violence and simultaneously blame them when they do not leave. While this can certainly thwart women's attempts to use religion and religious involvement as a strategy for positive coping, overall the

literature seems skewed to the positive role of religion and spirituality in the lives of IPV survivors. It may be that women who are still involved in abusive relationships encounter the contradictory messages of the church and/or religious leaders, but in choosing to leave an abuser, women adopt new methods of coping and/or have reframed religious conviction such that they no longer believe IPV to be in God's plan for their life (Banks-Wallace & Parks, 2004).

The above review seems to suggest that religion can be both a supportive construct that aids in recovery from abuse and as a method of coping which is sometimes less effective (as in the case of negative religious coping). However, it is important to note that interethnic variability has been noted in relation to religiosity in IPV survivors. Moreover, African American IPV survivors have been shown in the literature to use prayer more frequently and find it more helpful than European American women (El-Khoury et al., 2004) and use more positive religious coping than European American women (Fallot & Heckman, 2005). In Gillum et al.'s (2006) study, women of color were found to be more frequently involved in a place of worship, as well as more likely to report increased social support due to their church involvement, than European American women. Given these findings, it is reasonable to assume that African American women (and women of color more generally) may use religion as a primary strategy for coping in the aftermath of IPV.

Ethnicity: shattered assumptions, coping and religiosity.

To begin, the empirical data on these topics are sparse. To date, there has been no exploration of interethnic variability (or intraethnic variability) in regards to shattered assumptions. In regards to African American IPV survivors, a database search only

generated studies in which religiosity/spirituality were discussed. An exploration of these constructs in ethnic minority women is one contribution that the current thesis will provide. Nevertheless, a brief discussion on what has been found in African American women follows.

Banks-Wallace and Parks (2004) found that African American women who sought out spiritual guidance in the aftermath of trauma reappraised God's plan for their life in relation to IPV. This was identified by the IPV survivors as important in their recovery process. Watlington and Murphy's (2006) quantitative study recruited African American women from IPV agencies and found that religious involvement was negatively correlated with PTSD symptoms and positively correlated with social support. In addition, they found that both religious involvement and reported spirituality were negatively related with depressive symptoms. Notably, these authors found that all measures of religious coping, religious involvement and spirituality were significantly correlated. In seeming contrast to their findings, Fowler and Hill (2004) found that spirituality and social support were not significantly related to PTSD symptoms following IPV. Rather, the extent of IPV exposure predicted PTSD symptoms even after spirituality and social support were entered in the regression. Though these results seem opposed to Watlington and Murphy's results, it is possible that religious involvement is a better predictor of PTSD symptoms than spirituality. While spirituality was a predictor of lowered depressive symptoms in the Watlington and Murphy study, it was not a predictor of PTSD symptoms. Whether these small differences are a question of measurement or construct (religiosity versus spirituality) is unclear and in need of future attention. It may be, however, that PTSD symptoms are assuaged by more formalized

coping strategies, as seen in religious involvement, than depressive symptoms. Though these reasons are speculative, religiosity and religious involvement are the focus of the current study, given its more consistent link with PTSD symptoms in IPV survivors.

Shattered assumptions and subsequent coping may offer a window into a more contextualized understanding of how women experience and recover from IPV, as well as offer insights into how women of different ethnicities experience and recover from IPV. The hypotheses, methods and measures of the present study will now be addressed.

The Present Study

The present study explores the experience of IPV in women with attention to an alternative way of thinking about trauma reactions called shattered assumptions. Within this context, women's use of coping strategies and religiosity is examined in relation to violence exposure and the outcome of PTSD. It is hypothesized that variations within the constructs of shattered assumptions, coping and religiosity will contribute to variations seen in PTSD symptoms and variations across ethnicity.

Hypotheses

Hypotheses related to violence.

Given the compelling evidence for the relationship between several demographic variables and the experience of IPV, it is hypothesized that:

H1: African American women will report more intimate partner violence in the preceding year than European American women, and specifically more physical assault and sexual coercion.

H2: Low income, low educational attainment, cohabitation and younger age will predict higher scores of total IPV.

Hypotheses related to PTSD.

Given previous research on the relationship between frequency of violence and PTSD, as well as the evidence of interethnic variability in rates of PTSD, it is hypothesized that:

H3: European American women will endorse more symptoms of PTSD than African American women.

H4: Demographic variables such as income, educational attainment, and age will be inversely correlated to PTSD symptoms.

H5: More IPV exposure will be positively correlated with heightened PTSD symptoms.

Hypotheses related to shattered assumptions.

The construct of shattered assumptions has been shown to predict trauma survivor versus non-survivor status, as well as shown to be related to scores of PTSD measures, though never previously in IPV survivors. Additionally, this measure had not been used in research that explores differences across ethnicity. However, it is hypothesized that African American women will have more positive world assumptions in relation to European American women, given the ways in which African American women have been doubly victimized by interlocking systems of oppression. It is believed that enduring such hardships may result in more realistic assumptions about control, benevolence and worthiness of self, as well as produce a relative resilience in the face of trauma. With these propositions in mind, the following is hypothesized:

H6: African American will show less negative world assumptions than European American women.

H7: Shattered assumptions will mediate the relationship between ethnicity and PTSD symptoms.

H8: More IPV exposure will be inversely related to assumptions about the world, such that more violence exposure will result in more negative assumptions.

H9: Assumptions about the world will be inversely related to PTSD symptoms such that individuals with the most negative assumptions will show more PTSD symptoms.

Hypotheses related to coping and religiosity.

Though research has begun to explore these constructs in IPV survivors, the available information in regards to ethnicity, shattered assumptions and PTSD has remained limited. Research has shown that African American women and women of color more generally, use religion as a method of coping. Additionally, research has suggested that when considering coping as a process, it can be seen as connected to overall level of distress and shattered assumptions. As such, the following hypotheses are presented:

H10: African American will report more religious involvement than European American women, regardless of level of distress.

H11: Individuals with the most distress evidenced by higher PTSD symptoms will report escalated scores in relation to religiosity, which may be mediated by ethnicity.

H12: The use of predominantly emotion-focused coping as opposed to problem-focused coping will be related to having experienced more IPV in the preceding year, as well as heightened rates of PTSD symptoms.

H13: Problem-focused versus emotion-focused coping will moderate the relationship between IPV exposure and PTSD.

Preliminary testing of the model.

Research in the area of shattered assumptions has been nascent at best and has not yet been examined in IPV survivors or interethnically. However, research has suggested that shattered assumptions may impact coping post-trauma, which then opens the door for PTSD symptoms to develop. Two final regression analyses predicting to PTSD are therefore hypothesized to delineate some of these relationships. Demographic variables shown in earlier analyses to impact PTSD symptoms will be targeted for entry in the first step along with ethnicity and ethnic identity. The second step will include frequency and severity of violence. Shattered assumptions will be entered in the third step, followed by coping in the first regression and religiosity in the second regression. It is hypothesized that shattered assumptions will be a significant predictor of PTSD symptoms when also accounting for IPV frequency/severity and ethnicity, but that once coping and religiosity are entered, it will no longer be significant. This might suggest that shattered assumptions are an intermediary between the experience of IPV and one's strategy for coping, and that this has direct effects on PTSD symptom level.

Post hoc analyses.

Given that shattered assumptions, as well as the WCCL questionnaire, have shown minimal to no previous use in a population of IPV survivors, it was assumed that

further exploration may be necessary, especially in relation to ethnicity. In particular, it is hypothesized that splitting the data file as a function of ethnicity and regressing shattered assumptions, coping and religiosity on PTSD may contribute to a better understanding of the interrelationships between the primary variables. The possibility of building a model for future testing is also considered.

Chapter 2

Project Methods

Procedures

Women from southeastern and central Michigan were recruited through domestic violence shelters, as well as advertisements in local commercial locations (grocery stores, laundromats, and bus stations), doctor's offices, emergency rooms, social service agencies, courts, and women's agencies. Potential participants called the advertised phone number and were prescreened over the phone using a standard form (see Appendix I). Women were excluded if they had not experienced IPV in the previous two years.

Participant data was collected using two methods. The first method was via an intervention study for preschool-aged children exposed to IPV (Graham-Bermann, 2006). These women were either interviewed prior to and immediately following the intervention, or completed two interviews approximately five weeks apart with the option of joining the intervention groups following the second interview (treatment-as-usual controls). In order to participate in this study, women were required to have a child between the ages of four and six who was willing to participate in the children's group, agree to be interviewed twice, and in the case of experimental subjects, agree to take part in the intervention. Women that were not interested in the intervention, did not have a

child between the ages of four and six, and/or did not wish to be interviewed twice were given the option to participate in a one-time survey in which only the measures listed below were given. The second method of data collection was comprised of women recruited from domestic violence agencies and a women's center that provides low-cost services for the community. Women were interviewed by a Masters level clinical psychology student or clinical post-doctoral fellow. All interviewers were trained in clinical interviewing techniques and completed the PEERRS certification through the University of Michigan. Childcare was provided when needed by bachelor level students. Interviews lasted between 60 and 90 minutes and women were reimbursed $25 for their time.

Table 1 shows where interviews were conducted, as well as the ethnic match between the participant and the interviewer. Seventy-two percent of interviews were conducted in a domestic violence shelter, though this may be misleading because a shelter location frequently proved to be the most convenient for the interview and was not always the result of the survivor living in the shelter. Twenty-two percent of the interviews were conducted in the participants' home. The majority of interviews were conducted by a European American interviewer. In 44% of the interviews, a match existed between the ethnicity of the interviewer and the participant.

Participants

Demographic information of study participants can be seen in Tables 2 and 3. In total, 97 participants completed the interview measures. Of these participants, 47.4% were African American, 46.4% were European American, 5.2% were Hispanic American and 1.0% was Biracial. Overall, the sample had a low mean income for the preceding

month (*M*=$902, *SD*=943) and the majority of participants had a high school degree or less. However, a subsample of approximately thirteen percent had a college degree or greater. The sample was largely unemployed (71.1%) and a majority were currently using, or had previously used, the services of a domestic violence shelter (71.1%). Most women identified as single (52.6%), divorced (8.2%), or separated (19.6%), though a small subsample identified as still married (12.4%) or living with a partner (not necessarily the assailant) (6.2%). One woman identified as a widow. With the exception of two women, participants reported not currently living with a violent partner and had ended cohabitation anywhere between 4 and 2,920 days prior to the interview with a mean of 318 days (*SD*=526.8). Participants had a mean age of 33.2 (*SD*=8.7) years and had moved, on average, 3.5 times (*SD*=3.7) in the past four years.

Measures[5]

The measures used in the current study showed acceptable reliability overall, with Cronbach's α scores ranging between .73 and .92 for the full scales of primary measures (Table 4). Subscales generated from the measures showed reliability primarily in the moderate range, with several subscales in the poor reliability range (α<.60).

Demographics

Women were asked demographic questions regarding their current relationship status (single, living with partner, married, separated, widowed, divorced or remarried), ethnicity (Native American, Asian American, African American, Hispanic American, European American, Biracial or other), highest level of educational attainment (grade school or less, some high school, high school degree/GED, some college or vocational, college degree, some graduate school, graduate degree), employment status (yes/no),

[5] Please see appendices 2 through 7 for complete copies of the measures.

income in the last month, age, whether they had ever used a battered women's shelter (yes/no), and how many times the participant moved in the last four years.

Intimate Partner Violence (IPV)

The Conflict Tactics Scale-Revised (CTS-R) (Straus et al., 1996) is a 78 item measure that assesses perpetration and experience of intimate partner violence. The measure correlates highly with the original CTS (Straus, 1979). For the purposes of the present study, only reception of violence was assessed in the participants. The scale was used to determine the extent to which negotiation, psychological aggression, physical assault, injury, and sexual coercion were used against the respondent in the previous year, as well as to generate a score for total IPV exposure in that year. Respondents were asked whether a particular tactic was used and approximately how many times. Response choices included '1x' (1), '2x' (2), '3-5x' (3), '6-10x' (4), '11-20x' (5), '>20x' (6), and 'never' (7). Examples of questions on the CTS-R include 'my partner explained his or her side of a disagreement to me' (negotiation), 'my partner insulted or swore at me' (psychological aggression), 'my partner pushed or shoved me' (physical assault), 'you passed out from being hit in the head by your partner during a fight' (injury), and 'my partner used threats to make me have oral or anal sex' (sexual coercion). The measure was scored according the procedures outlined in Straus et al (1996). Reliability (measured by Cronbach's alpha) for this study was .92 for the total scale, .49 for the negotiation subscale, .78 for the psychological aggression subscale, .92 for the physical assault subscale, .87 for the sexual coercion subscale, and .75 for the injury subscale.

The original CTS scale was developed in 1979 by Straus. The original scale quantified the extent of physical violence in the year preceding the interview. In 1996,

Straus et al. revised the scale as a way to incorporate broadened definitions of violence that include psychological aggression, negotiation, and sexual coercion, as well as assess for injury, in dating, cohabiting and/or marital relationships. The CTS-R was developed using a sample of 317 undergraduate students (Straus et al., 1996), the majority female (64%). One of the new scales, sexual coercion, was constructed by crossing three levels of coercion (insistence, threats, force) with three types of sexual acts (vaginal, anal, oral). Of the nine original items, only seven showed strong enough coefficients to remain in the final scale. The other new scale that assesses injury was developed using items from the National Family Violence Survey (Straus et al., 1980). These six questions address the extent of injury, whether a doctor needed to be seen and whether a doctor was actually seen. The original three scales were amended slightly (for a more detailed description of the revision process, see Straus et al., 1996). The revised measure therefore includes five subscales, each with strong internal reliability: negotiation (α=.86), psychological aggression (α=.79), physical assault (α=.86), sexual coercion (α=.87), and injury (α=.95) (Straus et al., 1996). Z-tests confirmed construct validity for the scale in relation to reports of sexual coercion reported by men and women, and in the relation between assault and injury reported by men and women. The authors also argue that discriminant validity was shown by the low correlation between theoretically unrelated scales (for example, injury and negotiation or sexual coercion and negotiation).

Posttraumatic Stress Disorder (PTSD)

The Posttraumatic Stress Diagnostic Scale (PDS) (Foa, 1995) is a 49 item measure that yields a clinical diagnosis of PTSD, as well as a symptom score. The scale asks respondents whether they have experienced a variety of traumatic events and then

asks the participant to concentrate on the 'worst' of these events. For this study, participants were asked about their worst incident of IPV in particular. Respondents are asked questions to assess whether criterion A1 and A2 of the PTSD diagnostic criteria (see Figure 1) have been met for this 'worst' incident and are then asked whether they have experienced a series of symptoms from the PTSD symptom clusters and how frequently in the previous month. The scale ends by assessing the extent to which symptoms have interfered with various areas of the respondent's life. A total PTSD symptom score was generated by adding the frequency of PTSD symptoms endorsed by the participant in the previous month. Previous research by Coffey et al (1998) revealed that a symptom cutoff score of 28 was associated with a sensitivity rate of 89%, a specificity rate of 65% and a correct classification rate of 74%. As such, a cutoff score of 28 or higher was used to classify participants as having PTSD (noted in tables as "PTSD cutoff dx"). A second PTSD diagnostic category was generated by assessing each of the six PTSD diagnostic criteria outlined in the DSM-IV-TR. More specifically, in order to qualify for the clinical diagnosis of PTSD, the participant had to report: (a2) a response to an event of IPV marked by intense fear or feelings of helplessness, (b) one or more symptoms of reexperiencing in the last month, (c) three or more symptoms of avoidance in the last month, (d) two or more symptoms of hyperarousal in the last month, (e) a duration of symptoms a through d of at least one month, and (f) significant impairment in functioning as a result of the above symptoms. Participants who met all of the six criteria were labeled as having a PTSD clinic diagnosis (noted in tables as "PTSD clinical dx"). Reliability, as reflected by Cronbach's alpha scores, for this study was .82 for the entire

PTSD scale, .64 for the reexperiencing symptoms subscale, .69 for the avoidance symptoms subscale and .64 for the hyperarousal symptoms subscale.

The manual for the PDS provides the following psychometric information (Foa, 1995). The instrument has shown good test-retest reliability for diagnosis (87.3%) and for symptom severity score (83%). Reliability for the measure was originally reported at .92. The scale has also shown strong correlations to other measures of PTSD and mental health outcomes. For example, the original author found that mean symptom severity score and number of items endorsed for subjects who met SCID criteria for PTSD was significantly higher ($p<.001$) than individuals who did not get a SCID PTSD diagnosis, with 79.4% agreement between PDS and SCID. The sensitivity was estimated at 82% and specificity was estimated at 76.7%. Convergent validity was found with a variety of other instruments, including the Beck Depression Inventory (.79), the State versus Trait Anxiety Inventory-State (.73), The State versus Trait Anxiety Inventory-Trait (.74), the Impact of Events Scale – Intrusion (.80), and the Impact of Events Scale - Avoidance (.66).

World Assumptions

The World Assumptions Scale (WAS) (Janoff-Bulman, 1989) is a 32 item scale that assesses the extent to which individuals agree with statements about the benevolence of the world, the meaningfulness of the world and the worthiness of self. Response choices include: 'strongly disagree' (1), 'disagree' (2), 'somewhat disagree' (3), 'somewhat agree' (4), 'agree' (5), 'strongly agree' (6). There are eight subscales included in the measure: benevolence of the world, benevolence of people, justice, controllability, randomness, self-worth, self-controllability and luck. Examples of items

include: ‘misfortune is least likely to strike worthy, decent people’ (meaningfulness), ‘human nature is basically good’ (benevolence), and ‘I have a low opinion of myself’ (self-worth). A total world assumptions score was generated by reverse coding specified items and then tallying the responses. Subscales scores were created by summing the item responses associated with the different subscales outlined by Janoff-Bulman (1989). The eight subscales assess benevolence of the world, benevolence of people, justice, controllability, randomness, self-worth, self-controllability and luck. Reliability (as measured by Cronbach’s alpha scores) for this study was .85 for the entire scale, .76 for the benevolence of the world subscale, .64 for the benevolence of people subscale, .57 for the justice subscale, .58 for the control subscale, .34 for the randomness subscale, .75 for the self-worth subscale, .70 for the self-controllability subscale, and .77 for the luck subscale.

The scale was originally developed based on eight assumptions proposed by Janoff-Bulman’s model of basic world assumptions. Early analyses with 254 undergraduates suggested that the scale could be reduced from 64 items to 32 items with coefficients for each scale between .67 and .78. Using discriminant analyses, three of these assumptions were able to discriminate between survivors and non-survivors of trauma: self-worth (Wilks lambda = .981), chance (Wilks lambda = .974) and benevolence of the world (Wilks lambda = .970). Self-worth was the single best predictor of survivor versus non-survivor status with a standardized canonical discriminant function coefficient of .836. Harris and Valentiner (2002), in a population of undergraduate students, found that WAS scores accounted for 12% of the variance in fear of intimacy and that depressive symptoms on the BDI accounted for 4% of the

variance in WAS scores. In addition, the authors found that 41% of the variance in trauma severity scores, measured by the Traumatic Stress Symptom Inventory (TSI) (Briere et al., 1995), was accounted for by WAS scores.

Coping

The Ways of Coping Questionnaire (Folkman & Lazarus, 1985) is a 66-item questionnaire that assesses strategies for coping with stress. It includes items referring to both problem-focused and emotion-focused coping. Each item is rated on a 4-point scale from "never use" (1) to "use a great deal" (4). For the purposes of this study, a 44 item shortened version of this scale developed by Vitaliano et al. (1985) was used called the Ways of Coping Checklist (WCCL). Examples of items include: "I stood my ground and fought for what I wanted", "I didn't let it get to me; I refused to think too much about it", and "I tried not to act too hastily or follow my first hunch". Subscales were created by summing the items within each subscale and dividing by the number of items in that subscale. A total coping score was comprised of the sum of all subscales scores. In addition, an emotion-focused score was generated by adding the subscales associated with escape avoidance, distancing coping, positive reappraisal, and self-controlling. A problem-focused score was generated by summing the subscales associated with confrontive coping, seeking social support, planful problem-solving and accepting responsibility. Finally, a dichotomous variable was created that classified participants as an emotion-focused or problem-focused coper based on which subscale was greater (emotion-focused or problem-focused score). Reliability, as reflected by Cronbach's alpha scores, for this study was .85 for the entire scale, .78 for problem-focused coping and .78 for emotion-focused coping.

Vitaliano et al.'s (1985) study used three distressed populations in their revision of the original Ways of Coping scale: psychiatric outpatients, spouses of Alzheimer's patients and medical students. The authors found strong reliability for each scale with Cronbach's alpha scores ranging from .74 (avoidance subscale) to .88 (problem-focused subscale). In addition, the subscales showed moderately low shared variance between scales, ranging from 12% for the subsample of spouses to 28% for the subsample of psychiatric outpatients. The shared variance between subscales dropped substantially from the original scale to the revised scale, with a 6% drop for medical students, 8% for spouses and 14% for psychiatric outpatients. The revised scales also accounted for 62% and 57% of the variance in depression and anxiety for the spouse sample and outpatient sample, respectively, suggesting strong construct validity of the revised scales. The authors also found significantly higher coping means for females than males (F (5405) = 9.23, $p<.001$), with elevated means on the problem-focused, wishful thinking, seeks social support, avoidance and blamed self subscales.

Religiosity

The Multidimensional Measure of Religious Involvement (MMRI) (Levin et al., 1995) is a 12 item scale measuring several indicators of religious involvement. Respondents are asked how frequently they attend church services, read religious materials, pray and ask others to pray for them, as well as several 'yes'/'no' questions regarding whether they belong to a church or hold a church office. The scale concludes with three questions on a 5-point Likert scale from 'not at all' (1) to 'very' (5) asking whether individuals feel that they are religious, how important religion was growing up in their home, and how important they believe it is for parents to take children to religious

services. The scale was developed with an entirely African American population. A total scale score was generated, as well as subscales of organized religiosity, non-organized religiosity and subjective religiosity, according to the procedures outlined in Levin et al (1995). "Yes/No" questions were coded such that "no" was coded as "0" and "yes" was coded "1". Individuals were given a score of "0" for "never" responses, "1" for yearly responses, "2" for month responses, "3" for weekly responses, and "4" for daily responses. Subjective religiosity questions were recoded such that "1" was recoded as "0", "2" was recoded as "1", "3" was recoded as "2", "4" was recoded as "3" and "5" was recoded as "4". A total score was generated by summing all item scores. Subscales were generated by summing the first five items for organized religiosity, items six through nine for non-organized religiosity, and the final three items for subjective religiosity. Reliability was .83 for the entire scale, .75 for the organized religiosity subscale, .72 for the non-organized religiosity subscale and .67 for the subjective religiosity subscale, as measured by Cronbach's alpha.

The scale was developed using data from the National Survey of Black Americans (NSBA), a nationally representative cross-sectional survey of the African American population in the United States, using both confirmatory factor analysis and structural equation modeling. The first step (confirmatory factor analysis) confirmed the presence of three theoretical factor structures: organizational, nonorganizational and subjective religiosity. Individual factor loadings for the items in the scale fell in the moderate to high magnitude category, ranging from .369 to .867. Structural equation modeling found that the factors had overall excellent fit with fit indices ranging between .962 and .980. The subscales also correlated with other factors typically related to religious involvement

such as female gender (.13 to .23), older age (.18 to .30), and southern geographical location (.16 to .20). In addition, the organizational religiosity subscale significantly correlated with higher educational attainment (.47) and living in non-urban areas (-.19).

Ethnic Identity

The Multigroup Ethnic Identity Measure (MEIM) (Phinney, 1992) is a 23 item scale that assesses affirmation/belonging, ethnic identity achievement, other group orientation and overall ethnic identity. Respondents were read a series of statements and asked to rate the extent to which they 'strongly disagree' (1), 'somewhat disagree' (2), 'somewhat agree' (3) or 'strongly agree' (4) with each statement. Sample items include: "I have a lot of pride in my ethnic group and its accomplishments", "I don't try to become friends with people from other ethnic groups", and "I participate in cultural practices of my own group, such as special food, music or customs". A total ethnic identity score was generated by summing all items. The subscales were scored based on the procedures outlined in Phinney (1992) after reverse coding four items. A total score was produced by summing all item responses and dividing by the total number of items. The affirmation/belonging subscale (items 6, 11, 14, 18, 20), achievement subscale (items 1, 3, 5, 8, 10, 12, 13), ethnic behaviors subscale (items 2, 16), and other group orientation subscale (items 4, 7, 9, 15, 17, 19) were all calculated by summing items within the subscale and dividing by the number of items in that subscale. Reliability was .86 for the entire scale, .84 for the affirmation/belonging subscale, .79 for the achievement subscale, .35 for the ethnic behaviors subscale, and .68 for the other group orientation subscale.

This scale was developed using a high school (N=417) and college (N=136) sample of male and female participants. Students self-identified as Asian American,

African American, Hispanic American, Biracial, European American, or 'Other'. Cronbach's alphas for high school and college subsamples, respectively, for the scales are as follows: Ethnic Identity Scale (.81, .90), Affirmation/Belonging (.75, .86), Ethnic Identity Achievement (.69, .80), Other Group Orientation (.71, .74). Factor analyses revealed that two factors emerged for both the high school and college samples; namely, ethnic identity and other-group orientation. These factors accounted for 20% and 9.1% of the variance for the high school sample, respectively, and for 30.8% and 11.4% of the variance for the college sample. The ethnic identity scale showed a significant positive correlation between self-esteem in ethnic minority high school students (r=.31) and college students (r=.25). For European American students, the ethnic identity scale was not related to self-esteem.

Data Analysis

Prior to data analysis, variable distribution was assessed. It was determined that variables satisfactorily met assumptions and transformations were therefore not conducted. However, several data points were missing, which resulted from participants' refusal to answer specific questions. Given that no clear pattern existed for missing data, the series mean was used to replace missing values. For analyses that did not consider interethnic differences, the total sample (including 97 participants) was used. For analyses that considered ethnicity, a subsample of 91 participants (46 African American and 45 European American) was used and the remaining 6 participants were dropped. Data progressed from analysis of descriptive statistics to hypothesis testing. T-tests were used to analyze interethnic differences where hypothesized and correlation analyses were conducted to test proposed inter-relationships of constructs. Regression analyses were

performed to complete hypothesis testing; namely, to identify and test variables most related to PTSD symptoms for the whole sample and by ethnicity. Further, a series of regressions were completed post hoc to test meditational relationships included in a proposed model.

Chapter 3

Project Results

Interethnic differences in violence exposure, PTSD, world assumptions and religiosity were hypothesized in the present study. However, previous research has shown that demographic factors such as income, education and age have shown significant relationships with factors such as violence exposure and PTSD symptoms. In order to rule out the possibility that variation across ethnicity on primary factors proposed in the study were not attributable to interethnic differences across demographic factors, a series of t-tests were conducted. The results of the analyses revealed that no differences existed between the two ethnic groups in regards to age ($t(89)=.54$, $p>.05$), income ($t(89)=1.57$, $p>.05$), times moved in the last four years ($t(89)=.32$, $p>.05$) or level of education ($t(89)=.04$, $p>.05$) (Table 5). Effect size for income, however, was in the small to medium range ($d=.33$) and may have been significant with more power in the sample. Given the lack of interethnic differences, these factors were not included in subsequent analyses that compared the two ethnic groups.

Significant differences did exist, however, between African American and European American women in relation to ethnic identification (Table 6), and more specifically, on total ethnic identity ($t(89)=-4.33$, $p<.001$), affirmation and belonging

($t(89)=-3.73$, $p<.001$), ethnic identity achievement ($t(89)=-3.91$, $p<.001$) and ethnic behaviors ($t(89)=-3.12$, $p<.001$). In every case, African American women reported higher scores than European American women. Cohen's d was calculated for the latter set of t-tests, which showed medium to large effects sizes. Overall, Cohen's d was -.91 for total ethnic identity, suggesting a large effect size for differences across ethnicity on ethnic identification. There were no differences between groups on other group orientation.

Results of the Conflict Tactics Scale Revised (CTS-R) shown in Table 7 reveal the extent to which participants endured physical, emotional and sexual violence in the year preceding the interview. On average, participants experienced 298 total acts of violence ($SD=163.89$), 49 acts of negotiation ($SD=28.36$), 106 acts of psychological aggression ($SD=49.39$), 84 acts of physical assault ($SD=72.74$), 38 acts of sexual coercion ($SD=45.71$), and 23 injuries ($SD=24.94$). To test the first hypothesis that, relative to European American women, African American women would endorse more total IPV exposure in the previous year, and more sexual coercion and physical assault in particular, t-tests were conducted. Results of the t-tests confirmed hypothesis one; namely, African American participants reported significantly more total violence ($t(89)=-2.75$, $p<.01$), physical assault ($t(89)=-1.96$, $p<.05$), negotiation ($t(89)=-2.52$, $p<.05$), psychological aggression ($t(89)=-1.54$, $p<.05$) and sexual coercion ($t(89)=-2.70$, $p<.01$) than European American participants. African American did not report more injury than European American women ($t(89)=-.884$, $p>.05$). Results of a Cohen's d calculation of the differences in IPV across ethnicity indicates small to medium effect sizes. The effect size for interethnic differences in total amount of IPV was in the medium range (-.58).

To test the second hypothesis that low income, low educational attainment and younger age would predict higher rates of violence exposure, a linear regression model was tested (Table 8). The results of the regression partially confirmed the hypothesis. More specifically, the analysis demonstrated that both low income (β=-.20) and less education (β=-.20) predicted the presence of more acts of IPV in the preceding year. However, age was not a significant predictor of IPV exposure (β=-.06). The three demographic variables accounted for 7% of the variance in total IPV. A subsequent regression analysis that included ethnicity revealed that ethnicity continued to predict rates of IPV (β=2.50) in the presence of income, education and age (Table 9), and that these latter factors ceased to predict IPV once ethnicity was considered. The second regression analysis including ethnicity accounted for 10% of the variance in total IPV.

In regards to mental health, participants reported high levels of posttraumatic stress symptoms in the last month (*M*=25.64, *SD*=10.14) (Table 10). In fact, when using a total symptom cutoff score of twenty-eight or higher to determine eligibility for a PTSD diagnosis (Coffey et al., 1998), fifty-six percent of the sample qualified for a diagnosis. The same percentage similarly qualified for a diagnosis of PTSD using the more stringent diagnostic criteria outlined in the Diagnostic and Statistical Manual of Mental Disorders – Fourth Edition (DSM-IV) and explained in Chapter 2. Participants, on average, reported 7.29 (*SD*=3.47) symptoms of reexperiencing, 8.82 (*SD*=3.91) symptoms of hyperarousal, and 9.53 (*SD*=5.01) symptoms of avoidance in the previous month. To test the hypothesis that European Americans would report higher rates of PTSD than African Americans, t-test and Chi-Square analyses were conducted. The results of the analyses failed to confirm the hypothesis, revealing no interethnic differences in PTSD symptoms

($t(89)=-.17$, $p>.05$), symptom clusters (reexperiencing: $t(89)=.44$, $p>.05$, hyperarousal: $t(89)=-.16$, $p>.05$, avoidance: $t(89)=-.54$, $p>.05$), or diagnosis (clinical diagnosis: $\chi^2=.01$, cutoff diagnosis: $\chi^2=3.36$) (Table 10).

The test the fourth hypothesis, that low income, young age and less education would predict PTSD symptoms, a linear regression model was conducted (Table 11). Similar to violence exposure, an increase in PTSD symptoms was observed as a function of less income ($\beta=-.20$) and less education ($\beta=-1.99$). Young age was not a significant predictor of PTSD ($\beta=-.62$). Income, age and education accounted for 10% of the variance in PTSD symptoms.

To test the fifth hypothesis, that more violence exposure would be significantly related to PTSD symptoms, a correlation matrix was produced, as shown in Table 12. PTSD symptom total was significantly related to the total amount of violence in the preceding year ($r=.39$, $p<.001$), as well as to subscales of psychological aggression ($r=.30$, $p<.01$), physical assault ($r=.37$, $p<.001$), sexual coercion ($r=.29$, $p<.01$), and injury ($r=.29$, $p<.01$). Likewise, t-test analyses revealed that a PTSD diagnosis determined by a symptom score of twenty-eight or higher was significantly related to the total amount of violence in the preceding year ($t(93)=-4.16$, $p<.001$), as well as to subscales of psychological aggression ($t(93)=-2.86$, $p<.01$), physical assault ($t(93)=-3.98$, $p<.001$), sexual coercion ($t(93)=-2.63$, $p<.05$), and injury ($t(93)=-2.69$, $p<.01$), with effect sizes in the medium to large range.

In regards to world assumptions, Table 13 shows the mean belief in world assumptions of the sample ($M=124.94$, $SD=17.19$), as well as subscales generated by the WAS. More specifically, participants had an average score of 16.27 ($SD=3.77$) on the

benevolence of the world subscale, 16.45 (*SD*=3.35) on the benevolence of people subscale, 28.65 (*SD*=2.96) on the Justice subscale, 15.05 (*SD*=3.41) on the controllability subscale, 14.65 (*SD*=3.10) on the randomness subscale, 18.02 (*SD*=3.78) on the self-worth subscale, 17.49 (*SD*=3.29) on the self-controllability subscale, and 14.05 (*SD*=4.48) on the luck subscale. Tests of difference were performed to assess the sixth hypothesis, that African American participants would report less shattered assumptions about the world than European American participants. With the exception of a significant difference between African American and European American participants on the benevolence of people subscale ($t(89)=2.42$, $p<.05$), in which European American participants reported more positive assumptions than African American women, no significant interethnic differences emerged. The effect size of the difference on this subscale, as measured by Cohen's d, was in the medium range ($d=.51$). As a result, hypothesis number seven, that ethnicity would mediate the relationship between world assumptions and PTSD, could not be tested given the lack of a relationship between ethnicity and both world assumptions and PTSD.

To test whether world assumptions were significantly related to violence exposure and PTSD, two correlation analyses were performed. The first correlation matrix confirmed hypothesis eight, that more violence exposure would be associated with more shattered world assumptions (Table 14). Total violence exposure was significantly and inversely related to world assumptions ($r=-.30$, $p<.01$). Said differently, the more acts of violence a woman experienced in the last year, the more shattered world assumptions the woman held. This was similarly true with specific subscales of violence such that increased physical assault ($r=-.25$, $p<.05$), increased sexual coercion ($r=-.40$, $p<.001$),

and increased injury (r=-.25, p<.05) were related to more shattered world assumptions. In addition to the relationship with violence exposure, world assumptions were likewise significantly related to PTSD (Table 15), confirming hypothesis nine. More specifically, world assumptions were positively correlated with the presence of PTSD symptoms (r=-.32, p<.01). Therefore, women who did not develop PTSD reported more positive world assumptions. T-test analyses also revealed that women with a clinical diagnosis of PTSD endorsed more shattered assumptions (t(95)=-2.27, p<.01). Notably, PTSD symptoms (r=-.45, p<.001) were strongly and inversely related to the Self-Worth subscale of the WAS, illustrating that a low sense of self-worth may result from or contribute to PTSD.

The use of religious involvement was a strong and significant theme for the participants in the study. Table 16 shows the extent to which participants were involved in organized religious practices, as well as prayer and religious readings. Participants' mean score for total religiosity was 20.85 (SD=8.92), and was 3.24 (SD=.32) for organized religiosity, 9.66 (SD=4.49) for nonorganized religiosity and 8.03 (SD=3.07) for subjective religiosity. As hypothesized, t-tests revealed that African American participants reported significantly more religious involvement than European American participants (t(89)=-3.73, p<.001), as well as more nonorganized religious involvement (t(89)=-3.84, p<.001) and subjective religiosity (t(89)=-3.86, p<.001). The effect sizes, as measured by Cohen's d, for these differences were considered large (ranging from -.78 to -.80). Hypothesis eleven, that significant religious involvement would reflect emotional distress related to PTSD, was confirmed through correlation analyses presented in Table 17. In particular, participants who reported more frequent religious involvement also reported more symptoms of PTSD (r=.31, p<.01). A t-test analysis also

revealed that more frequent religious involvement was reported by women who qualified for a cutoff diagnosis of PTSD ($t(93)=-2.82$, $p<.01$).

Given the large effect sizes for interethnic differences between African American and European American women in total violence and religiosity, as well as the strong relationships between both religiosity and total violence and PTSD symptoms, a partial correlation was conducted to test whether significant differences between ethnic groups in religiosity and violence exposure could be masking the effects of ethnicity on PTSD symptoms. The results of the partial correlation showed that once religiosity and total IPV were controlled, the correlation between ethnicity and PTSD symptoms was significant ($r=-.24$, $p<.05$). Moreover, the negative slope shows that European American women (coded "-1") reported more symptoms of PTSD than African American women (coded "+1"), once religiosity and IPV exposure were controlled. Though indirect, these results partially support hypothesis number three, that European American women would report more PTSD symptoms than African American women.

More explicit forms of coping were assessed using the Ways of Coping Checklist, the results of which can be seen in Table 18. Participants reported using both problem-focused ($M=6.89$, $SD=1.70$) and emotion-focused ($M=6.55$, $SD=1.66$) forms of coping, and had an overall coping score of 13.44 ($SD=13.44$). The highest subscale for coping was the confrontive coping subscale ($M=1.92$, $SD=.63$) and the lowest subscale was distancing coping ($M=1.38$, $SD=.63$). To test hypothesis twelve, that participants who favored emotion-focused forms of coping would report more PTSD, participants were labeled as problem-focused or emotion-focused copers as a function of whether their problem-focused or emotion-focused coping scores were higher. Forty-four percent of

the sample was identified as using predominantly emotion-focused forms of coping and no differences were observed interethnically (χ^2=1.36, p>.05). Table 19 displays the results of t-test and Chi-Square analyses exploring whether emotion-focused copers reported more IPV and PTSD symptoms. The results revealed that participants who were identified as emotion-focused copers reported significantly more IPV exposure (t(89)=2.69, p<.01), as well as significantly more PTSD symptoms (t(89)=2.43, p<.05). Additionally, emotion-focused copers were more likely to meet a clinical diagnosis of PTSD (χ^2=6.22, p<.05).

It was hypothesized that the use of emotion-focused coping rather than problem-focused coping would moderate the relationship between the experience of IPV and an outcome of PTSD symptoms. Hypothesis thirteen was confirmed via the use of a linear regression model (Table 20). Step one of the analysis revealed that the type of coping that the participants favored was related to the presence of PTSD symptoms. More specifically, emotion-focused copers (labeled "-1") (β=-.24) reported more symptoms of PTSD. In fact, emotion-focused coping accounted for 5% of the variance in PTSD symptoms. With the addition of IPV total in step two, however, the type of coping predominantly used by the participant became an insignificant predictor of PTSD symptoms (β=-.15). The experience of more total IPV was significantly, positively related to the presence of PTSD symptoms (β=.35), trumping the effects of coping type on PTSD symptoms, and accounting for an additional 11% of the variance in PTSD symptoms. Step three of the regression revealed that the addition of a variable that multiplied the effects of total IPV exposure and type of coping resulted in a different understanding of the relationship between coping, IPV and PTSD symptoms. Namely,

while exposure to more total IPV (β=.31) *and* emotion-focused coping (β=-.55) were significantly predictive of PTSD symptoms in step three of the analysis, the interaction variable was also significantly and positively related to PTSD symptoms (β=.45) (Graph 1). The regression model including all three steps accounted for 19% of the variance in PTSD symptoms. Given that problem-focused coping was coded as "+1", the positive β suggests that participants who encountered more total IPV and used problem-focused coping were also at particular risk for PTSD symptoms once total IPV and the effects of using emotion-focused coping were simultaneously considered. It may be that emotion-focused coping alone predicts the presence of PTSD symptoms, as does total IPV, but in fact, problem-focused coping can be just as problematic in the presence of high levels of IPV. This supports previous empirical evidence that suggests that individuals who do not have the resources to leave or make change, but continue to engage in problem-focused coping, may be at risk for poorer mental health outcomes as a result of recurrent disappointment when attempts to make change fail (Lazarus, 1993).

Given the many interconnections evidenced in the preliminary analyses, a series of regression analyses was conducted to build a potential model of the relationships between total IPV, PTSD symptoms, ethnicity, world assumptions, coping, religiosity and demographic variables such as income and education. As outlined in the hypotheses, several models were tested that included variables identified in the preliminary analyses as significantly related to IPV and PTSD symptoms. Ethnicity and ethnic identity were also entered into the regression analyses given the particular interest in identifying how ethnicity impacts IPV and PTSD symptoms, as well as the strong correlations between ethnicity and religiosity. Three regression models were tested that included:

demographic variables and ethnic identity in step one, total IPV in the step two, world assumptions in step three, and coping in step four for the first regression and religiosity in step four for the second regression. A final model repeated this analysis with both coping and religiosity in step four.

Table 21 shows the results of the first regression predicting to PTSD symptoms with emotion-focused coping in step four. Emotion focused coping was chosen given its strong relationship with PTSD symptoms and IPV. Step one of the analysis revealed that income, education, ethnicity and ethnic identity did not significantly predict PTSD symptoms. The combination of these factors also failed to significantly contribute to the variance accounted for in PTSD symptoms (F=1.72, p>.05). However, when total IPV was entered in step two, not only did higher rates of violence predict higher levels of PTSD symptoms (β=.49), but ethnicity (β=-.24) and ethnic identity (β=.28) became significant predictors as well. More specifically, European American participants and participants with strong ethnic identity reported more symptoms of PTSD. Step 2 of the model accounted for 24% of the variance in PTSD symptoms. Moving on to step three, the same effects on PTSD symptoms existed for ethnicity (β=-.22), ethnic identity (β=.28) and total IPV (β=.43), but world assumptions (β=-.20) accounted for an additional and significant portion of the variance in PTSD symptoms ($F\Delta$=4.32, p<.05). This step of the analysis revealed that more shattered world assumptions was significantly related to PTSD symptoms. However, contrary to the hypotheses, the addition of emotion-focused coping in step four did not significantly add to the variance accounted for by the model and shattered assumptions remained significant in predicting PTSD symptoms, along with ethnicity, ethnic identity and total IPV. Variance inflation

factor (VIF) scores for the variables ranged from 1.07 to 1.35 in Step 4 of the analysis, suggesting an overall low concern for multicollinearity.

The second regression predicting to PTSD symptoms used religiosity in step four rather than emotion-focused coping (Table 22). The results of the second regression model mirrored the first regression through step three. That is to say, ethnicity and ethnic identity became significant predictors of PTSD symptoms with the addition of total IPV(also a significant predictor) in step two, and remained significant with the addition of world assumptions (also a significant, inversely related predictor) in step three. However, the addition of total religiosity in step four cast a different story. Step four of the analysis accounted for a significant addition to the overall variance in PTSD symptoms ($F\Delta$=10.18, p<.01), such that participants who reported more overall religiosity similarly reported more overall PTSD symptoms (β=.32). Notably, the addition of religiosity in step four of the model erased the effects of ethnic identity (β=.19). The final model accounted for 34% of the variance in PTSD symptoms. Similar to the first regression, a measure of variance inflation factors suggested low overall multicollinearity with scores ranging from 1.07 to 1.44.

Results of the third regression analysis predicting to PTSD symptoms that included both emotion-focused coping and religiosity in step four can be seen in Table 23. Similar to the first and second models, ethnicity, ethnic identity, total IPV and world assumptions significantly predicted PTSD symptoms through step three. When both emotion-focused coping and religiosity were included in step four, however, the model more closely resembled the second regression. More specifically, religiosity became a significant, positively associated predictor of PTSD symptoms (β=.30) while the effects

of ethnic identity on PTSD symptoms disappeared (β=.18). Emotion-focused coping did not significantly predict PTSD symptoms (β=.12). The model accounted for 34% of the variance in PTSD symptoms.

Post hoc analyses:

The above results suggest several areas conducive for post hoc investigation. For instance, the curious relationship between ethnicity, ethnic identity and religiosity deserves further exploration. In order to delineate further the relationships presented in the last three regressions, linear regression models were conducted on the sample split by ethnicity. Given the significance of total IPV, world assumptions and religiosity on PTSD symptoms in previous analyses, as well as the observed interethnic differences in total IPV and religiosity, these variables were chosen for inclusion in the next series of regression models. It was hypothesized that the inclusion of ethnicity in previous regression analyses may have masked intraethnic differences in the impact of these factors on PTSD symptoms, which could provide a more nuanced understanding of how different ethnic groups develop PTSD. It was hypothesized that world assumptions and total IPV exposure would significantly predict PTSD symptoms for European American women while religiosity and total IPV would predict PTSD symptoms for African American women. In order to understand the curious impact of ethnic identity on PTSD symptoms observed in previous regressions, ethnic identity was entered in a second set of regressions to evaluate whether this factor significantly added to the variance accounted for in PTSD symptoms differentially for the two ethnic groups.

Results of the first set of regression analyses predicting to PTSD symptoms and split by ethnicity can be seen in Table 24. Contrary to the hypotheses stated above, when

regressed onto PTSD symptoms, more total IPV (β=.35), more religiosity (β=-.32) *and* more shattered assumptions (β=.30) were associated with increased levels of PTSD symptoms for African American women. This was similar for European American women with the exception of world assumptions (β=-.19), which did not significantly predict PTSD symptoms in the presence of total IPV (β=.38) and religiosity (β=.33). While world assumptions was significant for African American women, but not for European American women, the effect remained similar for both groups; namely, higher rates of PTSD were related to lowered world assumptions. That this variable acts similarly for both groups suggests that an interaction between ethnicity, world assumptions and PTSD can be ruled out. For both groups of women, the three variables entered in the regression models accounted for a significant portion of the variance in PTSD symptoms, accounting for 32% for European American and 28% for African American women. Similar to previous collinearity diagnostics, VIF scores were in an acceptable range (1.02 to 1.07 for European American women and 1.06 to 1.22 for African American women), suggesting low multicollinearity.

The second set of regression analyses split by ethnicity, which included ethnic identity, uncovered a slightly different story in regards to intraethnic variability in PTSD symptoms (Table 25). When compared to the first set of regressions for European American women, the addition of ethnic identity (β=.18) resulted in the erasure of the effects of religiosity (β=.27) on PTSD symptoms. Overall, only total IPV significantly predicted PTSD symptoms (β=.38), with more overall violence predicting higher rates of PTSD symptoms. For African American women, however, the addition of ethnic identity (β=.15) did not have an overall effect on the significance of religiosity (β=.27) in

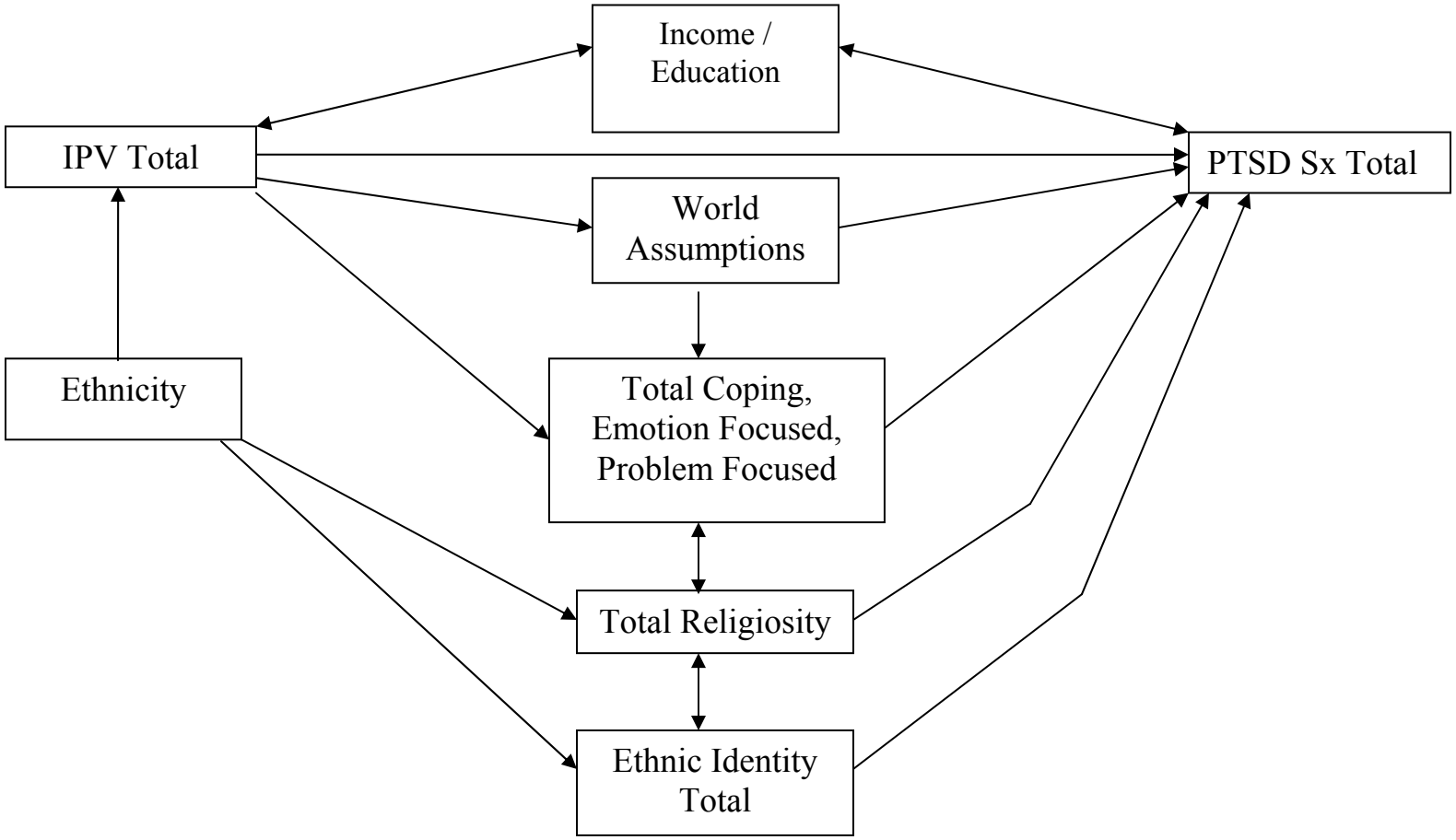
predicting PTSD symptoms. That this factor did not change for African American women is likely the result of more homogeneity in religiosity for African American women in relation to European American women, given that the beta for both groups was .27. While it was significant for African American women, but not European American women, the difference was likely statistically quite small. In addition, world assumptions (β=-.32) continued to predict PTSD symptoms for African American women, as well as total IPV (β=.36). Therefore, the hypotheses discussed above were not confirmed. Once again, VIF scores were in the acceptable range for both European American women (1.03 to 1.21) and African American women (1.05 to 1.22).

In addition to the set of regression models split by ethnicity, post hoc analyses can provide a more thorough model for future testing. For example, it is clear from the analyses presented above that significant relationships exist between total IPV, PTSD symptoms, income, education, world assumptions, coping, religiosity, ethnicity and ethnic identity. However, the use of several missing analyses may illuminate relationships that could provide insight into a model for confirmatory testing through structural equation modeling, which is prohibited in this study by the number of participants. Table 26 examines interrelationships between primary variables that have yet to be defined; namely, the relationships between religiosity and total IPV, ethnic identity, coping and world assumptions; ethnic identity and total IPV and world assumptions; world assumptions and coping. The correlation analyses reveal several significant relationships for addition to the model. For example, total religiosity was positively correlated with total coping (r=.26, p<.01) and ethnic identity (r=.41, p<.001), but not world assumptions (r=.12, p>.05). In addition, world assumptions was positively

correlated with total coping (r=.30, p<.01). However, ethnic identity was not significantly correlated with total IPV (r=.08, p>.05), total coping (r=.11, p>.05), or world assumptions (r=.11, p>.05). Figure 4 was conceived based on the theoretical literature and suggested from the results and post hoc analyses of the present study. Only relationships between variables that were shown to be statistically significant were included. Given this model, additional mediation analyses were conducted to test portions of the model. More specifically, three mediation analyses examined: (1) whether world assumptions mediates the relationship between IPV and PTSD, (2) whether religiosity mediates the relationship between ethnicity and PTSD, and (3) whether ethnic identity mediates the relationship between ethnicity and PTSD.

Table 27 shows the results of the first mediation analysis, conducted via three linear regression models according to the methods suggested in Frazier, Tix and Barron (2004). The first regression confirms previous analyses; namely, IPV exposure if a strong and significant predictor of PTSD symptoms (β=.02). In the second regression, IPV exposure is also a significant predictor of shattered world assumptions (β=.08). In the third regression, both world assumptions and IPV exposure are entered to predict PTSD symptoms. In order to expose a full mediation model, the effects of IPV exposure on PTSD would need to become insignificant in the presence of world assumptions. This

Figure 4: Proposed Model for Testing



was not revealed in the analysis, where both world assumptions (β=-.13) and IPV exposure (β=.01) remained significant predictors. However, a partial mediation was suggested by the analyses. To test whether a significant partial mediation was present, a z calculation was performed according to the procedure outlined in Frazier et al. (2004). The results produced a z score of 1.78, less than the 1.94 required for a significance level of .05. As such, world assumptions were not a significant mediator of the relationship between IPV and PTSD in the current study. However, it is likely that not enough power was present to detect the relationship and that a larger sample would produce a significant, partial mediation. The remaining set of mediation models were discontinued after the first step of the analysis, which revealed that ethnicity did not significantly predict PTSD symptoms. As such, the model could not be tested further. It is possible that the small sample size similarly affected the results of these analyses and that a larger sample would produce significant results.

Though several portions of the proposed model were not confirmed via the analyses conducted in the present study, future research that includes a larger population may find these relationships to be significant. The model is therefore presented as a proposal for future work. The model suggests that coping, religiosity and world assumptions, though inter-related, account for variance in PTSD symptoms independently, but are theorized to result from the amount of IPV that one encounters. In addition, ethnicity may impact PTSD symptoms via expression of religiosity and ethnic identity, which may in turn delimit other methods of coping and subsequently influence the development of PTSD symptoms. The model further proposes that the

maintenance of world assumptions may be related to coping, and subsequently may influence PTSD symptom development.

Chapter 4

Discussion

The results of the present study support, challenge and extend previous research on the topics of IPV and PTSD. More specifically, it was discovered that world assumptions are a salient factor in working with survivors of IPV and implicated in PTSD symptoms, that coping must be considered in context and that religiosity is a robust feature of women's experience of IPV and report of PTSD symptoms. As a result of the analyses, a model was constructed for future testing (Figure 4).

Rates of IPV and Ethnicity

To begin, the present study reinforces earlier work that the most disadvantaged groups in terms of income, education and ethnic minority status are at heightened risk for more frequent and severe intimate partner violence (Byrne et al., 1999; Caetano et al., 2005; Cunradi et al., 2002b; Field & Caetano, 2004; Frias & Angel, 2005; Hall Smith et al., 2002; Kessler et al., 2001; Krishnan et al., 1997; Rennison & Welchans, 2000; Sorenson et al., 1996; Straus & Gelles, 1986), especially in the areas of sexual coercion, physical assault, negotiation and psychological aggression. Given that the CTS-R (Straus et al., 1996) has only included negotiation, sexual coercion and psychological aggression

in the last decade, it is possible that these disparities would have been observed throughout previous work on IPV.

Additionally, the present study mirrored work by Field and Caetano (2004, 2005), Caetano et al. (2005), and Krishnan (1997), in that African American women continued to be at heightened risk for more violence exposure even after controlling for income, education and age. Unlike the majority of earlier work that explores interethnic differences, however, the current sample did *not* show significant differences across ethnicity in regards to demographic factors such as income and education (Caetano et al., 2005; Field & Caetano, 2004; Lilly & Graham-Bermann, 2006). Though a small effect size was generated for interethnic difference in income, with European American women reporting higher overall income in the month prior to the interview, African American and European American women were statistically equivalent in regards to income, education, age and housing mobility in the last four years.

Why are African American women at risk for more frequent and severe forms of violence, even after income and education are controlled? It is possible that several factors are at play in this phenomenon. One possibility has to do with economic mobility across generations. While African American women may be slowly closing the economic and educational gap on European American women, many of these women have come from families marked by poverty and poor education, as well as violence (Bell & Mattis, 2000; Huang & Gunn, 2001; Wyatt et al., 2000). As such, it may be that a history of disenfranchisement and poverty in African American communities has increased risk for violence, which has been perpetuated by intergenerational cycles of abuse and trauma (Hampton et al., 2003; Huang & Gunn, 2001). Regardless of

socioeconomic advances in income and education, trauma history that results from witnessing interparental violence as a child (Bensley et al., 2003; Lang et al., 2004; Schafer et al., 2004) may put African American women at risk for entering abusive relationships.

Another possible explanation for this finding lies in communities and neighborhoods. As shown by Van Wyk et al. (2003), neighborhoods considered "disadvantaged" (high poverty, high unemployment) show disproportionately high rates of IPV. Given that neighborhood context was not taken into account in the present study, it is possible that the African American participants were concentrated in communities with the most limited resources. With fewer community resources, African American women may not have had as many opportunities to leave an abusive relationship, staying in the relationship longer and in spite of severe abuse. This is supported by Benson et al. (2004) who found that neighborhood context can override the effects of ethnicity on IPV exposure. Neighborhood context is likely further complicated by African American women's hesitance to leave abusive relationships and seek help via social services, which may be driven by societal racism (Bent-Goodley, 2004; McNutt et al., 2000; Nash, 2005). African American women may be hesitant to expose pathology within the family to a society that may judge and further abuse them, as well as to a legal system and police officers that may harm African American male partners (Nash, 2005).

Research has also shown that African American women have alternative definitions of violence such that pushing and shoving are not considered "abuse", while "beatings" are (Bent-Goodley, 2004). As a result, African American women may not recognize and/or acknowledge early forms of violence as abuse, staying in the

relationship while violence escalates to more frequent and severe forms. A final factor may have been the role of religious involvement. According to Bell and Mattis (2000) religious leaders can be a protective and risk factor for staying in abusive relationships for African American women. It may have been that what came with heightened religiosity for African American woman was a sense that dissolving the family system was against God's wishes, and therefore these women stayed in abusive relationships for longer than their European American counterparts.

Association among Ethnic Identity and IPV

Though interethnic differences across demographic factors did not emerge in the data, a large difference was observed in relation to ethnic identity. More specifically, African American women reported overall more identification with their ethnic group than European American women, as well as higher rates of pride in African American achievements and a heightened sense of belonging. This begs the question of why such differences emerged.

As discussed in Chapter 1, psychological research, and research in the fields of IPV and PTSD in particular, have a long history of employing predominantly European American samples. Though this was often touted as the outcome of convenience samples, it reflects a broader, systemic problem with ethnicity in the United States. Namely, European American individuals are taken as the norm from which all other ethnic groups vary (Harding, 1998; Mohanty, 2003). It may be that European Americans are socialized into thinking that their experiences are not driven by culture or ethnicity given their experience as always being the 'norm', and as a result, ethnicity is something

taken for granted. This was apparent to the first author in conducting interviews. Many European American women were offended and/or confused by the Multigroup Ethnic Identity Measure, the questions of which they found difficult, and even impossible, to answer. They frequently asked for clarification surrounding whether their "group" was "Caucasian in the US", or "German Americans" or "Scandinavians", to name a few. For African American women, this questionnaire posed less of a problem as identifying their "group" was not typically queried.

In addition, it is important to acknowledge methodological choices that may have impacted the results. For example, none of the women in the study were interviewed by an African American interviewer. For European American women, the difference across interviewee and interviewer may have forced these women to identify and think more concretely about their "group", rather than relying on the interviewer to understand and empathize with their discomfort at thinking about their own ethnicity. For African American women, the addition of an African American interviewer may have made these women feel more comfortable and answers may have been altered in several directions that are difficult to speculate. Though these factors may call into question the validity of the MEIM, there currently is no reason to exclude the measure from the study (i.e., missing data showed no pattern in relation to ethnicity) and the results may suggest the importance of considering ethnic identification in future research with multiethnic samples.

IPV and PTSD Symptoms

The experience of IPV historically has shown high association with an outcome of PTSD symptoms and PTSD diagnosis (Astin et al., 1993; Axelrod et al., 1999; Chemtob & Carlson, 2004; Golding, 1999; Kemp et al., 1991; Mertin & Mohr, 2000; Nixon et al., 2004). In this study, the results were no different. Fifty-six percent of this joint community and shelter sample qualified for a diagnosis of PTSD and the mean rate of PTSD symptoms in the preceding month was twenty-six for the entire sample, only two away from the PTSD symptom cutoff diagnosis of 28 (Coffey et al., 1998). In fact, the rates are likely an underestimate given that many of the women were recently admitted into domestic violence shelters and identified their worst incident of violence as occurring within the last month. As a result, these women did not meet the symptom duration criteria required for a clinical diagnosis. The results suggest disproportionately high rates of posttraumatic stress symptoms and diagnoses in women who have experienced intimate partner violence in relationship to the general population where rates of PTSD are estimated at 7.8% (Kessler et al., 1995). Though a direct link was found between violence exposure and PTSD, low income and low educational attainment in the face of IPV seemed to be associated with increased risk for PTSD symptoms. This reinforces previous work that has shown that aside from the experience of IPV, concurrent financial and educational strain may also be implicated in PTSD symptom reports (Vogel & Marshall, 2001).

The question remains why rates of PTSD are so high in this population? Women in the sample, on average, experienced some form of relationship violence almost 300 times in the year preceding the interview. As shown in the research, assaultive violence increases vulnerability to PTSD (Breslau, 2001). Though some of these forms of

violence seem less severe (such as yelling or stomping out of a room), many women survived rape, broken bones, shootings, stabbings and/or scalding. When the severity of these traumas, along with the repetitive nature of the abuse, is taken into account, it is perhaps astounding that the rates of PTSD were not higher.

IPV, PTSD and Ethnicity

Contrary to the hypotheses, African American and European American women reported equivalent rates of PTSD symptoms and diagnoses. These findings echo a subset of research that has found no variability in absolute rates of PTSD as a function of ethnicity (Lipsky et al., 2005b) or variability that disappears in the presence of socioeconomic status or violence exposure (Egendorf et al., 1981; Green et al., 1990; Jasinski & Kantor, 2001; Kulka et al., 1990; Norris et al., 2002; Perilla et al., 2002; Pole et al., 2001), but runs counter to earlier work by Gross and Graham-Bermann (2008) and Seng et al. (2005). Both of the latter studies found rates of PTSD to be higher in European American IPV survivors (Gross & Graham-Bermann, 2008) and female Medicaid recipients (Seng et al., 2005) than in African American women. This bears the question of why the present study sample reported equivalent rates.

One explanation for the different results may be in the sample. The sample in the present study was collected predominantly from domestic violence shelters, where rates of PTSD have been shown to be disproportionately high (Strube, 1988). It is possible that the high rates of PTSD in the study represent a ceiling effect and that lack of variability within the present sample delimited the ability to observe differences across groups. Another explanation stems from different assessment measures used in the

studies. In Gross and Graham-Bermann (2008), the Saunders PTSD Scale for Family Violence was used (Saunders, 1994). The Posttraumatic Stress Diagnostic Scale (PDS) was chosen for this study (Foa, 1995). The latter measure asks about PTSD symptoms in a more generic way, in which symptoms are summed across the last month. In the Saunders scale, questions are referenced specifically for family violence and there is no reference point for the timing of symptoms. As a result of these two differences, the PDS may generate symptoms that are not necessarily in relation to family violence and may result from other traumas that the individual has encountered, and in addition, are a more current assessment of functioning. In the Saunders scale, traumas that occur outside of family violence are not considered and the timing of symptoms is diffuse and unmeasured, resulting in an inability to make a clinical diagnosis and identify current level of functioning. These factors could likely contribute to the differences seen in levels of PTSD overall and across ethnicity.

While absolute rates of PTSD did not vary across ethnicity, differences in PTSD were observed between European American and African American women when rates of IPV and religiosity were controlled. More specifically, a partial correlation revealed that when controlling for rates of IPV and religiosity, European American women did report higher rates of PTSD symptoms than African American women. This raises several intriguing points for discussion. From the analyses, it appears that IPV has a strong and direct effect on PTSD symptoms; namely, the more violence that one endured, the higher the rates of PTSD symptoms. However, African American women reported significantly more overall IPV than European American women. As a result, African American women would be expected to have higher rates of PTSD. This, however, was not the

case. In fact, rates of PTSD across ethnicity remained unchanged when controlling for violence. According to the theory proposed in the present study, religiosity was hypothesized as a form of coping that is more prevalent in African American women. High amounts of coping were in turn theorized to represent the presence of more distress and higher rates of PTSD. Both of these suppositions seemed to be valid; namely, African American women reported more religiosity and religiosity was related to higher rates of PTSD. When religiosity was controlled for, along with IPV, interethnic variability was revealed that European American women reported more PTSD symptoms.

The question then becomes why, when the indirect effect of religiosity and the direct effect of IPV on PTSD symptoms are controlled, do European American women report more symptoms of PTSD? There are several possible explanations. It may be that religiosity is a signal of distress such that women, and African American women in particular, who are traumatized by their experiences search for answers via church and prayer. African American women's distress may be expressed via religiosity, and once this is controlled, European American women express more symptoms of PTSD.

It may be that the expression of religiosity is a more culturally acceptable way to communicate distress and trauma for African American women, whose trauma symptoms may be sublimated into an alternative expression of distress than what is outlined in the DSM system. Said differently, it is possible that African American women either do not experience or do not report symptoms consistent with a DSM diagnosis of PTSD at equivalent rates of European American women, favoring instead to convey trauma and distress via faith, belief in redemption and prayer. In the end, it is unclear whether religiosity serves as a method of coping more frequently utilized by African American

women that may be helpful in decreasing symptoms of PTSD, or whether religiosity replaces symptoms of PTSD as a more culturally acceptable way to express distress. Future research is required to more definitively answer this question.

Do World Assumptions Help Explain PTSD Symptoms?

The present study aimed to contribute to a new understanding of PTSD in IPV survivors by incorporating the theory of shattered assumptions. Previous work on shattered assumptions has been limited and not formally explored in IPV survivors. The results showed that shattered assumptions were not only significantly related to the reported amount of IPV exposure, but they were also related to PTSD symptoms. This might suggest that the theory of shattered assumptions is a valid construct for IPV survivors and that holding shattered world assumptions can have significant, deleterious effects on the survivor's mental health. In fact, with a larger sample size, it may be shown that world assumptions partially mediates the relationship between IPV and PTSD.

In opposition to the theory proposed in the present study, however, world assumptions did not significantly vary between African American and European American women. Though it is possible that this simply reflects a true lack of difference, other explanations for the lack of findings can be offered. For instance, the lack of difference between ethnic groups on demographic factors such as age, income and education may have had an effect on shattered assumptions. It was hypothesized that African American women's relative resilience in the face of IPV would be apparent in relatively higher world assumptions, and that this would have resulted from a long history

of disenfranchisement. It may be that a cellar effect was present for all of the women in this study such that there was an overall high level of poverty and lack of education. These latter factors may have an impact on world assumptions as much as the experience of IPV, and therefore, ethnic differences in world assumptions were not apparent.

It may also be that world assumptions do not represent the same construct for the two groups. Further examination of the regression analyses split by ethnicity (Tables 24 and 25) may give clues to potential interethnic variation in meanings behind shattered assumptions for the two groups. For example, the regressions show that for African American women, world assumptions were a significant predictor of PTSD both when ethnic identity was considered (Table 25) and not considered (Table 24). For European American women, world assumptions did not significantly predict PTSD symptoms in either model. While the direction of the effect was the same for both African American and European American women, suggesting that an interaction was not present, it does raise the question of why world assumptions predicted PTSD only for African American women. One possibility is that shattered assumptions are more highly related to religiosity for European American women than for African American women, and therefore the presence of religiosity (a more powerful predictor of PTSD symptoms for both groups of women) overshadowed the effects of shattered assumptions on PTSD for European American women. Going further, it is possible that African American women's use and understanding of religion is qualitatively different than it is for European American women, and that it is unrelated to broader, systemic beliefs about how the world operates. It may be that African American women are socialized to accept the world as unjust and unsafe (lowered world assumptions) by parents who are eager to

prepare them adequately for life in a racist society, and that this remains a separate construct than the redemptive qualities for religion, i.e., a phrase that may sound something like "God is kind and just, but the world is not". Conversely, for European American women, it may be that world assumptions are more closely aligned to their religious convictions such that redemption through God feels like a restoration in beliefs in the benevolence, safety and meaningfulness of the world, i.e., "God is good, and so is the world".

On a similar note, it may be that historical trauma and/or the lived experience of being an ethnic minority in a racist culture, lead to an altogether different set of assumptions about the world. For example, it may be that high rates of violence in African American communities and families may lead to alternative assumptions about how the world can, should and does operate from an early age that are less positive in nature. It is assumed in Janoff-Bulman's theory (1983) that three fundamental assumptions exist for everyone, though this is highly speculative given that early empirical work that support the theory were based on predominantly European American samples, often of relatively well-educated college students, that may not be true and/or generalizable for individuals from different and/or stigmatized social locations. For African Americans, trauma and/or suffering may not disintegrate an internal world as proposed, but rather, may be an expected element of lived experience. As such, the world assumptions scale (WAS) presents a construct that may be largely irrelevant for African Americans. These speculations warrant further empirical examination via qualitative interviews.

In the end, it is possible that world assumptions (and its measurement in this study) do not tap the same underlying constructs for the two ethnic groups, and that other factors such as religiosity may be implicated.

The Role of Religion in PTSD Variability for Diverse Women

Parallel to past empirical findings, religious involvement was a strong theme for the IPV survivors in this study (El-Khoury et al., 2004; Fallot & Heckman, 2005; Gillum et al., 2006b). Based on earlier work, it was hypothesized that religiosity would be an especially important subject for African American women (Banks-Wallace & Parks, 2004; El-Khoury et al., 2004; Fallot & Heckman, 2005; Gillum et al., 2006a), which was supported by t-test analyses. As discussed above, hypotheses that religiosity would signal distress consistent with PTSD symptoms were also confirmed, such that total religious involvement was positively correlated with PTSD symptoms. Though this may be counter-intuitive in that religiosity is often considered a reparative force in individuals' lives, it was previously argued that religious involvement may instead be a more socially and culturally acceptable expression of psychological distress. It also appears as though religiosity is related to different constructs such as world assumptions and PTSD differentially as a function of ethnicity as argued in previous pages.

However, another unusual finding in regards to religiosity worthy of further dissection is in the regressions split by ethnicity is that religiosity became an insignificant predictor of PTSD symptoms for European American women in the second regression when ethnic identity is considered (Table 25). At the same time, the beta weight of .27 for religiosity for European American women was exactly the same as the beta weight for

African American women. This suggests that more homogeneity existed for African American women than for European American women. As mentioned above, world assumptions were similarly significant for African American women, but not European American women. What may be shown in this analysis is that African American women, once again, show more overall homogeneity in their responses than European American women. The reasons behind this are unknown. However, similar to above, one might hypothesize that socialization could be responsible. Put differently, it is possible that a by-product of being raised in a racist environment is that lessons about ethnic identity, violence, religion and coping are made explicit by African American parents who wish to sufficiently prepare their children for the heightened possibility of encountering injustice in a world that devalues African American individuals. In contrast, violence may be relatively silenced in European American communities and the lessons to be learned about acknowledging, dealing with and recovering from the experience of IPV are left to be learned by the individual who feels isolated and misunderstood. As a result, more heterogeneity in response would exist for European American women.

In the end, it remains unclear whether religiosity is a form of coping or a signal of distress. However, it is argued here that religiosity serves as a delayed, yet effective form of emotion-focused coping that is not subject to the same rules and interpretations previously theorized regarding the function of coping, or may serve as a catalyst for problem-focused methods of coping. Said differently, emotion-focused forms of coping historically have not been favored in the literature (Lazarus, 1993) and were shown here be associated with increased risk for PTSD symptoms. Though this has been untested in the literature, religiosity, as a form of emotion-focused coping, may be particularly

effective at giving the women strength to engage in problem-focused forms of coping. It is possible that religiosity facilitates a shift from emotion-focused coping to more engaged and problem-focused forms of coping.

Understanding the Coping Response to IPV and PTSD Symptoms

Moving on to coping, the results indicate that coping may be an especially salient construct for IPV survivors. More specifically, high levels of IPV exposure were related to increases in emotion-focused coping, and subsequently heightened rates of PTSD symptoms. In fact, emotion-focused coping mediated the relationship between IPV and PTSD symptoms. However, the results suggest a more complicated and nuanced story in relation to this construct. Though individuals who used more emotion-focused ways of coping were at risk for PTSD symptoms, a moderation analysis suggested that individuals who favored problem-focused coping in the face of high levels of IPV showed enhanced risk for PTSD symptoms as well. Said differently, individuals who experienced frequent acts of IPV and leaned on problem-focused methods of coping also reported more symptoms of PTSD, similar to individuals who favored emotion-focused methods of coping. For individuals with lower levels of IPV, problem-focused coping was related to lower levels of PTSD symptoms.

Though these results may seem unusual, theoretical and empirical work reviewed by Lazarus (1993) and placed in a feminist context by Banyard and Graham-Bermann (1993) can lend a contextualized understanding of the results; namely, these authors suggest that problem-focused coping is most effective at deterring negative mental health sequelae only when the individual's attempts to positively cope are rewarded. For

individuals with less control over their situation, efforts to positively and purposefully make change that fail may result in more detriment to one's mental health. It is possible that more total IPV signals an environment in which the woman has little control over resources and the decision to stay or leave. For these women, engaging in problem-focused methods of coping that are thwarted by the assailant may be psychologically devastating and lead to symptoms consistent with PTSD such as numbing and avoidance. Further investigation of this relationship is warranted. It may also be that women's attempts to engage in problem-focused coping (such as confronting the abuser or seeking social support) increase the possibility of violence as men interpret women's attempts to cope as threats to their authority and react with heightened levels of violence.

Though coping showed a strong relationship with both IPV and PTSD, when this factor was entered into a model predicting PTSD symptoms with demographic factors, total IPV, and world assumptions, it failed to independently predict PTSD symptoms, both with and without religiosity in the model. It is possible that emotion-focused coping is so closely related to the experience of IPV, and possibly world assumptions, that the effects of coping on PTSD were trumped by the strength of the relationships between IPV, world assumptions and PTSD. This may be especially true once religiosity was entered into the model, given the robust relationship between religiosity and PTSD, which may have left little room for the effects of emotion-focused coping on PTSD symptoms to be shown. These inter-relationships deserve further exploration and replication.

Testing Complex Models Predicting to PTSD Symptoms

Taken together, various hypothesized and novel results contribute to a complex understanding of the current risk and protection model of PTSD symptoms following IPV. To resolve ambiguity, a series of regression models further elucidated some of the interrelationships present in the data. For example, the results showed that when one considers multiple layers of the model, including demographic factors, IPV exposure, world assumptions and type of coping, that ethnicity, ethnic identity, IPV exposure and world assumptions, but not coping, significantly predicted the extent of PTSD symptoms. More specifically, demographic factors such as ethnicity and ethnic identity did not become significant predictors of PTSD symptoms until IPV exposure was entered into the regression. This is likely the case because African American women reported more overall violence and higher ethnic identification than European American women, and these factors were directly related to PTSD symptoms. Overall, European American participants and participants with strong ethnic identity reported more symptoms of PTSD. Given that African American women reported more overall violence, this step of the analysis suggests that once the effects of interethnic variations in the amount of violence are controlled, that European Americans are more at risk for PTSD symptoms. On the other hand, African American women endorsed stronger ethnic identity, which became a significant predictor of PTSD in step two. It is possible that the effect of this variable on PTSD symptoms is driven by African American women. Put differently, a significant portion of African American women reported PTSD symptoms and no differences in PTSD symptoms were observed between ethnic groups. It may be that a strong ethnic identification may be the missing piece for understanding PTSD development in African American women, rather than ethnicity alone. To date, the

relationships between ethnic identity, ethnicity, IPV and PTSD have not been examined, so these interpretations should be read with caution. The results need replication and expansion.

In addition to ethnicity, ethnic identity and IPV exposure, lowered assumptions about the world were positively related to PTSD symptoms. In fact, the addition of shattered assumptions to the model significantly improved the variance accounted for in PTSD symptoms. However, the addition of coping in the final step of the model failed to produce an improvement in variance accounted for in PTSD symptoms and was not a significant predictor. Though coping showed a strong relationship with both IPV and PTSD in previous analyses, when this factor was entered into a model predicting PTSD symptoms with demographic factors, total IPV, and world assumptions, it failed to independently predict PTSD symptoms, both with and without religiosity in the model, which runs counter to work by Goldenberg and Matheson (2005) that found world assumptions to drop out as a significant predictor of PTSD in the presence of coping. In this study, coping, world assumptions and religiosity seemed to have independent effects on PTSD symptoms, though this was more so for African American women than European American women.

In a second regression that included religiosity in step four rather than coping, the analysis was similar through step three. However, the addition of religiosity in step four found an additional portion of variance in PTSD symptoms accounted for and the erasure of the significant effects of ethnic identity on PTSD symptoms. Taken together with the previous regression, it makes sense that the strong relationship between religiosity and PTSD symptoms, along with the robust interethnic variability in religiosity that shows

African American women as endorsing more overall religiosity, would trump the effects of ethnic identity on PTSD symptoms. In other words, the effects of religiosity, which is a more forceful factor for African American women than for European American women, may overshadow the effects of ethnic identity on PTSD and could possibly take over as a leading predictor of PTSD for African American women. Again, these results should be interpreted with caution and deserve further attention.

In the third full sample regression, both religiosity and coping were entered in the final step. In this analysis, coping once again failed to significantly contribute to PTSD symptom variance in comparison to religiosity, which was shown to significantly predict PTSD symptoms. Similar to the previous analysis, ethnic identity no longer became significant when step four was added to the analysis. Given the strong relationship between religiosity and PTSD, it is possible that the effects of coping on PTSD symptoms were trumped by the strength of the aforementioned relationship.

Post hoc analyses in the current study were proposed to shed light on the complex interrelationships shown through the course of data analysis. For example, the analyses suggested that factors contributing to PTSD may act differently as a function of ethnicity. Post hoc regressions that considered total IPV, world assumptions and religiosity, and split by ethnicity, however, found only small differences in significant predictors of PTSD as a function of ethnic group. For example, while African American women's report of PTSD symptoms was significantly predicted by total IPV, religiosity and lowered world assumptions, only the former two predicted PTSD symptoms for European American women.

Given the slightly peculiar performance of ethnic identity in earlier regression analyses, a second set of regressions (split by ethnicity) attempted to elucidate some of the interrelationships between ethnicity, IPV, world assumptions and religiosity in relation to PTSD symptoms. The results showed that the addition of ethnic identity for African American women left the results unchanged in regards to the previous regression analyses. Moreover, total IPV, world assumptions and religiosity each independently predicted PTSD symptoms. For European American women, however, the addition of ethnic identity removed the significant effects of religiosity on PTSD symptoms. Only total IPV was a significant PTSD symptom predictor for European American women. These results cannot be easily understood or interpreted. However, they may suggest that the relationships between ethnic identity, religiosity and world assumptions may be more closely intertwined for European American women, washing out the effects of each on PTSD symptoms. For African American women, these factors may be more salient, robust, and/or independent. For example, it may be that African American women are more homogeneous in their reports on these factors, thinking more similarly as a group regarding religiosity (as evidenced by a smaller standard deviation than European American) and thinking about world assumptions as separate from religiosity. For European American women, these factors may be more diffuse and interrelated. Implications of these findings will be further discussed below.

Via hypothesis testing and post hoc analyses, many interrelationships between variables emerged. Though the data lacked power to be amenable to a structural equation modeling analysis, a preliminary model was produced for future testing. A series of correlation analyses explored relationships between variables not previously delineated in

the course of analysis and put into the model (Figure 4). Following this, a series of mediation analyses was conducted to test portions of the proposed model. Shattered assumptions were shown to be a possible partial mediator of the relationship between IPV and PTSD with the addition of more participants and thus more statistical power. In addition, the roles of ethnic identification and religiosity as mediators of the relationship between ethnicity and PTSD failed to show significance. Once again, this is likely due to the overall small sample size, which is only ninety-one when ethnicity is considered. Future studies that include more participants may be able to further test and demarcate the relationships between IPV, PTSD, world assumptions, religiosity, coping, ethnic identification and ethnicity.

Feminist Implications

The results of the present study may further contribute to feminist theory. To begin, it reinforces that violence against women is a pervasive feature of culture in the United States, affecting women's financial, social, and emotional health. Though the cross-sectional design limits interpretations of the order of events, many of these women were impoverished, poorly educated and had multiple children in their care. It is possible that these factors placed women at risk for entering and remaining in violent relationships, however, it is just as likely that these were the result of many years of abuse. In addition, many of the women suffered from PTSD. Said differently, violence against women is a serious social and public health problem in the United States.

Among feminist goals, there seems an established desire to be cognizant of how intersections of gender, race/ethnicity, socioeconomic status, age, and education (as well

as a multitude of other identity-related factors) impact lived experience. Though this study did not find direct differences across the intersection of gender and ethnicity in regards to PTSD, it did find differences among the level of violence experienced and women's use of religion, suggesting that women's social location in regards to gender and ethnicity may have a direct impact on what women may be exposed to and how they chose to cope and recover. Further research may continue to expose the many ways in which intersections of identity impact women's experience of, and recovery from, violence.

Clinical Implications

Much has been written about interventions with traumatized populations, from combat veterans to motor vehicle accident survivors. To encapsulate the literature on treatment and recovery from trauma could constitute an entirely new study. Though the field on posttraumatic intervention is large, however, what is known about how IPV survivors in particular recover from trauma is rather limited. In fact, one study found that few clinicians have ever worked directly with an IPV survivor (Browne, 1993). One could hypothesize based on current literature what might be best for IPV survivors, but based on the qualitative aspects of IPV that set it apart from other forms of trauma (duration, severity, interpersonal), these generalizations would probably come up short in providing effective treatment. Said differently, what is known about trauma treatment with both men and women using approaches such as cognitive-behavioral therapies may not be valid in working with survivors of IPV given the ongoing, continuous nature and threat of IPV. The present study, however, does provide some insight to mental health workers that treat and support IPV survivors in the community and shelters.

Perhaps the greatest clinical implication that results from the current study is that rates of PTSD are disproportionately and exceptionally high in IPV survivors, and that there is a dose-response relationship such that more violence increases risk for the development of PTSD symptoms and a diagnosis of PTSD. These results suggest that women who are in or have left violent relationships should be screened early on for symptoms of PTSD and intervention needs to begin as early as possible (Browne, 1993). The amount and severity of violence reported by the survivor can give clinicians an early indication of risk for current and later PTSD symptoms.

However, the current study provides additional information regarding factors that contribute to PTSD that may be useful for clinicians. For example, though future studies need to confirm these speculations, this project found that world assumptions may be a potential mediator of the relationship between IPV and PTSD. This finding gives clues regarding entry points in working with survivors. One approach with survivors may be to confront shattered world assumptions by attempting to restore previously held, positive assumptions regarding the benevolence of the world, of people, belief in justice and self-worth. This may include helping women build trusting and compassionate relationships that provide corrective emotional experiences. It may also include facilitating survivor's entry into the work force and /or educational system, improving their sense of self-worth and mastery. These experiences may help women regain a sense of meaning in the world and self worth. It is imperative, however, that these experiences occur within a safe environment. For many of these women, threats to their sense of safety can be very real and threatening, contributing to their hypervigilance, arousal and numbing symptoms. These reactions are an adaptive response to a relationship that continues to threaten their,

and possibly their children's, lives – and these instincts may actually keep these women alive. The restoration of assumptions can only occur once a woman's safety is no longer in question, lest a false sense of safety put these women at continued risk for abuse and further damage their assumptions. Close attention to the therapeutic alliance is also imperative, providing a space for the restoration of trust and empathy, as well as a space where the survivor is not judged (Battaglia et al., 2003).

A similar caution surrounds engaging women in alternative forms of coping. The results of the current study suggest, for instance, that IPV survivors with the most frequent violence also employ emotion-focused methods of coping, and also report higher rates of PTSD symptoms. Naturally, one may then assume that helping women engage in more problem-focused forms of coping may reduce risk for PTSD symptoms. However, this assumption leaves out the question of context. For survivors whose context places them at continued risk for violence, the use of problem-focused coping may also increase risk for PTSD. This makes sense in that individuals who attempt to make changes, but continue to fail and/or suffer at the hands of the assailant, may become demoralized, emotionally numb, dissociative, and/or avoidant. It is only when women have a real sense of control over their situation that problem-focused coping is most effective. This is important for clinicians to realize when they become impatient with survivors who seem resistant to make changes or engage in problem-focused methods of coping. Research has shown that clinicians begin to blame survivors when they do not leave their assailant (Wandrei & Rupert, 2000). It is likely that women are favoring emotion-focused methods of coping until a time when they have sufficient resources or power to leave, a job with which the clinician can assist. However, research has also shown that a

transition to more active forms of coping is perhaps necessary before recovery can begin (Rayburn et al., 2005). Though the act of helping women transition to methods of coping that can more actively make change may be slow, it remains a central component of recovery. On a related note, research on posttraumatic recovery has also suggested that helping an individual gain a sense of self-efficacy over the traumatic events (including the decision of whether to stay or leave) improves outcome (Benight & Bandura, 2004; Lerner & Kennedy, 2000), a process that engaging in problem-focused coping may facilitate.

Research in the area of religiosity and IPV cast a somewhat confusing picture. For instance, religiosity has been viewed as an avenue of recovery and forgiveness for many IPV survivors, especially African American women. Within the context of shattered assumptions, this seems sensible as religiosity may facilitate the restoration of assumptions shattered by experiences of abuse. However, this study showed that world assumptions and religiosity are not correlated. At the same time, the current study found that more religiosity was correlated with increased risk for PTSD symptoms and it was suggested that higher religiosity signals higher distress in the same way that more overall coping signals more overall distress. It is therefore important in working with IPV survivors to recognize religiosity as a possible method of coping that is especially important in this population, but also to listen for signs of distress within the expression of religiosity.

The current research contributes to a multicultural understanding of IPV and PTSD development that may be informative to clinicians working with survivors of diverse ethnicity. For African American women, rates of violence are disproportionately

high, including the areas of physical assault and sexual coercion, both shown to particularly increase risk for PTSD in IPV survivors (Coker et al., 2005; Lipsky et al., 2005b; Pico-Alfonso, 2005). In addition, African American women have been shown to have fewer resources and come from communities and neighborhoods with a higher concentration of poverty (Bent-Goodley, 2004; Nash, 2005; Van Wyk et al., 2003). In this sense, African American women may be at particular risk for PTSD development. However, according to the data in the current study, these women show equivalent rates of PTSD to European American women. One difference is the role of religiosity for African American women. Though religiosity signaled higher rates of PTSD, African American women were not at higher risk for PTSD in relation to European American women, suggesting that religiosity may be a culturally acceptable expression of distress and replacement of PTSD reports. It may be important, therefore, in working with African American women that the role of religiosity be a central component of the intervention, but also that the woman's particular use of religion be explored. It may be that religiosity is giving these women the strength to engage in more effective, problem-focused methods of coping, but it may also be true that it is simply an expression of a high level of distress and trauma. Clinicians may consider parsing out the role of religiosity and not take for granted that it is an effective method of coping, especially in relationship to the role of their particular minister, who may serve as an valuable ally or a barrier to future mental health care (Neighbors et al., 1998). At the same time, several researchers have suggested that intervention with survivors of IPV (Ai & Park, 2005; Cunradi et al., 2002a; El-Khoury et al., 2004; Ellison & Anderson, 2001; Fallot & Heckman, 2005; Giesbrecht & Sevcik, 2000; Humphreys, 2000; Senter & Caldwell,

2002), and African American individuals in particular (Ellison, 1998; Gillum et al., 2006a; Neighbors et al., 1983), should heavily consider a focus on religion in order to be effective.

For European American women, rates of PTSD are significantly higher than for African American women once African American women's increased risk for violence and higher rates of religiosity are controlled. European American women may be more prone to distress expressed as PTSD symptoms when rates of violence are even across ethnicity. In addition, European American women may be less likely to lean on religion for support, an opportunity for meaning-making and fellowship that may help these women recover from abuse. Overall, less is known about what factors increase and decrease risk for PTSD in European American survivors. For example, only total violence was a significant predictor of PTSD for European American women in comparison to African American women for whom world assumptions, religiosity and total IPV were all significant and independent predictors. It may be that, for European American women, PTSD rates are driven almost exclusively by the amount of violence exposure rather than by women's reactions to and attempts to cope with the violence. It would therefore be important for a clinician to assess the amount of violence experienced by a survivor from either ethnic group, but this information may be especially important in understanding a European American survivor's risk for PTSD.

In the end, current and past research suggests that IPV is a very complex problem that has direct effects on a survivor's mental health. However, the results of the current study suggest that a thorough assessment and intervention for IPV survivors consider both coping and religiosity, as well as the current status of a woman's world assumptions.

The first rule of intervention should always be safety, but following this, various avenues in regards to restoration of shattered assumptions, improving problem-focused coping, and situating the role of religion are suggested by the current work.

Limitations

Multiple limitations regarding methodology are worthy of mention. To begin, the study population was a highly traumatized group of women whose experiences can only be described as horrific. In general, the rule seemed to be resilience given the multiple and additive traumas that these women had endured not just in their adult relationships, but through out their life spans. That a more detailed trauma history was not collected was a limitation given that symptoms of PTSD may have resulted from any number of the traumas that these women endured. Some of the women seemed to have difficulty with a sense of time and memory, highly attributable to the traumatic experiences they had endured. As such, it was sometimes difficult to gauge the accuracy with which the women answered questions. It is therefore advisable to get information from multiple sources when working with such a traumatized population.

Other methodological limitations were present as a result of collecting a convenience sample. One repercussion of conducting research with PTSD sufferers is the extent to which avoidance is a symptom of the disorder and makes women less likely to volunteer to talk about their experiences. As such, the majority of the sample was identified and approached within domestic violence shelters rather than community women who found advertisements and took the initiative to call and enroll. Research has shown that women who use shelters are among the most traumatized and have encountered disproportionately high rates of violence (Strube, 1988). As a result, the

findings from the current study likely reflect a subsample of IPV survivors that are skewed to the more traumatized end of the spectrum. In addition, this sample was quite impoverished and poorly educated. Though women who are the most disadvantaged are the most at risk for violence, it is important to remember that violence occurs at all intersections of ethnicity, income and education, and few women of adequate to ample resources were enrolled in the study. Going further, the sample was almost entirely comprised of women who no longer lived with their assailant and/or who had been out of the relationship for almost a year or more. It is therefore important to remember that the current results are not generalizable to all IPV survivors in that this sample was skewed to a shelter population that had experienced high rates of violence, had inadequate resources in terms of income and education, and had (with a few exceptions) made the decision to leave their assailant.

The current work was restricted to almost exclusively European American and African American women. Though several Hispanic American women and one biracial woman were interviewed, the sample was quite limited in regards to ethnic diversity. Given the focus on ethnicity in this study and finite number of resources, this was a purposeful choice. However, this choice severely limits the generalizability of the results. Additionally, the subsamples of European American and African American women were too small to conduct adequate intraethnic analyses that could help illuminate how factors related to PTSD differed within the ethnic groups. In the same vein, the addition of an African American interviewer may have yielded different results for the African American participants, as none of these women were interviewed by someone who shared their experiences as an African American woman. On a broader note, many

of the measures were developed using predominantly European American participants, with the exception of the MMRI, which was developed with entirely African American participants. The measures used in the present study may therefore not tap the same underlying constructs across ethnicity. As mentioned earlier, this may be problematic in cases such as the world assumptions scale, where assumptions about the world may be different for African Americans as a result of longstanding disenfranchisement, subjugation and historical trauma. Given that both the theory of shattered assumptions and the scale used to assess assumptions were based on work with European Americans, it may not be applicable for African American women.

The cross-sectional design of the study also calls multiple findings into question. For example, it is impossible to tell whether income and education predicted the level of PTSD symptoms or whether lowered income and less education were the result of women's inability to work or finish school due to PTSD pathology. Additionally, it is not possible to tell whether individuals who engage in more emotion-focused coping do so as the result of IPV or may be at risk for IPV because of a lack of engaging in problem-focused coping. On a similar note, it is also possible that the development of PTSD symptoms makes problem-focused coping exceptionally difficult and lead to emotion-focused coping in the aftermath of its development. It is also reasonable to assume that retrospective reporting of coping and experiences of violence is affected by post-trauma pathology. For women who have finally left an abusive relationship after many years, the act of leaving may alter their impression of the ways in which they coped in the year preceding the interview, accepting a new vision of themselves as someone who uses predominantly problem-focused methods of coping. Women who develop

PTSD may over-estimate the severity and frequency of the violence. Similar problems emerge with assessment of world assumptions. Though several points in this study have referenced shattered assumptions, the cross-sectional design resulted in an inability to say whether these world assumptions were the result of a shattering/trauma or whether the individual had simply never held positive world assumptions at all. Future studies may ameliorate some of these limitations.

Future Studies

Given the limitations of the current study, future work on these topics would do well to include a larger sample, with more ethnic diversity, more variability in income and education, and should include a longitudinal study design that can more aptly parse out the direction of relationships found in the present work. These improvements to study methodology would allow the proposed model to be tested and further delineation between factors to be accomplished. Moreover, future studies may consider collecting information from multiple sources, including friends, family, and physicians or mental health workers, as well as including a more ethnically diverse interviewing staff. At the same time, issues of confidentiality make such research designs difficult to execute. Regardless, multiple sources of information should be a goal of future research.

In interviews with the women, it was apparent that trauma was a consistent theme, not just in their intimate partner relationships. Though not specifically assessed, women offered stories of rape, stranger assault, robbery, witnessing friends and family assaulted or killed, and accidents, injuries and natural disasters. Given that any of these events could contribute to PTSD symptoms, a more detailed trauma history may improve the

field's understanding on the context of violence and trauma in these women's lives, as well as provide insight into how multiple traumas, changing world assumptions, coping and religiosity impact short and long term mental health. For most of these women, IPV was among many assaults to their sense of themselves and beliefs in how the world should and does operate.

Future qualitative work may shed light and parse out the interrelationships found in the current study. For example, questions continue to linger regarding the exact role of religiosity for survivors, and whether religiosity operates differently as a function of ethnicity, and further, whether it can be seen as a form of coping, an expression of PTSD, both, or neither. The relationship between coping and world assumptions, as well as the relationship between religiosity and world assumptions, deserve further exploration. For example, do negative changes in world assumptions increase reliance on emotion-focused coping? Are religiosity and world assumptions related differently as a function of ethnicity? What role does access to resources (income, education, employment) play in maintenance of world assumptions and choices in regards to coping, and does this interplay with PTSD symptom development? Larger sample sizes, longitudinal designs and mixed methods that include qualitative approaches may help clarify some of these questions.

In addition to the heightened risk for PTSD, IPV survivors also report high levels of depressive symptoms and low self-esteem. Future studies may consider examining depressive symptoms in relation to coping, world assumptions and religiosity as an alternative signal of distress that results from IPV. For example, does the type of coping that one favors increase risk for depressive symptom development like it does for PTSD?

What is the relationship between depressive symptoms and PTSD for IPV survivors, and does it function similarly in relation to ethnicity? Do changing world assumptions impact the development of depressive symptoms like it does for PTSD symptoms? Lastly, are PTSD and depression really similar and related expressions of distress for IPV survivors, or are they mutually exclusive?

Finally, more work in the area of ethnicity, IPV and PTSD is warranted. Research continues to find significant differences across ethnicity in relation to most of the constructs included in the current study, and yet a more concrete understanding of the effects of ethnicity has remained limited. The curious findings in relation to ethnic identity may be one start. For example, the question of how a sense of belonging to one's ethnic group combined with one's experience as an individual of a particular ethnicity impacts an individual's definitions of, understanding of, choices in relation to and recovery from violence is particularly salient following the results of the current study. Additionally, future research may explore how the experiences of individuals of multiple ethnic group heritage impact the experience of and recovery from violence, given the growing population of multi-racial individuals in the United States.

Summary

This project sought to explore how the experience of IPV is both directly related to PTSD symptoms and indirectly affected by resources, ethnicity, world assumptions, coping and religiosity. Its aim was to provide a more nuanced and contextualized understanding of the ways in which IPV survivors navigate the trauma of IPV, hypothesizing that changes in world assumptions, coping and religiosity would function differently for different survivors, as well as explain variation across ethnicity. The study

found that while IPV has a strong, positive relationship with PTSD symptoms, income, education and world assumptions may increase or decrease risk for PTSD symptoms. Coping was found to moderate the relationship between IPV and PTSD, suggesting that methods of coping always be considered within the context of the survivor's available choices. Religiosity was a salient and robust theme for survivors, especially African American survivors, and seemed to work as a form of emotion-focused coping, though could also be interpreted as a culturally-appropriate expression of distress. A model that attempted to organize and delineate the relationships found in the current study was proposed for future testing with an increased sample size.

Violence against women is a complex, context-driven and multilayered problem that affects individuals differently, but leaves few unaffected. Moreover, it is a grave and gendered violation of human rights that requires continued awareness, education and activism, all three of which the current study aspired to contribute.

Tables

Table 1: Ethnic Match of Interviews and Interview Location

Table 1

Ethnic Match of Interviewer and Interviewee and Interview Location (N=97)

Interviewer	Interviewee	n	Percent
European American	European American	43	44.3
European American	African American	42	43.3
European American	Hispanic American	5	5.2
European American	Biracial	1	1.0
Arab American	European American	2	2.1
Arab American	African American	3	3.1
Indian American	African American	1	1.0
Overall Match of Interviews		43	44.3
Interview Location			
Domestic Violence Shelter		60	72.2
Interviewee's Home		21	21.6
University of Michigan Lab Office		6	6.2

Table 2: Demographic Information of Participants

Table 2

Demographic Information of Participants (N=97)

Variable	n	Percent
Ethnicity		
African American	46	47.4
European American	45	46.4
Hispanic American	5	5.2
Biracial	1	1.0
Working	28	28.9
Shelter Use: Current or Past	69	71.1
Highest Education		
Grade School	1	1.0
Some High School	21	21.6
High School Degree	31	32.0
Some College	31	32.0
College Degree	10	10.3
Graduate School	3	3.1
Relationship Status		
Single	51	52.6
Living with Partner	6	6.2
Married	12	12.4
Divorced	8	8.2

Separated	19	19.6
Widowed	1	1.0
Living with Violent Partner	2	2.1
Mental Health Condition		
Yes	30	30.9
No	57	58.8
Unknown	10	10.3

Table 3: Demographic Information of Participants (Continuous Variables)

Table 3

Demographic Information of Participants (N=97)

	N	Mean	SD	Range
Income (Dollars)	$97	$902.08	943.34	$0-$4,000
Age	97	33.20	8.75	17-58
Times Moved in 4 Years	97	3.50	3.74	0-30
Days Since Cohabitation	95	318.42	526.82	4-2,920

Table 4: Reliability of Measures

Table 4

Reliability of Measures by Total Scale Score and Subscales

Measure	Cronbach's α
Conflict Tactics Scale (CTS-R) (IPV Total)	.92
Negotiation	.49
Aggression	.78
Physical Assault	.92
Sexual Coercion	.87
Injury	.75
Posttraumatic Stress Diagnostic Scale (PDS) (PTSD Sx Total)	.82
PTSD Reexperiencing	.64
PTSD Avoidance	.69
PTSD Arousal	.64
Ways of Coping Checklist (WCCL) (Total Coping)	.85
Confrontive Coping	.23
Distancing Coping	.57
Self-Controlling	.51
Seeking Social Support	.84
Accepting Responsibility	.66
Escape Avoidance	.71
Planful Problem Solving	.73
Positive Reappraisal	.57

Problem Focused Coping	.78
Emotion Focused Coping	.78
Multidimensional Measure of Religious Involvement (MMRI) (Total Religiosity)	.83
Organized Religiosity	.75
Nonorganized Religiosity	.72
Subjective Religiosity	.67
World Assumptions Scale (WAS) Total (World Assumptions Total)	.85
Benevolence of the World	.76
Benevolence of People	.64
Justice	.57
Control	.58
Randomness	.34
Self-Worth	.75
Self-Controllability	.70
Luck	.77
Multigroup Ethnic Identity Measure (MEIM) (Ethnic Identity Total)	.86
Affirmation and Belonging	.84
Achievement	.79
Ethnic Behaviors	.35
Other Group Orientation	.68

Table 5: Demographic Information of Participants by Ethnicity

Table 5

T-Test Analyses of Interethnic Differences in Demographic Variables (African American: n=46, European American: n=45)

	European American Mean (SD)	African American Mean (SD)	t	d
Age	33.80 (9.07)	32.80 (8.88)	.54	.11
Income (Last Month)	$1,056 ($1,133)	$744 ($729)	1.57	.33
Times Moved in 4 Years	3.64 (4.72)	3.40 (2.56)	.32	.06
Highest Education Level	3.36 (1.11)	3.35 (.97)	.04	.01

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

Table 6: Ethnic Identity Reported and Ethnicity Differences

Table 6

Participants' Ethnic Identity as Measured by the Multigroup Ethnic Identity Measure (MEIM) (N=97, African American: n=46, European American: n=45)

	N/n	Mean	SD	t	d
Ethnic Identity Total					
Total Sample	97	2.57	.61		
European American	45	2.30	.54		
African American	46	2.80	.57	-4.33***	-.91
Affirmation and Belonging					
Total Sample	97	2.94	.70		
European American	45	2.67	.62		
African American	46	3.17	.67	-3.73***	-.77
Ethnic Identity Achievement					
Total Sample	97	2.48	.66		
European American	45	2.22	.62		
African American	46	2.73	.62	-3.91***	-.82
Ethnic Behaviors					
Total Sample	97	1.96	.78		
European American	45	1.70	.74		
African American	46	2.18	.73	-3.12***	-.65
Other Group Orientation					
Total Sample	97	3.60	.41		
European American	45	3.55	.48		

African American	46	3.62	.33	-.70	-.17

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

Table 7: Intimate Partner Violence (IPV) Reported and Ethnicity Differences

Table 7

Intimate Partner Violence (IPV) Experienced by Participants in Preceding Year as Measured by Conflict Tactics Scale-Revised (CTS-R) (N=97, African American: n=46, European American: n=45)

	N/n	Mean	SD	t	d
Negotiation					
Total Sample	97	48.59	28.36		
European American	45	42.04	26.35		
African American	46	56.70	28.99	-2.52**	-.53
Psychological Aggression					
Total Sample	97	106.52	49.39		
European American	45	99.07	47.96		
African American	46	115.11	51.53	-1.54*	-.32
Physical Assault					
Total Sample	97	83.97	72.74		
European American	45	70.82	70.24		
African American	46	100.63	74.65	-1.96*	-.41
Sexual Coercion					
Total Sample	97	38.21	45.71		
European American	45	24.67	36.98		
African American	46	49.49	49.59	-2.70**	-.57
Injury					
Total Sample	97	22.87	24.94		

European American	45	20.91	22.47		
African American	46	25.60	27.84	-.884	-.19
IPV Total					
Total Sample	97	298.22	163.89		
European American	45	254.45	136.28		
African American	46	346.41	179.54	-2.75**	-.58

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

Table 8: Regression Predicting IPV Total with Demographic Variables

Table 8

Linear Regression Model Predicting IPV Total Using Demographic Variables (N=97)

Predictor	Adj. R^2	β	Sig.	VIF
	.07			
Income		-.20	.04*	1.03
Age		-.06	.54	1.03
Education		-.20	.05*	1.05

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

Table 9: Regression Predicting IPV with Demographic Variables Including Ethnicity

Table 9

Linear Regression Model Predicting IPV Total Using Demographic Variables and Ethnicity (N=91)

Predictor	Adj. R^2	β	Sig.	VIF
	.10			
Income		-.16	.12	1.05
Age		-.04	.71	1.03
Education		-.17	.10	1.04
Ethnicity		2.47	.02*	1.03

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

Table 10: Participants' Mental Health and Ethnicity Differences

Table 10

Participants' Posttraumatic Stress Symptoms and PTSD Diagnosis as Measured by the Posttraumatic Stress Diagnostic Scale (PDS) (N=97, African American: n=46, European American: n=45)

	N/n	Mean	SD	t	d
PTSD Reexperiencing					
Total Sample	97	7.29	3.47		
European American	45	7.33	3.63		
African American	46	7.01	3.32	.44	.09
PTSD Hyperarousal					
Total Sample	97	8.82	3.91		
European American	45	8.60	3.88		
African American	46	8.73	4.07	-.16	-.03
PTSD Avoidance					
Total Sample	97	9.53	5.01		
European American	45	8.96	4.99		
African American	46	9.50	4.59	-.54	-.11
PTSD Sx Total					
Total Sample	97	25.64	10.14		
European American	45	24.89	10.45		
African American	46	25.24	9.44	-.17	-.04

	Percent	χ^2
PTSD Clinical Dx		
Total Sample: PTSD	55.7	
European American: PTSD	55.6	
African American: PTSD	56.5	.01
PTSD Cutoff Dx		
Total Sample: PTSD	55.7	
European American: PTSD	35.6	
African American: PTSD	47.8	3.36

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

Table 11: Regression Predicting PTSD Symptoms with Demographic Variables

Table 11

Linear Regression Model Predicting PTSD Symptoms Using Demographic Variables (N=97)

Predictor	R^2	β	Sig.	VIF
	.10			
Income		-.20	.04*	1.03
Age		-.62	.54	1.03
Education		-1.99	.05*	1.05

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

Table 12: Intercorrelations of IPV and PTSD Symptoms

Table 12

Intercorrelations of Violence (Total and Subscales) and PTSD Symptoms (Total and Subscales) (N=97)

	1	2	3	4	5	6	7	8	9	10
1.IPV Total	…									
2.Negotiation	.33***	…								
3.Aggression	.82***	.16	…							
4.Physical Assault	.88***	.10	.65***	…						
5.Sexual Coercion	.67***	.10	.50***	.40***	…					
6.Injury	.78***	.12	.49***	.81***	.35***	…				
7.PTSD Reexperiencing	.27**	.09	.25*	.25*	.13	.23*	…			
8.PTSD Avoidance	.36***	.07	.26*	.33**	.27**	.25*	.46***	…		
9.PTSD Hyperarousal	.31**	-.01	.22*	.29**	.29**	.22*	.54***	.50***	…	
10.PTSD Sx Total	.39***	.06	.30**	.37***	.29**	.29**	.78***	.85***	.82***	…

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

Table 13: World Assumptions Reported and Ethnicity Differences

Table 13

Participants' World Assumptions as Measured by the World Assumptions Scale (WAS) with Lower Numbers Reflecting More Shattered Assumptions (N=97, African American: n=46, European American: n=45)

	N/n	Mean	SD	t	d
Benevolence of the World					
Total Sample	97	16.27	3.77		
European American	45	16.85	3.17		
African American	46	15.70	4.09	1.50	.31
Benevolence of People					
Total Sample	97	16.45	3.35		
European American	45	17.24	2.46		
African American	46	15.66	3.65	2.42*	.51
Justice					
Total Sample	97	28.65	2.96		
European American	45	28.42	3.28		
African American	46	29.08	2.53	-1.07	-.23
Controllability					
Total Sample	97	15.05	3.41		
European American	45	14.76	3.18		
African American	46	15.28	3.49	-.75	-.16
Randomness					
Total Sample	97	14.65	3.10		

European American	45	14.44	3.55		
African American	46	14.81	2.81	-.56	-.12
Self-Worth					
Total Sample	97	18.02	3.78		
European American	45	17.89	3.42		
African American	46	18.30	3.79	-.55	-.12
Self-Controllability					
Total Sample	97	17.49	3.29		
European American	45	17.44	3.24		
African American	46	17.73	3.19	-.42	-.09
Luck					
Total Sample	97	14.05	4.48		
European American	45	13.80	4.29		
African American	46	14.20	4.62	-.42	-.09
World Assumptions Total					
Total Sample	97	124.94	17.19		
European American	45	125.06	14.86		
African American	46	125.19	17.76	-.04	-.01

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

Table 14: Intercorrelations of IPV and World Assumptions

Table 14

Significant Intercorrelations of Violence (Total and Subscales) and World Assumptions (Total and Subscales) (N=97)[#]

	1	2	3	4	5	6	7	8	9	10
1.IPV Total	…									
2.Physical Assault	.88***	…								
3.Sexual Coercion	.67***	.40***	…							
4.Injury	.78***	.81***	.35***	…						
5.World Assumptions Total	-.30**	-.25*	-.40**	-.25*	…					
6.WAS Self-Worth	-.32**	-.31**	-.37**	-.29**	.61***	…				
7.WAS Self-Controllability	-.28**	-.34**	-.27**	-.30**	.72***	.57***	…			
8.WAS Luck	-.21*	-.12	-.32**	-.16	.73***	.34**	.45***	…		
9.WAS Benevolence of the World	-.22*	-.11	-.24*	-.10	.66***	.26*	.31**	.46***	…	
10.WAS Benevolence of People	-.26*	-.23*	-.20*	-.24*	.53***	.31**	.36***	.33**	.63***	…

Negotiation and Aggression (from the CTS-R) and Randomness, Controllability and Justice (from the WAS) were not significantly correlated across measures and excluded from this table.

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

Table 15: Intercorrelations of PTSD and World Assumptions

Table 15

Significant Intercorrelations of PTSD (Total and Subscales) and World Assumptions (Total and Subscales) (N=97)[#]

	1	2	3	4	5	6	7	8
1.PTSD Reexperiencing	…							
2.PTSD Avoidance	.46***	…						
3.PTSD Hyperarousal	.54***	.50***	…					
4.PTSD Sx Total	.78***	.85***	.82***	…				
5.World Assumptions Total	-.12	-.30**	-.33**	-.32**	…			
6.WAS Self-Worth	-.28**	-.38***	-.43***	-.45***	.61***	…		
7.WAS Self-Controllability	-.14	-.32**	-.27**	.31**	.72***	.57***	…	
8.WAS Luck	-.07	-.23*	-.22*	-.22*	.73***	.34**	.45***	…

Randomness, Controllability, Justice, Benevolence of the World and Benevolence of People (from the WAS) were not significantly correlated with PTSD symptoms or subscales and excluded from this table.

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

Table 16: Reported Religiosity and Ethnicity Differences

Table 16

Religiosity Reported by Participants in Preceding Year as Measured by Multidimensional Measure of Religious Involvement (MMRI) (N=97, African American: n=46, European American: n=45)

	N/n	Mean	SD	t	d
Organized Religiosity					
Total Sample	97	3.24	3.32		
European American	45	2.58	3.22		
African American	46	3.57	3.30	-1.45	-.30
Nonorganized Religiosity					
Total Sample	97	9.66	4.49		
European American	45	7.82	4.51		
African American	46	11.24	3.97	-3.84***	-.80
Subjective Religiosity					
Total Sample	97	8.03	3.07		
European American	45	6.73	3.29		
African American	46	9.07	2.42	-3.86***	-.81
Total Religiosity					
Total Sample	97	20.85	8.81		
European American	45	17.13	8.97		
African American	46	23.71	7.81	-3.73***	-.78

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

Table 17: Intercorrelations of Religiosity and PTSD Symptoms

Table 17

Significant Intercorrelations of PTSD (Total and Subscales) and Religiosity (Total and Subscales) (N=97)[#]

	1	2	3	4	5	6	7	8
1.Organized Religiosity	…							
2.Nonorganized Religiosity	.56***	…						
3.Subjective Religiosity	.33**	.58***	…					
4.Total Religiosity	.77***	.90***	.76***	…				
5.PTSD Reexperiencing	.10	.20	.21*	.21*	…			
6.PTSD Avoidance	.16	.23*	.30**	.28**	.46***	…		
7.PTSD Hyperarousal	.19	.23*	.26*	.28**	.54***	.50***	…	
8.PTSD Sx Total	.19	.27**	.32**	.31**	.78***	.85***	.82***	…

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

Table 18: Ways of Coping Reported and Ethnicity Differences

Table 18

Participants' Coping Styles as Measured by the Ways of Coping Checklist (WCCL)

(N=97, African American: n=46, European American: n=45)

	n/N	Mean	SD	t	d
Confrontive Coping					
Total Sample	97	1.92	.63		
European American	45	1.91	.60		
African American	46	1.93	.10	-.179	-.05
Distancing Coping					
Total Sample	97	1.38	.63		
European American	45	1.28	.10		
African American	46	1.49	.09	-1.58*	-.33
Self-Controlling					
Total Sample	97	1.67	.55		
European American	45	1.61	.58		
African American	46	1.75	.53	-1.12	-.25
Seeking Social Support					
Total Sample	97	1.45	.77		
European American	45	1.38	.71		
African American	46	1.51	.84	-.84	-.17
Accepting Responsibility					
Total Sample	97	1.67	.65		
European American	45	1.48	.58		

African American	46	1.80	.68	-2.38*	-.51
Escape Avoidance					
Total Sample	97	1.75	.58		
European American	45	1.59	.61		
African American	46	1.86	.53	-2.25*	-.47
Planful Problem Solving					
Total Sample	97	1.85	.62		
European American	45	1.84	.54		
African American	46	1.84	.62	.06	0
Positive Reappraisal					
Total Sample	97	1.75	.68		
European American	45	1.75	.69		
African American	46	1.78	.63	-.24	-.05
Emotion Focused Coping					
Total Sample	97	6.55	1.66		
European American	45	6.23	1.78		
African American	46	6.88	1.54	-1.85	-.39
Problem Focused Coping					
Total Sample	97	6.89	1.70		
European American	45	6.61	1.46		
African American	46	7.08	1.89	-1.32	-.28
Total Coping					
Total Sample	97	13.44	2.94		

European American	45	12.85	2.81		
African American	46	13.96	3.08	-1.80	-.38

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

Table 19: Relationship between Coping Style, IPV Total and PTSD

Table 19

T-test and Chi-Square Analyses of Relationship between Emotion- and Problem-Focused Coping and Posttraumatic Stress (Symptoms and Diagnosis) and Total Violence (N=97)

	n/%	Mean	SD	t/χ^2
IPV Total				
Emotion Focused	43	346.74	151.23	
Problem Focused	54	259.57	164.61	2.69**
PTSD Sx Total				
Emotion Focused	43	28.37	8.69	
Problem Focused	54	23.47	10.74	2.43*
PTSD Cutoff Dx				
Emotion Focused	55.8			
Problem Focused	45.2			2.74
PTSD Clinical Dx				
Emotion Focused	55.5			
Problem Focused	44.4			6.22*

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

Table 20: Moderating Effects of Type of Coping on Relationship between IPV Total and PTSD Symptoms

Table 20

Linear Regression Model Predicting to PTSD Symptoms in Emotion-Focused Versus Problem-Focused Participants (N=97)

Variables	Adj. R^2	ΔR^2	F Δ	β Step 1	β Step 2	β Step 3
Type of Coping	.05	.06	5.89*	-.24*	-.15	-.55**
IPV Total	.16	.11	12.93**		.35**	.31**
Type of Coping x IPV Total	.19	.04	4.82*			.45*

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

Table 21: Regression Predicting to PTSD Symptoms with Coping

Table 21

Linear Regression Model Predicting to PTSD Symptoms with Emotion Focused Coping in Step 4 (n=91)

Variables	Adj. R^2	ΔR^2	F Δ	β Step 1	β Step 2	β Step 3	β Step 4
Step 1	.03	.07	1.72				
Income (Dollars)				-.12	-.04	-.02	-.00
Highest Education				.05	.14	.12	.12
Ethnicity				-.12	-.24*	-.22*	-.23*
Ethnic Identity Total				.29	.28**	.28**	.26*
Step 2	.24	.20	23.88***				
IPV Total					.49***	.43***	.39***
Step 3							
World Assumptions Total	.26	.04	4.32*			-.20*	-.23*
Step 4							
Emotion Focused Coping	.28	.02	2.49				.15

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

Table 22: Regression Predicting to PTSD Symptoms with Total Religiosity

Table 22

Linear Regression Model Predicting to PTSD Symptoms with Total Religiosity in Step 4 (n=91)

Variables	Adj. R^2	ΔR^2	F Δ	β Step 1	β Step 2	β Step 3	β Step 4
Step 1	.03	.07	1.72				
Income (Dollars)				-.12	-.04	-.02	-.07
Highest Education				.05	.14	.12	.13
Ethnicity				-.12	-.24*	-.22*	-.30**
Ethnic Identity Total				.29*	.28**	.28**	.19
Step 2	.24	.20	23.88***				
IPV Total					.49***	.43***	.40***
Step 3	.26	.04	4.32*				
World Assumptions Total						-.20*	-.23*
Step 4	.34	.08	10.18**				
Total Religiosity							.32**

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

Table 23: Regression Predicting to PTSD Symptoms with Coping and Religiosity

Table 23

Linear Regression Model Predicting to PTSD Symptoms with Coping and Religiosity in Step 4 (n=91)

Variables	R^2	ΔR^2	F Δ	β Step 1	β Step 2	β Step 3	β Step 4
Step 1	.03	.07	1.72				
Income (Dollars)				-.12	-.04	-.02	-.05
Highest Education				.05	.14	.12	.13
Ethnicity				-.12	-.24*	-.22*	-.30**
Ethnic Identity Total				.29*	.28**	.28**	.18
Step 2	.24	.20	23.88***				
IPV Total					.49***	.43***	.37***
Step 3	.26	.04	4.32*				
World Assumptions Total						-.20*	-.25**
Step 4	.34	.09	5.88**				
Emotion Focused Coping							.12

Total Religiosity	.30**

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

Table 24: Regression Predicting to PTSD Symptoms, Split by Ethnicity

Table 24

Linear Regression Model Predicting to PTSD Symptoms Split by Ethnicity (African American: n=46, European American, n=45)

Variables	Adj.R^2	ΔR^2	F Δ	β
European American	.32	.37	7.95***	
IPV Total				.38**
World Assumptions Total				-.19
Total Religiosity				.33*
African American	.28	.33	6.95**	
IPV Total				.35*
World Assumptions Total				-.32*
Total Religiosity				.30*

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

Table 25: Regression Predicting to PTSD Symptoms with Ethnic Identity Total, Split by Ethnicity

Table 25

Linear Regression Model Predicting to PTSD Symptoms Split by Ethnicity, including Ethnic Identity Total (African American: n=46, European American, n=45)

Variables	Adj.R^2	ΔR^2	F Δ	β
European American	.33	.40	6.53***	
Ethnic Identity Total				.18
IPV Total				.38**
World Assumptions Total				-.17
Total Religiosity				.27
African American	.29	.35	5.59**	
Ethnic Identity Total				.15
IPV Total				.36*
World Assumptions Total				-.32*
Total Religiosity				.27*

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

Table 26: Correlation Matrix of Variable Relationships Tested for Model: IPV Total, Religiosity, Coping, World Assumptions and Ethnic Identity

Table 26

Correlation Matrix of Variable Relationships Tested for Model: IPV Total, Religiosity, Coping, World Assumptions and Ethnic Identity (N=97)

	1	2	3	4	5	6	7
1.IPV Total	…						
2.Total Religiosity	.10	…					
3.Total Coping	.11	.26**	…				
4.Emotion Focused Coping	.21*	.21*	.87**	…			
5.Problem Focused Coping	-.02	.25*	.88**	.54**	…		
6.World Assumptions Total	-.30*	.12	.30**	.18	.35**	…	
7.Ethnic Identity Total	.08	.41**	.11	.16	.03	.11	…

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

Table 27: Mediation Analysis of World Assumptions, IPV and PTSD

Table 27

Linear Regression Analyses Testing World Assumptions as a Mediator of the Relationship between IPV and PTSD (N=97)

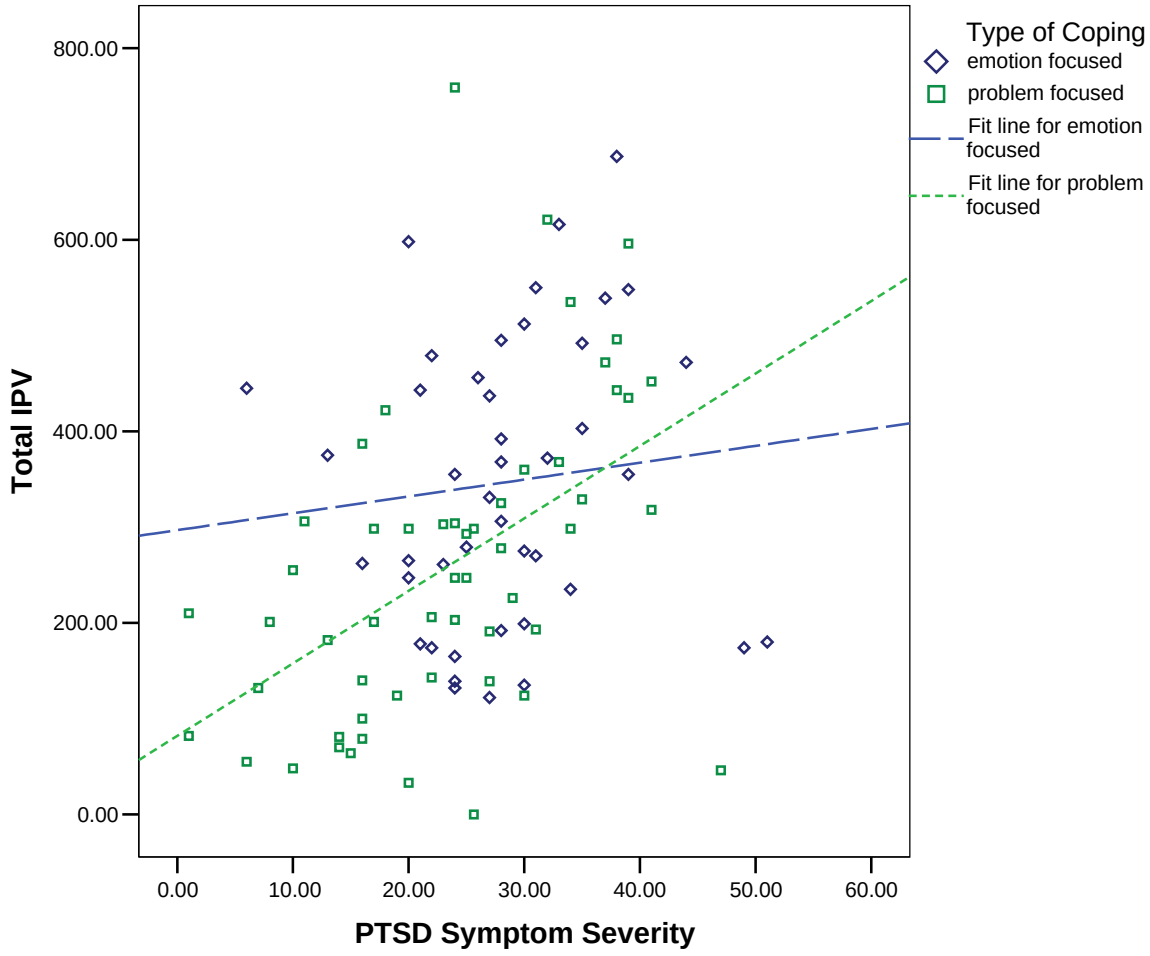
	Adj.R^2	B	SE B	Sig.
Regression 1:				
Outcome: PTSD Symptoms	.14			
Predictor: Total IPV		.02	.01	.00***
Regression 2:				
Outcome: World Assumptions	.08			
Predictor: Total IPV		-.03	.01	.00**
Regression 3:				
Outcome: PTSD Symptoms	.18			
Mediator: World Assumptions		-.13	.06	.03*
Predictor: Total IPV		.02	.01	.00**

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

Graph 1: Effects of the Interaction of Type of Coping and IPV on PTSD Symptoms

Graph 1

Effects of the Interaction of Type of Coping and IPV on PTSD Symptoms



Appendices

Appendix 1: Phone prescreening form

Name of mother: _____
(First Name, 1st initial of last name)

Date of contact: _____

Phone number: _(___ __)___ _____
What is your preferred number to contact? When may we contact you?
Are there any times when we may not contact you? Y/N
Is it ok to leave a message for you? Y/N

Describe the program briefly:
"The Kids Club is a 10 session intervention program for mothers who have experienced violence with a partner within the last year and for their children ages 4 to 6. The mothers participate in a group with a focus on providing support and empowerment as well as addressing parenting issues and children's concerns. The children's group provides a safe place to discuss feelings, build self-esteem, reduce self-blame, and teach coping and social skills."*

*Those not interested in the intervention, can still complete the survey.

1. **Have you experienced any physical violence from your partner in the last year? Yes No**
   (If NO, then they do not qualify for the survey, but may participate in the intervention)

2. **Do you have legal custody of your child? Yes No**
   (If NO, then we cannot interview the child and we cannot provide intervention for the child. Mom can still do an interview for Michelle)

Child's First Name	Date of Birth	Age	Gender
1.			
2.			
3.			
4.			
5.			

* If there are two children, explain that both can participate in the intervention, but that mothers will complete the interview for only one of the children and that only one of the children will be interviewed.

Provide more details about the Kids Club for those interested:

"The Kids Club started November 2nd. The groups meet from 6:30-7:30 pm on Tuesdays and Thursdays for 5 weeks at Safe House Center. The groups are free of charge and childcare is provided onsite. There will be another group starting again in January either at Safe House Center or at the University of Michigan."*

1. Would you be willing to wait until January to participate in the Kids Club? Y / N

2. Will you be able to attend sessions twice a week for an hour for five weeks? Y/N

3. Will you be able to do an interview before you get started – it lasts approximately an hour and a half to two hours and you receive $25 for your time? Y / N

4. Would you be willing to have your child participate in a 30 minute interview? He/she will receive a small toy for their participation? Y / N

5. Will you be able to complete an interview after the five weeks are over? Y / N

6. Would you be willing to be contacted in six months for another short interview over the phone? Y / N

7. Will you need childcare during the interviews? Y / N

8. Do you have any questions / concerns?

9. How did you find out about the intervention and survey?

Interview scheduled:
Date_____
Location: _____

Appendix 2: Conflict Tactics Scale – Revised (CTS-R)

	1x	2x	3-5x	6-10x	11-20x	>20x	Never
1. *My partner* showed care for me even though we disagreed.	1	2	3	4	5	6	7
2. *My partner* explained his or her side of a disagreement to me.	1	2	3	4	5	6	7
3. *My partner* insulted or swore at me.	1	2	3	4	5	6	7
4. *My partner* threw something at me that could hurt.	1	2	3	4	5	6	7
5. *My partner* twisted my arm or hair.	1	2	3	4	5	6	7
6. *You* had a sprain, bruise or small cut because of a fight with me.	1	2	3	4	5	6	7
7. *My partner* showed respect for my feelings about an issue.	1	2	3	4	5	6	7
8. *My partner* made me have sex without a condom.	1	2	3	4	5	6	7
9. *My partner* pushed or shoved me.	1	2	3	4	5	6	7
10. *My partner* used force to make me have oral or anal sex.	1	2	3	4	5	6	7
11. *My partner* used a knife or gun on me.	1	2	3	4	5	6	7
12. *You* passed out from being hit on the head by your partner in a fight.	1	2	3	4	5	6	7
13. *My partner* called me fat or ugly.	1	2	3	4	5	6	7
14. *My partner* punched or hit me with something that could hurt.	1	2	3	4	5	6	7
15. *My partner* destroyed something that belonged to me.	1	2	3	4	5	6	7
16. *You* went to a doctor because of a fight with your partner.	1	2	3	4	5	6	7
17. *My partner* choked me.	1	2	3	4	5	6	7
18. *My partner* shouted or yelled at me.	1	2	3	4	5	6	7
19. *My partner* slammed me against a wall.	1	2	3	4	5	6	7
20. *My partner* was sure we could work it out.	1	2	3	4	5	6	7
21. *You* needed to see a doctor because of a fight with your partner, but didn't.	1	2	3	4	5	6	7
22. *My partner* beat me up.	1	2	3	4	5	6	7
23. *My partner* grabbed me.	1	2	3	4	5	6	7
24. *My partner* used force to make me have sex.	1	2	3	4	5	6	7
25. *My partner* stomped out of the room or house or yard during a disagreement.	1	2	3	4	5	6	7
26. *My partner* insisted that I have sex when I didn't want to (but did not use physical force).	1	2	3	4	5	6	7
27. *My partner* slapped me.	1	2	3	4	5	6	7
28. *You* had a broken bone from a fight with your partner.	1	2	3	4	5	6	7
29. *My partner* used threats to make me have oral or anal sex.	1	2	3	4	5	6	7
30. *My partner* suggested a compromise to a disagreement.	1	2	3	4	5	6	7
31. *My partner* burned or scalded me on purpose.	1	2	3	4	5	6	7
32. *My partner* insisted that I have oral or anal sex (but did not use physical force)	1	2	3	4	5	6	7
33. *My partner* accused me of being a lousy lover.	1	2	3	4	5	6	7
34. *My partner* did something to spite me.	1	2	3	4	5	6	7
35. *My partner* threatened to hit or throw something at me.	1	2	3	4	5	6	7
36. *You* still felt physical pain the next day because of a fight you had with your partner.	1	2	3	4	5	6	7
37. *My partner* kicked me.	1	2	3	4	5	6	7
38. *My partner* used threats to make me have sex.	1	2	3	4	5	6	7
39. *My partner* agreed to try a solution I suggested.	1	2	3	4	5	6	7

40. Are you currently living with a violent partner? Yes No
    a. If yes, how long have you lived with this partner? _____
    b. If no, when was the last time that you lived with a violent partner, if ever? _____
41. How many violent partners have you had in your life? _____

Appendix 3: Posttraumatic Stress Diagnostic Scale (PDS)

1. Serious accident, fire, or explosion (for example, an industrial, farm, car, plane, or boating accident)
Yes No

2. Natural disaster (for example, tornado, hurricane, flood, or major earthquake)

Yes No

3. Non-sexual assault by a family member or someone you know (for example, being mugged, physically attacked, shot, stabbed, or held at gunpoint)

Yes No

4. Non-sexual assault by a stranger (for example, being mugged, physically attacked, shot, stabbed, or held at gunpoint)

Yes No

5. Sexual assault by a family member or someone you know (for example, rape or attempted rape)
Yes No

6. Sexual assault by a stranger (for example, rape or attempted rape)

Yes No

7. Military combat or a war zone

Yes No

8. Sexual contact when you were younger than 18 with someone who was 5 or more years older than you (for example, contact with genitals, breasts)

Yes No

8. Imprisonment (for example, prison inmate, prisoner of war, hostage)

Yes No

10. Torture
Yes No

11. Life-threatening illness

Yes No

12. Other traumatic event (Read examples below)

Yes No

e.g., Attacked by an animal, Man-made disasters (crashes, fires, war), Witnessed another person being beaten, raped, threatened with serious harm, shot at seriously wounded, or killed, Accidental burning, Near drowning, Hospitalization, emergency room visit, and/or invasive medical procedures, Kidnapped or Other event.

13. Explain if 'yes' to item 12:_____

Though you may have experienced a variety of traumatic events, we would like for you to respond to the following questions only in relation to physical and/or sexual assault that you've experienced from a partner.

14. Though you may have had many traumatic events occur with your partner, can you tell me which one you remember as the worst, or the one that has maybe stuck with you the most?

_____

_____

_____

Appendix 3: Posttraumatic Stress Diagnostic Scale (PDS) (continued)

15. How long ago did that traumatic event happen? Or, when was the last time it happened? (mark ONE)
    1. Less than 1 month
    2. 1 to 3 months
    3. 3 to 6 months
    4. 6 months to 3 years
    5. 3 to 5 years
    6. More than 5 years

16. During this traumatic event, were you physically injured? _____ Yes _____ No
17. During this traumatic event, was someone else physically injured? _____ Yes _____ No
18. Did you think that your life was in danger? _____ Yes _____ No
19. Did you think that someone else's life was in danger? _____ Yes _____ No
20. Did you feel helpless? _____ Yes _____ No
21. Did you feel terrified? _____ Yes _____ No

Below is a list of problems that people sometimes have after experiencing a traumatic event. Please choose an answer that best describes how often that problem has bothered you **IN THE LAST MONTH**:

0: not at all or only one time
1: once a week or less/once in awhile
2: 2-4 times a week/half the time
3: 5 or more times a week/almost always

22. Having upsetting thoughts or images about the traumatic event that came into your head when you didn't want them to: _____
23. Having bad dreams or nightmares about the traumatic event: _____
24. Reliving the traumatic event, acting or feeling as if it was happening again: _____
25. Feeling emotionally upset when you were reminded of the traumatic event (for example, feeling scared, angry, sad, guilty, etc.): _____
26. Experiencing physical reactions when you were reminded of the traumatic event (for example, breaking out in a sweat, heart beating fast): _____
27. Trying not to think about, talk about, or have feelings about the traumatic event: _____
28. Trying to avoid activities, people, or places that remind you of the traumatic event: _____
29. Not being able to remember an important part of the traumatic event: _____
30. Having much less interest or participating much less often in important activities: _____
31. Feeling distant or cut off from people around you: _____
32. Feeling emotionally numb (for example, being unable to cry or unable to have loving feelings): _____
33. Feeling as if your future plans or hopes will not come true (for example, you will not have a career, marriage, children, or a long life): _____
34. Having trouble falling or staying asleep: _____
35. Feeling irritable or having fits of anger: _____
36. Having trouble concentrating (for example, drifting in and out of conversations, losing track of a story on television, forgetting what you read): _____
37. Being overly alert (for example, checking to see who is around you, being uncomfortable with your back to a door, etc.): _____
38. Being jumpy or easily startled (for example, when someone walks up behind you): _____

Appendix 3: Posttraumatic Stress Diagnostic Scale (PDS) (continued)

39. How long have you experienced the problems that you reported above? (may need to remind them of relevant symptoms) (Mark only ONE)

1. Less than 1 month 2. 1 to 3 months 3. More than 3 months

40. How long after the traumatic event did these problems begin? (Mark only ONE)

1. Less than 6 months 2. 6 or more months

Have the problems we just discussed interfered with any of the following areas of your life DURING THE PAST MONTH:

41. Work _____ Yes _____ No
42. Household chores and duties _____ Yes _____ No
43. Relationships with friends _____ Yes _____ No
44. Fun and leisure activities _____ Yes _____ No
45. Schoolwork _____ Yes _____ No
46. Relationships with your family _____ Yes _____ No
47. Sex life _____ Yes _____ No
48. General satisfaction with life _____ Yes _____ No
49. Overall level of function in all areas of your life _____ Yes _____ No

Appendix 4: World Assumptions Scale (WAS)

(1) Misfortune is least likely to strike worthy, decent people.	1	2	3	4	5	6
(2) People are naturally unfriendly and unkind.	1	2	3	4	5	6
(3) Bad events are distributed to people at random.	1	2	3	4	5	6
(4) Human nature is basically good.	1	2	3	4	5	6
(5) The good things that happen in this world far outnumber the bad.	1	2	3	4	5	6
(6) The course of our lives is largely determined by chance.	1	2	3	4	5	6
(7) Generally, people deserve what they get in this world.	1	2	3	4	5	6
(8) I often think I am no good at all.	1	2	3	4	5	6
(9) There is more good than evil in the world.	1	2	3	4	5	6
(10) I am basically a lucky person.	1	2	3	4	5	6
(11) People's misfortunes result from mistakes they have made.	1	2	3	4	5	6
(12) People don't really care what happens to the next person.	1	2	3	4	5	6
(13) I usually behave in ways that are likely to maximize good results for me.	1	2	3	4	5	6
(14) People will experience good fortune if they themselves are good.	1	2	3	4	5	6
(15) Life is too full of uncertainties that are determined by chance.	1	2	3	4	5	6
(16) When I think about it, I consider myself very lucky.	1	2	3	4	5	6
(17) I almost always make an effort to prevent bad things from happening to me.	1	2	3	4	5	6
(18) I have a low opinion of myself.	1	2	3	4	5	6
(19) By and large, good people get what they deserve in this world.	1	2	3	4	5	6
(20) Through our actions we can prevent bad things from happening to us.	1	2	3	4	5	6
(21) Looking at my life, I realize that chance events have worked out well for me.	1	2	3	4	5	6
(22) If people took preventive actions, most misfortune could be avoided.	1	2	3	4	5	6
(23) I take the actions necessary to protect myself against misfortune.	1	2	3	4	5	6
(24) In general, life is mostly a gamble.	1	2	3	4	5	6
(25) The world is a good place.	1	2	3	4	5	6
(26) People are basically kind and helpful.	1	2	3	4	5	6
(27) I usually behave so as to bring about the greatest good for me.	1	2	3	4	5	6
(28) I am very satisfied with the kind of person I am.	1	2	3	4	5	6
(29) When bad things happen, it is typically because people have not taken the necessary actions to protect themselves.	1	2	3	4	5	6
	1	2	3	4	5	6
(30) If you look closely enough, you will see that the world is full of goodness.	1	2	3	4	5	6
(31) I have reason to be ashamed of my personal character.	1	2	3	4	5	6
(32) I am luckier than most people.	1	2	3	4	5	6

Appendix 5: Ways of Coping Checklist (WCCL)

(1) Just concentrated on what I had to do next – the next step _____
(2) Went over the problem again and again in my mind to try to understand it _____
(3) Turned to work or substitute activity to take my mind off of things _____
(4) I felt that time would make a difference—the only thing to was wait _____
(5) Concentrated on something good that could come out of the whole thing _____
(6) Talked to someone to find out more about the situation _____
(7) Criticized or lectured myself _____
(8) Tried not to burn bridges behind me _____
(9) Hoped a miracle would happen _____
(10) Went along with fate; sometimes I just have bad luck _____
(11) Went on as if nothing had happened _____
(12) I wished that I could change the way I felt _____
(13) Didn't let it get to me; refused to think about it _____
(14) I blamed myself _____
(15) Accepted sympathy and understanding from someone _____
(16) I told myself things that helped me to feel better _____
(17) Tried to forget the whole thing _____
(18) I got professional help _____
(19) I waited to see what would happen before doing anything _____
(20) Tried to make up to someone for the bad thing that happened _____
(21) I made a plan of action and followed it _____
(22) I accepted the next best thing to what I wanted _____
(23) I let my feelings out somehow _____
(24) I felt bad that I couldn't avoid the problem _____
(25) Talked to someone who could do something concrete about the problem _____
(26) Tried to make myself feel better by eating, drinking, smoking, using drugs or medication _____
(27) I tried not to act too hastily or follow my first hunch _____
(28) I thought about fantastic or unreal things that made me feel better _____
(29) Rediscovered what is important in life _____
(30) Changed something so things would turn out alright _____
(31) I asked someone I respected for advice and followed it _____
(32) Made light of the situation; didn't get too serious about it _____
(33) Talked to someone about how I was feeling _____
(34) Stood my ground and fought for what I wanted _____
(35) Took it out on other people _____
(36) I knew what had to be done, so I doubled my efforts and tried harder to make things work _____
(37) I wished that I could change what had happened _____
(38) I made a promise to myself that things would be different next time _____
(39) Came up with a couple of different solutions to the problem _____
(40) I just took things one step at a time _____
(41) Wished that I was a stronger person—more optimistic and forceful _____
(42) I daydreamed or imagined a better time or place _____
(43) Wished that the situation would go away or somehow be over with _____
(44) Had fantasies or wishes about how things might turn out _____

Appendix 6: Multidimensional Measure of Religious Involvement (MMRI)

(1) How often do you usually attend religious services?
___ Never ___ Year ___ Month ___ Week ___ Day

(2) Are you an official member of a church or other place of worship?
___ No ___ Yes

(3) How many church clubs or organizations do you belong to or participate in?
___ None ___ One ___ Two___ Three ___ Four+

(4) Besides regular service, how often do you take part in other activities at your place of worship?
___ Never ___ Year ___ Month ___ Week ___ Day

(5) Do you hold any positions or offices in your church or place of worship?
___Yes ___ No

(6) How often do you read religious books or other religious materials?
___ Never ___ Year ___ Month ___ Week ___ Day

(7) How often do you watch or listen to religious programs on TV or radio?
___ Never ___ Year ___ Month ___ Week ___ Day

(8) How often do you pray?
___ Never ___ Year ___ Month ___ Week ___ Day

(9) How often do you ask someone to pray for you?
___ Never ___ Year ___ Month ___ Week ___ Day

(10) How religious would you say are you? (From 1 to 5 with "1" being "not at all religious" to "5" being "very religious")
___ 1 ___ 2 ___ 3 ___ 4 ___ 5

(11) How important was religion in your home when you were growing up? (From 1 to 5 with "1" being "Not at all important" to "5" being "extremely important")
___ 1 ___ 2 ___ 3 ___ 4 ___ 5

(12) How important is it for parents to send or take their children to religious services? (From 1 to 5 with "1" being "Not at all important" to "5" being "extremely important")
___ 1 ___ 2 ___ 3 ___ 4 ___ 5

Appendix 7: Multigroup Ethnic Identity Measure (MEIM), Language Use and Generational Status

In this country, people come from a lot of different cultures and there are many different words to describe the different backgrounds or *ethnic groups* that people come from. Some examples of the names of ethnic groups are Mexican-American, Hispanic, Black, Asian-American, American Indian, Anglo-American and White. Every person is born into an ethnic group, or sometimes two groups, but people differ on how important their *ethnicity* is to them, how they feel about it, and how much their behavior is affected by it. These questions are about your ethnicity or your ethnic group and how you feel about it or react to it.

In terms of ethnic group, I consider myself to be _____

Use the numbers "1" to "4" to rate your answer to the following questions with:
1=strongly disagree 2=somewhat disagree 3=somewhat agree 4=strongly agree

(1) I have spent time trying to find out more about my own ethnic group, such as its history, traditions and customs _____
(2) I am active in organizations or social groups that include mostly members of my own ethnic group _____
(3) I have a clear sense of my ethnic background and what it means to me _____
(4) I like meeting and getting to know people from ethnic groups other than my own ____
(5) I think a lot about how my life will be affected by my ethnic group membership ____
(6) I am happy that I am a member of the group I belong to _____
(7) I sometimes feel it would be better if different ethnic groups didn't try to mix together_____
(8) I am not very clear about the role of my ethnicity in my life _____
(9) I often spend time with people from ethnic groups other than my own _____
(10) I really have not spent much time trying to learn more about the culture and history of my ethnic group _____
(11) I have a strong sense of belonging to my own ethnic group _____
(12) I understand pretty well what my ethnic group membership means to me, in terms of how to relate to my own group and other groups _____
(13) In order to learn more about my ethnic background, I have often talked to other people about my ethnic group _____
(14) I have a lot of pride in my ethnic group and its accomplishments _____
(15) I don't try to become friends with people from other ethnic groups _____
(16) I participate in cultural practices of my own group, such as special food, music or customs _____
(17) I am involved in activities with people from other ethnic groups _____
(18) I feel a strong attachment towards my own ethnic group _____
(19) I enjoy being around people from ethnic groups others than my own _____
(20) I feel good about my cultural and ethnic background _____
My father's ethnicity is (from letters above): _____
My mother's ethnicity is (from letters above): _____

(a) Asian, Asian American
(b) Black, African American
(c) Hispanic or Latina
(d) Afro-Caribbean
(e) White, Caucasian, European, not Hispanic
(f) American Indian
(g) Biracial—parents are from different ethnic groups
(h) Other: _____

We predominantly speak _____ in the home.

I am (circle): 1st generation 2nd generation 3rd+ generation

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[i] Intimate partner violence affects women across all intersections of ethnicity, age, education, and sexual orientation. Though a perfect methodological design would therefore include a representative sample of all intersections, research is limited by the availability of funding, time and researcher's practical concerns (such as completing dissertations in a timely manner. Like all studies, this work is limited by these same considerations. It was therefore necessary to choose several groups of interest for exploration. In the end, European American, African American and Hispanic American women were chosen as the focus of the present study. However, after considerable efforts to enroll women of these three ethnic groups, only African American and European American women were consistently enrolled. As a result, research with Hispanic American women is proposed for future study in the discussion section of this thesis.

Before proceeding, however, it is vital to note several precautions in reading and interpreting this work. It is exceedingly important to remember that variations observed across ethnicity necessarily average over variations within ethnicity. Each 'group' discussed in this study is enormously heterogeneous, consisting of individuals from different countries, continents, cultures, regions, and religions. Another precaution is related to the way in which this review is structured. Each section of the review presents data on what is known generally about IPV, PTSD and shattered assumptions/coping/religiosity first and is then followed by what is known about each of these topics in African American women. This may strike the reader as another form of 'othering' where European American women are taken as the norm and African American women are considered 'other' or 'post hoc' to the analysis. It is not intended to imply that what is known about European American IPV survivors be taken as normative. Rather, early research on IPV was commonly conducted with mostly European American women with research on African American (and other ethnic minority women) coming into focus only in the last decade (Root, 2001). Where possible, I have attempted to integrate research across ethnicity within each discussion topic more generally. However, several research studies were comprised of entirely African American women, which seemed to suggest that specific attention be afforded these studies separately from the general discussion.