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by

SARAH E. DUNN

Under the Direction of Gregory Jurkovic, PhD

ABSTRACT

There are elevated rates of childhood maltreatment and posttraumatic stress disorder (PTSD) symptomatology in low-income, abused, suicidal African American women. This investigation aimed to: (1) identify the components of childhood maltreatment in this sample; (2) ascertain whether or not the constructs of childhood maltreatment and PTSD symptomatology were associated in this sample; and (3) examine if maladaptive coping mediated the childhood maltreatment-PTSD symptomatology link and if the magnitude of the mediated relationship was influenced by level of social support (i.e., moderated mediation). Specific types of childhood maltreatment generally loaded onto three components according to a principal components analysis (PCA) of the Childhood Trauma Questionnaire: physical-emotional abuse, sexual-emotional abuse, and neglect. Women who endorsed experiencing higher levels of two of the childhood maltreatment components (physical-emotional abuse and sexual-emotional abuse)

reported higher levels of current PTSD symptomatology. However, contrary to the study hypotheses, current level of maladaptive coping did not mediate the relationship between child maltreatment and current PTSD symptomatology. Further, the addition of social support did not change this finding. Results are discussed, clinical implications are explored, and recommendations for future studies are offered.

INDEX WORDS: Childhood maltreatment, PTSD, Coping, Social support, African American, Suicidal, IPV, Moderated mediation

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CHAPTER I

INTRODUCTION

Childhood maltreatment is a major public health problem in the United States (U.S.) today (Finkelhor, Ormrod, Turner, & Hamby, 2005) and not only has immediate consequences for children, but has significant implications for the emotional and psychosocial well-being of adults traumatized during childhood (Arias, 2004; Briere & Elliott, 1994; Turner, Finkelhor, & Ormrod, 2006; Widom, 1999). Myriad studies have examined, and consistently found that robust relationships exist between childhood maltreatment and negative life events and mental health outcomes in adulthood (Arias, 2004; Zlotnick et al., 1996), with increased levels of childhood maltreatment having been found to be related, among others, to increased rates of adult depression, anxiety, and suicidality (Anderson, Tiro, Price, Bender, & Kaslow, 2002; MacMillan et al., 2001; Meadows & Kaslow, 2002; Reinherz, Paradis, Gioconia, Stashwick, & Fitzmaurice, 2003; Thompson, Kaslow, Bradshaw, & Kingree, 2000; Widom, DuMont, & Czaja, 2007). Additionally, for some individuals, especially those with other comorbid risk factors (e.g. low SES, minority status etc.), childhood maltreatment also been found be related to increased prevalence of posttraumatic stress disorder (PTSD) in adulthood (Koopman, Gore-Felton, Classen, Kim, & Spiegel, 2001; Oddone-Paolucci, Genuis, & Violato, 2001; Widom, 1999). However, little research has been undertaken examining how different forms of childhood maltreatment, either independently or in combination, related to adult PTSD. In addition, research indicates that the link between childhood maltreatment and adult PTSD is not a causal in nature, but is influenced by numerous other internal and external factors (Bradley, Schwartz, & Kaslow, 2005; Cohen & Willis, 1985; Hyman, Gold, & Cott, 2003). However, while studies have been conducted aimed at identifying these contributing variables, very few have examined

the impact of the integration of these factors with regard to the childhood maltreatment-PTSD link (Bradley et al., 2005; Cohen & Willis, 1985; Hyman et al., 2003).

The current study was designed to address the aforementioned gaps in the literature by identifying population specific types of childhood maltreatment and how each, in addition to how to specific factors (social support and coping) may interact with regard to the development and nature of adult PTSD symptomatology. Also, given that the majority of previous studies examining the aforementioned link have focused primarily on middle-class, Caucasian populations, the current study focused solely on low-income, African American women. The focus on these specific population demographics is important, as these individuals are underserved and under researched and have generally been found to have elevated levels of both childhood maltreatment (U.S. Department of Health and Human Services, 2007) and PTSD symptoms (Culver, Arena, Wimberly, Antoni, & Carver, 2004) and also tend to experience more severe forms of intimate partner violence (IPV) (Hampton, Oliver, & Magarian, 2003; Hampton & Gelles, 1994; Kessler, Molnar, Feurer, & Appelbaum, 2001). The use of a sample of women who have experienced both recent IPV and suicidal behavior is valuable because it allows for an examination of PTSD symptom variability in a group of women who have all experienced recent levels of extreme stress. That is, while all participants have experienced similar types of recent stressors, levels of PTSD symptomatology reported may still vary.

The following section will begin with a review of the pertinent literature on childhood maltreatment, including attention paid to the various forms of childhood maltreatment, childhood maltreatment in minority communities, difficulties researching childhood maltreatment, and longitudinal and retrospective methods of assessing childhood maltreatment. This is followed by a discussion of PTSD, which is a common symptom presentation of women who experience

chronic traumatization and those who are survivors of childhood maltreatment. Since all of the women in the sample experienced IPV and made a suicide attempt in the year prior to their participation in the study, the next section briefly reviews IPV and suicidal ideation/behavior. Attention then is paid to one potential mediator (maladaptive coping) and one potential moderator that may influence this mediation (social support), as well as the interplay between coping and social support. The section concludes with a depiction and delineation of the model that guides the research and that is a logical outgrowth of the literature that is reviewed.

Childhood Maltreatment

In 2006, it was estimated that in the United States (U.S.), 905,000 children were victims of childhood maltreatment and in 2008 approximately 1,530 children died as a result of abuse and/or neglect they suffered (U.S. Department of Health and Human Services: Administration on Children, Youth, & Families, 2008). How childhood maltreatment is operationally defined as being influenced by multiple forces within the individual, family, community and culture as a whole (Belsky, 1993). However, although some instance of abuse may be isolated, single events, childhood maltreatment is generally universally viewed as a form of chronic traumatization that is characterized by repeated exposure to traumatic stressors within the same overall context over time (Kaysen, Resick, & Wise, 2003). Within the U.S. alone, definitions of childhood maltreatment vary from state to state, but according to the National Child Abuse and Neglect Data System (NCANDS), these definitions all generally include the intentional or non-accidental harm of a child under the age of 18 as constituted by acts of abuse or neglect (U.S. Department of Health and Human Services, 2007).

Childhood abuse. Abuse generally refers to acts of commission, or an action taken out on a child that is considered aversive and physically and/or psychologically harmful. There are three

primary forms of abuse: sexual, physical, and emotional. Sexual abuse includes sexual contact or attempted sexual contact with a child under the age of 18 by an adult for the purposes of the adult's sexual gratification or financial gain (Cicchetti & Toth, 2005). Physical abuse generally refers to the non-accidental physical injury of a child at the hands of an adult (exceeding what would be regarded as "reasonable discipline"), but depending upon the circumstances, non-intentional harm can also constitute physical abuse. Emotional abuse consists of eliciting psychological distress in a child, by engaging one or more of the following behaviors: rejecting (negating the child's self image through inconsistent behavior/reactions), degrading or devaluing (attacking the child's self esteem though belittling, name calling, or verbal insults), terrorizing (invoking extreme stress in children through the use of threats, harassment or intimidation), isolating (intentionally withdrawing the child from situations that allow for normal socio-emotional development), or corrupting and exploiting (encouraging the child to engage in anti-social behavior) (Briere, 1992).

Childhood neglect. Neglect refers to acts of omission rather than commission, but there is little agreement among professionals as to the specific definitions of child neglect (Black & Dubowitz, 1999; Zuravin, 1991, 1999). However, some behaviors seem to be universally classified as neglect including failure to provide adequate nutrition, clothing, hygiene or shelter; inadequate medical, dental or mental health care; unsafe environments; inadequate supervision; abandonment; or expulsion from the home (Barnett, Manly, & Cicchetti, 1993; Dubowitz et al., 2005; Sedlack & Broadhurst, 1996). Physical neglect includes failing to provide basic material needs for the child such as food, shelter, clothing, or medical care. Emotional neglect is similar to emotional abuse, but whereas emotional abuse involves the offender *engaging* in behaviors that elicits distress, emotional neglect includes *omitting* certain behaviors that the child needs in

order to thrive emotionally. This may include denial of emotional responsiveness or reacting with coldness, unreliable parenting, ignoring, or lack of positive support (Bernstein & Fink, 1998). Of all the different forms childhood maltreatment may take, neglect has generally been found to be the most prevalent type of childhood maltreatment. Overall, more children experience neglect then physical and sexual abuse combined (U.S. Department of Health and Human Services, 2002). In 2008, the types of childhood maltreatment that were reported varied, but neglect accounted for the majority of cases (64%) (U.S. Department of Health and Human Services: Administration on Children et al., 2008). Despite the fact that neglect has a significantly higher incidence rate than abuse, it is the least studied and thus least well understood form of childhood maltreatment (McSherry, 2007). Subsequently, neglected children may be overlooked, often due to the fact that their injuries are not as visible or immediately apparent as those associated with more physical forms of maltreatment.

Childhood maltreatment in minority populations. Despite increasing attention being paid to research with ethnic minority children from 1999-2002 (Miller & Cross, 2006) as compared to 1977-1998 (Behl, Crouch, May, Valente, & Conyngham, 2001), this amount of attention does not accurately represent the number of minority abuse victims in the U.S. population. This fact is of particular concern given that a recent study examining ethnicity in childhood maltreatment victims found that among the almost 500 empirical papers were published from 1999-2002, ethnicity had a significant effect in over half of the articles (Miller & Cross, 2006). This examination further noted that although there is an overrepresentation of African American, low-income, less educated, single parent, families among substantiated cases of childhood maltreatment (Kenny & McEachern, 2000; Levine, Doueck, Freeman, & Compaan, 1996), this population remains particularly underrepresented in research samples (Miller & Cross, 2006)

(Behl et al., 2001; Iwamasa & Smith, 1996; Sue, 1999). The 2006 U.S. Department of Health and Human Services Child Maltreatment Census found that approximately half of the reported victims were Caucasian, but African American children had the highest rates of victimization (19.8 per 1,000 children) (U.S. Department of Health and Human Services: Administration on Children et al., 2008). These rates are significantly higher than those of their Caucasian counterparts (10.7 per 1,000 children). In addition, abuse-related child mortality is significantly higher in African Americans than in individuals from other racial backgrounds (Falcone, Brown, & Garcia, 2007).

The consideration of ethnicity with regard to childhood maltreatment research is one of importance given that a number of childhood maltreatment studies have also found important differences between ethnic groups with regard to variables that may impact how childhood maltreatment impacts individuals in the short and long-term (e.g. demographic information, maltreatment reporting, risk and protective factors, treatment, etc.) (Coohey, 2001; Rodriguez-Srednicki & Twaite, 1999). For example, previous studies suggest that (Rao, Di Clemente, & Ponton, 1992) non-White children evidence more severe symptoms, yet are less likely to be referred to and receive mental health services than their Caucasian peers (Cohen, Deblinger, Mannarino, & de Arellano, 2001).

Difficulties with researching childhood maltreatment. Conducting research in the area of childhood maltreatment, especially in the short-term, is difficult and complicated for a number of reasons. Specifically, although child abuse statistics provided by annual reports compiled from state and national censuses may appear to provide an over view regarding prevalence rates etc., this information is inaccurate due to the fact that it consists only of reported or substantiated cases of childhood maltreatment. Thus, these reports do not reflect the thousands of additional

cases of childhood maltreatment that go unreported and, therefore, do not provide an accurate cross-section of maltreated children in general. It is likely that factors and variables related to maltreated children who are identified as being maltreated, versus maltreated children who are not officially identified as being maltreated, differ in multiple ways. However, examining the potential differences between these two groups of maltreated children at the time the maltreatment is occurring is impossible due to the very fact that studying unreported cases is impossible, or at best, highly unethical.

Additionally, reports related to childhood maltreatment cases often do not reflect the true nature or extent of what the child has experienced. For example, in an immediate context, when a child is identified as being maltreated, s/he is generally classified as having experienced a specific type of maltreatment (e.g. sexual abuse). However, in the face of the reported 'sexual abuse' other comorbid types of maltreatment (e.g. emotional abuse secondary to sexual abuse) may be totally overlooked. Indeed, research suggests that maltreated children generally experience more than one form of abuse and/or neglect; however, suffering more than one form of abuse is very rarely recognized and almost never documented (Kinnard, 1994). With regard to research, strict legal and ethical guidelines limit scientists' access to interacting with such populations, which further hampers the ability to collect specific information and details as to the comorbidity of maltreatment types experienced. Research with adult survivors of childhood maltreatment suggests that a positive relationship exists between the number/types of childhood maltreatment experiences and adult mental wellbeing (Chapman et al., 2004; Dube et al., 2001; Edwards, Holden, Felitti, & Anda, 2003).

Longitudinal methods for researching the impact of childhood maltreatment. With regard to examining the long-term impacts of childhood maltreatment (i.e. adult mental wellbeing),

longitudinal study designs generally have been considered the preferred method. Longitudinal studies have a number of advantages, including the ability to follow the same individuals from childhood through adulthood, the ability to gather data in the moment at discrete time points, the ability to make and test future predictions, and the opportunity to separate out individual effects on the environment versus environmental effects on the individual (Bell & Chapman, 1986; Hardt & Rutter, 2004). However, in addition to being very expensive and time-consuming, longitudinal methods also have a number of disadvantages including high attrition rates biasing the remaining sample and reliance on potentially outdated measures used in childhood (Hardt & Rutter, 2004). However, probably the most notable limitation with regard to longitudinal methods of childhood maltreatment research is that, as mentioned above, the samples selected are heavily biased and include only children officially identified at being maltreated at the time of selection. Also, details related to the nature/extent of the maltreatment are not likely to be reported contemporaneously in childhood.

Retrospective methods for researching the impact of childhood maltreatment. One alternate option for assessing experiences of childhood maltreatment that bypasses many of the limitations associated with longitudinal designs is to employ retrospective methods. Specifically, a particular sample population can be selected based on a specific set of criteria and information regarding maltreatment experiences during childhood are retrospectively recalled and reported by the participant. As with longitudinal designs, retrospective methods have a number of drawbacks, the most notable of which is problems with memory recall resulting in recall biases. This is especially true when attempting to gather information that may be traumatic or distressing in nature, such as experiences of childhood maltreatment as multiple factors may influence the quality of information that is recalled. For example, early memories of childhood maltreatment

may be reinforced or biased though repetition and discussion of what occurred (i.e. due to involvement in treatment) can lead to false positives (Loftus, 1994). Alternately, individuals whose experiences of childhood maltreatment are continuously denied, minimized or invalidated (i.e. by family members) may lead to false negatives. In addition, some research also suggests that what people recall may be influenced by their mood at the time of retrospective reporting (Matt, Vazquez, & Campbell, 1992; McFarland & Buehler, 1998); however, it has also been suggested that this factor may not create as much recall bias as sometimes assumed (Brewin, Andrews, & Gotlib, 1993).

Despite limitations, retrospective methods of collecting information regarding childhood maltreatment experiences has a number of benefits including the opportunity to incorporate individuals with childhood maltreatment histories but who were not officially identified at the time as maltreated children. In addition, retrospective reports also afford the opportunity to obtain information useful in identifying specific individual types of childhood maltreatment and the comorbidity of these experiences. Again, knowing this information is an important factor when studying the long-term impact of childhood maltreatment, due to the fact that research suggests that the number/type of childhood maltreatment experiences impacts adult mental wellbeing (Chapman et al., 2004; Dube et al., 2001; Edwards et al., 2003).

Retrospective information regarding childhood maltreatment is generally obtained through the administration of measures or questionnaire. Although some measures require simple endorsements (e.g. yes/no answers) to the stated questions, more sophisticated measures aimed at assessing the level or severity of maltreatment experienced often require the respondent to answer using a likert scale (e.g. 0 = never 5 = always, etc.). Often, the nature of the questions asked aim to solicit information as to the respondent's experiences regarding the nature of the

maltreatment experienced. Some childhood maltreatment measures categorize content/experience-similar questions together in order to create specific childhood maltreatment factors or components that allow for the examination of each independently of other childhood maltreatment factors/components.

One commonly employed retrospective measure of childhood maltreatment is the Childhood Trauma Questionnaire – Short Form (CTQ), which is comprised of 28 questions (See Appendix H) (Bernstein & Fink, 1998). A number of researchers have examined the factor analytic structure of the CTQ. Bernstein and colleagues reported that a principal component analysis (Varimax) yielded four factors: physical/emotional abuse, emotional neglect, sexual abuse, and physical neglect (Bernstein et al., 1994). A later study conducted with several different populations found five factors: physical abuse, sexual abuse, emotional abuse, physical neglect, and emotional neglect. (Bernstein & Fink, 1998; Scher, Stein, Asmundson, McCreary, & Forde, 2001; Wright et al., 2001). However, although similar childhood maltreatment factors emerged when examined in several different populations, the populations sampled examined were all relatively heterogeneous, and thus, these factors may not generalize to all populations. Subsequently, it is important to ensure that childhood maltreatment factors are sample appropriate, as factor analytic results may differ as a function of the demographic make-up of the population of interest.

Post-Traumatic Stress Disorder (PTSD)

PTSD is characterized by the persistent experiencing of highly disturbing psychological symptoms that occur in reaction to trauma. According to the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV) (American Psychiatric Association, 2000), psychological symptoms associated with PTSD generally fall into three categories: re-

experiencing trauma (e.g. nightmares, flashbacks, or intrusive thoughts), emotional avoidance (e.g. emotional numbing, avoidance of reactive stimuli, emotional numbing), and increased arousal (e.g., hypervigilance, sleep disturbances, poor concentration) (pp. 463-468). It is estimated that approximately 20% of individuals who are exposed to a traumatic event will go on to develop PTSD (Breslau et al., 1998).

In the general population, the prevalence of PTSD ranges from 7.8-12.3% (American Psychiatric Association, 2000; Breslau, Davis, Andreski, & Peterson, 1991; Kessler, Sonnega, Bromet, Hughes, & Nelson, 1995; Resnick, Kilpatrick, Dansky, Saunders, & Best, 1993). Females from low socioeconomic backgrounds are more likely to develop PTSD than are individuals from any other demographic group (Brewin, Andrews, & Valentine, 2000) (Bassuk, Dawson, Perloff, & Weinreb, 2001). The rates of PTSD in non-Whites have been found to be twice as high as those for Caucasian individuals, a finding that appears to be a function of socio-demographic variables including differential rates of trauma exposure (Breslau et al., 1998). Rates of PTSD have been found to be higher among low income, African Americans than the general population, however, this particular population is still thought to be under recognized and under treated. For example, in a sample of individuals seeking non-emergent care in a large urban hospital clinic, 43% of African Americans were found to meet criterion for PTSD, however, only 11% of these individuals carried a chart diagnosis for this disorder (Schwartz, Bradley, Sexton, Sherry, & Ressler, 2005).

PTSD and chronic traumatization. Although the majority of the PTSD literature focuses primarily on individuals exposed to a specific, identifiable, one-time traumatic event, an increasing amount of research has started to examine the long-term impact of multi-time traumatic exposure, also known as chronic traumatization. Research has found that, in comparing

compared to those who have experienced one-time specific traumatic events, individuals exposed to chronic traumatization report higher prevalence of PTSD symptomatology (Herman, 1992). Furthermore, chronic traumatization beginning in childhood and continuing through adulthood has been found to be related to increased rates of adult PTSD symptomatology (Brewin et al., 2000; Herman, 1992; Widom, 1999). Hypotheses regarding the link between chronic traumatization and the subsequent development of PTSD symptomatology suggest that initial childhood traumas, such as childhood maltreatment, may cause significant disruptions in biological, psychological, and social development (Davis & Siegel, 2004). Specifically, according to Pynoos (Pynoos, 1993), experiencing chronic traumatization in childhood results in proximal and distal developmental effects. Proximal effects may include the disruption of newly acquired skills and competencies (e.g. coping skills), whereas distal developmental effects pertain to the future development of personality, cognition, perceptions of danger, emotional regulation, etc. Such disruptions in a child's development may lead to a number of trauma related symptoms, including increased anxiety and hyperarousal, that may leave the individual in a constant state of fear and distress (van der Kolk & McFarlane, 1996). Thus, chronically traumatized children may continuously perceive risk and danger in the environment even in the absence of a specific traumatic event, which reinforces the notion that the environment is an inherently dangerous place (Smith, Smith, & Earp, 1999). Subsequently, in the absence of factors that may foster appropriate development, traumatized children may continue to utilize maladaptive or ineffective cognitive and reasoning skills when interacting within their social environments, increases the likelihood of exposure to subsequent stressors and traumatic events (Pynoos, 1993), and in turn may increase their vulnerability to the development of PTSD.

PTSD and childhood maltreatment. In a longitudinal study examining PTSD prevalence in children, Ackerman and colleagues (Ackerman, Newton, McPherson, Jones, & Dykman, 1998) found that 36% of physically and/or sexually maltreated children went on to develop PTSD. Similarly, in an all-female sample study, 42% of women who experienced childhood physical abuse and 35% of women who experienced childhood sexual abuse met DSM-IV criteria for PTSD, compared to less than 3% of women without a history of sexual or physical abuse (Silverman, Reinherz, & Giaconia, 1996). Other studies of women with childhood sexual abuse histories studies have reported incidence rates regarding the lifetime occurrence of PTSD symptoms as ranging between 33 and 86% (Molnar, Buka, & Kessler, 2001; Polusny & Follette, 1995; Thompson et al., 2003). Physically abused children have been found to be almost twice as likely as non-abused children to develop PTSD as adults (Widom, 1999). Similarly, Duncan and colleagues (Duncan, Saunders, Kilpatrick, Hanson, & Resnick, 1996) found that women who reported a history of child physical abuse were five times more likely to suffer from a lifetime history of PTSD than women without a history of child physical abuse.

It should be noted that while the relation between child sexual and physical abuse and adult PTSD has been extensively studied, little empirical attention has been paid to the link between PTSD and other non-contact forms of chronic maltreatment, such as emotional abuse and physical and emotional neglect. However, emotional abuse, emotional neglect and the experience of living in an emotionally abusive or neglectful environment can be just as, or even more, traumatic than experiencing physical or sexual abuse. Emotional abuse also may significantly affect children's basic perceptions of themselves and others and ability to adapt to in stressful situations in the future (Garbarino, 1986). With regard to neglect, the absence of a responsive and nurturing caregiver can provoke a sense of danger, unpredictability and insecurity

in a child (Cicchetti & Toth, 1995) and early work on neglect suggested that the denial of basic material needs and the omission of emotional responsivity and validation can lead to the development of a chronic state of anxiety (Rutter, 1981). In turn, the experience of chronic anxiety can diminish children's self efficacy and ability to develop adaptive coping strategies to help deal with future stressors, thus, significantly impacting the biopsychosocial processes found to be associated with the development PTSD (De Bellis, 2001; Schore, 2002; van der Kolk & Fisler, 1996). Additionally, the risk factors associated with chronic emotional and physical neglect may lead to the exposure to other types of trauma. In a sample of neglected children, researchers found that 35% had been exposed to IPV in the home (Shepard & Raschick, 1999). Evidence suggests that experiencing more severe forms as well as multiple types of childhood maltreatment is associated with greater trauma related symptomatology and poorer mental health outcomes in adulthood (Clemmons, Walsh, diLillo, & Messman-Moore, 2007; Teicher, Samson, Polcari, & McGreenery, 2006).

Adult Intimate Partner Violence (IPV) and Suicidal Ideation/Behavior

A history of childhood maltreatment may predispose individuals to experiencing future traumas, which in turn, increases their vulnerability to PTSD symptoms and/or the disorder (Arias, 2004; Jones, Hughes, & Unterstaller, 2001; Kimerling, Alvarez, Pavao, Kaminsiki, & Baumrind, 2007; Nishith, Mechanic, & Resick, 2000; Pelcovitz, Kaplan, DeRosa, Mandel, & Salzinger, 2000; Zlotnick et al., 1996). A number of studies have examined, and consistently found, significant findings with regard to childhood maltreatment predicting increased rates of adult IPV and suicidality (Anderson et al., 2002; MacMillan et al., 2001; Meadows & Kaslow, 2002; Reinherz et al., 2003; Thompson et al., 2000; Widom et al., 2007), two traumas that often co-occur with or precede the development of PTSD symtpomatology.

Adult IPV. Among the many negative impact of childhood maltreatment is that of future revictimization (Griffing et al., 2006) and numerous investigations have revealed that individuals abused or neglected during childhood are more likely to experience abusive intimate relationships during adulthood (Desai, Arias, Thompson, & Basile, 2002; Mayall & Gold, 1995; Mesman & Long, 1996; Urquiza & Goodlin-Jones, 1994; White & Widom, 2003; Wyatt, Axelrod, Chin, Carmona, & Loeb, 2000; Wyatt, Guthrie, & Notgrass, 1992). For example, in a study of over 1200 women, individuals who reported experiencing severe physical abuse in childhood were three times more likely to experience IPV in adulthood (Coid et al., 2001). Further, in a study assessing childhood family violence and risk for IPV, women who reported a history of physical abuse were four to six times more likely to experiencing physical IPV (Bensley, Van Eenwyk, & Simmons, 2003). A study of college women found that one of the biggest risk factors for sexual victimization in adulthood was a history of child sexual abuse (Himelein, 1995) and research has found that between 16-72% of individuals who suffered childhood sexual abuse went on to experience revictimization in their adult intimate relationships (Mesman & Long, 1996).

The risk for experiencing IPV in adulthood not only increases in individuals who experienced physical or sexual abuse in childhood, it is also true of persons who report non-physical forms of maltreatment in childhood. Specifically, there is empirical evidence that women who reported witnessing interparental violence in childhood are just as likely as a those who experienced child physical abuse to experience physical IPV in adulthood (Bensley et al., 2003; Tjaden & Thoennes, 2000). However, it should be noted that witnessing interpersonal violence in the home not only greatly increases children's likelihood of being physically abused themselves, but exposure to such violence could also be classed as emotional abuse. Moeller and

colleagues (Moeller, Bachmann, & Moeller, 1993) reported that risk for adult revictimization increases with experiencing more types of maltreatment (e.g. physical, sexual, emotional) in childhood.

Within the African American community, the link between childhood maltreatment and adult IPV has been documented empirically, and some research suggests that minority status in itself may be a primary risk factor with regard to revictimization (Kilpatrick, Acierno, Resnick, Saunders, & Best, 1997). One study found that African American women with higher levels and frequency of nonphysical conflict (verbal/emotional) in their intimate partnerships were more likely to have experienced childhood maltreatment (Wyatt et al., 2000) and in study with African American women who were sexually abused as children, more than 50% reported experiencing adult IPV (West, Williams, & Siegel, 2000).

Suicidal behavior. Suicidal behavior refers to the continuum between suicidal ideation and suicide completions. Research focusing on suicidal behavior in individuals who were maltreated as children has consistently found a correlation between the two with suicidal ideation, attempts, and completions identified as a long-term consequence of childhood maltreatment (Felitti et al., 1998; Johnson et al., 2002; Runyon, Faust, & Orvaschel, 2002). In addition, the amount and/or severity of childhood maltreatment experienced has been found to be positively correlated with suicide attempts in adulthood, especially in African American women (Anderson et al., 2002; Thompson et al., 2000; Young, Twomey, & Kaslow, 2000). Furthermore, women with a history of childhood maltreatment in addition to IPV have been found to evidence significantly higher rates of suicidal ideation and attempts than those without a history of IPV (Classen, Field, Koopman, Nevill-Manning, & Spiegel, 2001; Messman-Moore & Long, 2000).

Moderators and Mediators of the Childhood Maltreatment-PTSD Symptomatology Link

A review of the literature identified several different factors as mediators and/or moderators of the link between childhood maltreatment and negative mental health outcomes and in adulthood. Two of these widely cited factors are coping and social support. Although there is a lack of consistency on whether these two factors act to mediate or to moderate the relationship (Holmbeck, 1997), more often, coping has been conceptualized as a mediator (i.e., a variable that accounts for the relationship) and social support as a moderator (a variable that changes the magnitude of the relationship) of this association.

Coping. Broadly defined, coping refers to relatively stable cognitive and behavioral techniques employed in an order to manage environmental stressors (Moos & Holahan, 2003). Generally speaking, coping involves both relatively stable styles or dispositions that depict an individual's characteristic ways of interacting with their environments in addition to the cognitive and behavioral responses or skills that they utilize to manage stressful encounters (Moos & Holahan, 2003). Coping involves biological, behavioral, cognitive, emotional, and social levels (Pearlin & Schooler, 1978) and the coping strategies that any given individual utilizes depends on situational demands (Folkman, Lazarus, Dunkel-Schetter, DeLongis, & Gruen, 1986).

Some researchers characterize coping as falling into two discrete categories: problem-focused coping and emotion-focused coping (Folkman & Lazarus, 1980, 1985; Folkman & Moskowitz, 2004; Lazarus & Folkman, 1987). Problem-focused coping is directed at modifying the problematic person-environment relationship. This type of coping includes engaging in effective, positive, purposeful, and adaptive, strategies that employ behavioral and cognitive techniques in an effort to actively alter the course of stress (e.g. seeking treatment or utilizing

resources). Conversely, emotion-focused coping refers to passive coping that involves utilizing negative, maladaptive, strategies that employ behavioral and cognitive techniques aimed at reducing emotional stress (e.g. avoidance, & engaging in harmful behaviors) (Carver, Scheier, & Weintraub, 1989; Folkman & Lazarus, 1980; Folkman & Moskowitz, 2004; Moos & Holahan, 2003). More recently, it has been argued that the long-standing and extensively used categorization of coping strategies into problem-focused and emotion-focused could be expanded to include meaning-focused coping (Folkman & Moskowitz, 2004), a process of utilizing values and beliefs to modify the subjective meaning of stressful events, particularly those that are chronic or unavoidable (Park & Folkman, 1997).

Other investigations have conceptualized coping as either adaptive or maladaptive. Maladaptive coping is more often compared to emotion-focused coping and aims to reduce immediate stress, but generally at a cost to later quality of life (Carver et al., 1989). Examples of maladaptive coping include avoidance, venting, denial, and substance use (Dakof & Taylor, 1990; Moos & Schaefer, 1993). However, it should be noted though that although certain approaches are classified as "maladaptive", these strategies may be adaptive for specific individuals or under certain circumstances. Adaptive coping, on the other hand, is similar to problem-focused coping and is designed to manage stress or solve a problem by eliminating or circumventing the stressor. Since it aims to modify the actual terms of the individual's stressful relationship with the environment, it should be associated with a favorable cognitive appraisal and as a result, a more positive response to the stressor. Evidence suggests that in high threat situations, both adaptive and maladaptive coping approaches are often engaged (Rippetoe & Rogers, 1987).

The literature does support the notion that a distinction exists between the effectiveness of each coping style with regard to future adjustment and psychological well-being. For example, in a study of women with early stage breast cancer, poorer adjustment in this sample was associated with specific forms of maladaptive coping including denial and avoidance (Carver et al., 1993). Conversely, the types of coping found to be beneficial with regard to decreased psychological distress included: use of adaptive coping including acceptance, use of humor, and positive reframing (Carver et al., 1993). In addition, in a sample of HIV positive adults, a inverse relation existed between use of maladaptive coping strategies and quality of life (Vosvick et al., 2002). In one study of ethnic minority youth, including African Americans, maladaptive coping was found to be increase the impact of exposure to community violence with regard to the the likelihood of engaging in violent behavior themselves (Brady, Gorman-Smith, Henry, & Tolan, 2008).

Some studies have found that African Americans use more maladaptive coping and/or less adaptive coping than do their Caucasian counterparts in dealing with health problems in themselves or their children (Jordan, Lumley, & Leisen, 1998; Yeates et al., 2002). However, it also has been suggested that, in general, African Americans tend to use both significantly more adaptive and maladaptive coping than do Caucasians, which suggests that they may be exposed to unique, culturally specific stressors that require the utilization of a full range of coping strategies (Plummer & Slane, 1996). African American women tend to use more avoidance strategies and less problem-solving strategies in the face of racism (Utsey, Ponterotto, Reynolds, & Cancelli, 2000). In addition, African Americans in general tend to use more religious-based coping, suggesting that this also may be an important, but often disregarded, form of coping in this population (Culver et al., 2004). Similarly, the lack of such coping, as well as the lack of

other forms of culture-specific (i.e., spiritual and collective coping) is problematic for African Americans from high-risk urban communities, as it is associated with less positive quality of life outcomes (Utsey, Bolden, Lanier, & Williams, 2007).

Due to the developmental disruptions and associated proximal effects of childhood trauma, it has been suggested that individuals with histories of childhood maltreatment may at increased risk for developing more maladaptive coping strategies that may persist into adulthood (Engel et al., 1993; Johnson, Sheahan, & Chard, 2003). Specifically, children who are chronically exposed to traumatic events (such as childhood maltreatment) often utilize maladaptive coping strategies that may initially prove to be adaptive in protecting them from intense emotional distress (e.g. denial and/or avoidance) (Morrow & Smith, 1995). However, if over-used or carried into adulthood, such strategies may become maladaptive. In fact, significant differences exist regarding the coping strategies of abused women who function effectively in society and those whose lives continue to be negatively impacted by the childhood maltreatment (Parker & Lee, 2002). One study with adult survivors of childhood sexual abuse found that those individuals who utilized more maladaptive coping strategies exhibited significantly worse levels of adult psychological functioning than those who utilized more adaptive coping strategies (Binder, McNiel, & Goldstone, 1996).

The utilization of coping strategies is especially salient regarding responses to adult trauma. Specifically, as stated above, in response to trauma, the literature has consistently found that adults who utilize maladaptive coping exhibit poorer mental-health outcomes and increased psychopathology compared to individuals who use more adaptive styles (Clohessy & Ehlers, 1999; Johnson et al., 2003). Furthermore, researchers also have found a link between maladaptive coping and the development of PTSD (Johnson & Kenkel, 1991; Sinclair & Gold,

1997). Avoidant coping styles have been found to be strong predictors of PTSD symptoms in sexual assault survivors (Ullman, Townsend, Filipas, & Starzynski, 2007) and women with histories of childhood sexual abuse who developed PTSD were found to utilize more avoidant-coping, than those who did not develop PTSD (Johnson et al., 2003). Similarly, women with histories of both childhood sexual abuse and adult sexual assault who developed PTSD tended to use maladaptive coping responses including using substances, acting out sexually, withdrawing from people, and self-blaming (Filipas & Ulman, 2006). In a related vein, female survivors of sexual and nonsexual assault who use more wishful thinking and positive distancing are less likely to experience PTSD over time (Valentiner, Foa, Riggs, & Gershuny, 1996).

Previous research regarding the impact of coping on stress and mental health outcomes has examined coping in terms of both a mediator and a moderator (Holmbeck, 1997). Specifically, viewing coping as a moderator poses the question of *when* a given stressor is more strongly related to an outcome and implies that coping interacts with the stressor in such a way as to either increase or decrease the response (Skinner, Edge, Altman, & Sherwood, 2003). For example, in a study examining the role of coping on the relationship between exposure to violence and PTSD symptoms in African American youth, avoidant coping was found to moderate violence such that, when exposure to violence was high and coping was low, PTSD symptoms increased (Dempsey, Overstreet, & Moely, 2000).

Conversely, conceptualizing coping as a mediator poses the question of *how* or *why* a given stressor is related to an outcome and implies that coping acts as a mechanism through which a given stressor impacts a given outcome (Frazier, Tix, & Barron, 2004). For example, when examining the impact of coping styles on the relationship between IPV and women's mental health (distress), the results of numerous statistical analyses did not identify coping as a

significant moderator of this relationship. However, coping was found to completely mediate this relationship, such that, the impact of IPV on distress was dependent on method of coping (Calvete, Corral, & Estevez, 2008).

In their widely acclaimed theoretical model of stress and coping, Lazarus and Folkman focus on the transaction between individuals and their environments and conceptualize stress as the result of how a stressor appraised and dealt with. Therefore, coping is viewed as a central concept in the transitional approach explaining how or why an outcome occurs, and is consistently classed as a mediator (Lazarus & Folkman, 1984; Lazarus, 1990, 1993).

Social support. Social support consists of interpersonal connections and exchanges that individuals perceive as being helpful. It may be conceptualized as the instrumental, financial, and emotional aid that people obtain from their social networks (Berkman, 1984). It refers to the social resources and coping assistance that are provided to individuals prior to, during, or subsequent to a stressful life event (Thoits, 1986). Seven key functions of social relationships have been identified: intimacy, social integration or sense of belonging, opportunity for nurturing behavior, reassurance of worth, assistance, guidance and advice, and access to new contacts and diverse information (Walker, MacBride, & Vachon, 1977; Weiss, 1969). Family members, close friends or confidantes, or other people in one's social network may provide such support (Berkman, 1984). The perception and experience of social support may be influenced by people's general state of psychological well-being (Gore, 1981). Individuals from higher socioeconomic status levels tend to experience more social support than their counterparts from lower social class groups (Turner & Marino, 1994).

Social network support accounts for some of the vulnerability differences between groups of stressed individuals (Ganster & Victor, 1988) and may act as a buffer in highly stressful

situations, by intervening between the stressor and the person's reaction by influencing the individual's cognitive appraisal of the experience (Cohen & Willis, 1985; Tremblay, Hebert, & Piche, 1999). Social relationships and the perception of available social support are associated with health outcomes, as more socially isolated and less socially integrated people are less physically and psychologically healthy (i.e., more distress and more psychological disorders) and more likely to die (Berkman & Syme, 1979; Cohen & Hoberman, 1983; House, Landis, & Umberson, 1988; Mulvaney-Day, Alegria, & Sribney, 2007; Ostberg & Lennartsson, 2007; Turner & Marino, 1994). Persons with high levels of social support use less health care than those with low levels and they have high health-quality and self-efficacy outcomes (Arora, Rutten, Gustafson, Moser, & Hawkins, 2006; Broadhead, Gehlbach, DeGrui, & Kaplan, 1989).

One arena in which the notion of social support has been found to be increasingly important regarding adult mental well-being is in individuals, both youth and adults, with a history of maltreatment in childhood. Many of these investigations have conceptualized social support as a moderator. A number of studies have found that social support buffers the psychological ramification of childhood maltreatment on mental health outcomes (Conte & Schuerman, 1987; Testa, Miller, Downs, & Panek, 1992; Vrancenu, Hobfoll, & Johnson, 2007). One study of co-educational college students who reported a history of either sexual or physical abuse in childhood found that a significant amount of the variance in adult psychological adjustment and well-being in was attributable to social support (Runtz & Schallow, 1997). Another study of females who reported child sexual abuse found that social support significantly buffered PTSD development, accounting for 12% of the variance of PTSD symptomatology prediction (Hyman et al., 2003).

One study with low-income African American women found that social support may partially account for the link between childhood maltreatment and adult IPV (Bender, Cook, & Kaslow, 2003). However, although social support has been found to be a valuable protective factor within the African American community (Li, Nussbaum, & Richards, 2007), a history of childhood maltreatment in low-income, abused, African American women has been linked with lower levels of social support (Bradley et al., 2005).

Within the African American community, low levels of social support are associated with engagement in health risk behaviors (e.g., smoking, drug use, etc.) and this finding is particularly prominent among women (Romano, Bloom, & Syme, 1991). Conversely, higher levels of social support from partners, family members, and friends, reduces strain on African American women (Bailey, Wolfe, & Wolfe, 1996) and is associated with more positive health outcomes (Norbeck, Dejoseph, & Smith, 1996). Specifically, one previous study found that social support serves as a buffer against health problems (e.g., elevated blood pressure) and is associated with more adaptive health behaviors (e.g., cancer screening) and disease management (e.g., diabetes care) among African Americans (Dressler & Bindon, 2000; Ford, Tilley, & McDonald, 1998; Kang, Bloom, & Romano, 1984). High levels of social support are also associated with greater levels of responsiveness and the provision of more stimulating home environments for African American women and their children (Burchinal, Follmer, & Bryant, 1996). However, how social support is depicted by the African American culture may differ from mainstream conceptualizations. Specifically, most African Americans portray their social supports as intangible and informal in nature (Jung & Khalsa, 1988; Petchers & Milligan, 1987; Smerglia, Deimling, & Barnes, 1988). social support from family members appears to have a more powerful buffering effect against negative mental health outcomes (e.g., depression) in African

Americans than Caucasians, whereas the reverse tends to be true for peer support (Jung & Khalsa, 1988).

In women with childhood maltreatment histories, social support has been associated with lower levels of perceived and actual mental and physical health, symptoms of depression, symptoms of anxiety substance abuse, and suicidal ideation and attempts (Coker et al., 2002; Coker, Watkins, Smith, & Brandt, 2003). Moreover, social support has been found to impact the development of PTSD in trauma-exposed individuals (Haden, Scarpa, Jones, & Ollendick, 2007; Johnson & Thompson, 2008) and a meta-analysis of six studies found significant negative relationships between PTSD symptomatology and lack of social support (Brewin et al., 2000). Similarly, one study of victims of violent crime, found that negative (not positive), social responses were associated with PTSD symptoms, particularly in women (Andrews, Brewin, & Rose, 2003). Also, in a sample of veterans who suffered combat stress, social support was found to be the only significant intervening variable in the association between traumatic life events and PTSD symptomatology (Solomon, Mikulincer, & Avitzur, 1988).

Only recently has attention has been paid to the specific mechanism by which social support impacts PTSD development (Guay, Billette, & Marchand, 2006) and research as to whether social support serves to moderate or to mediate the relationship between aversive given predictors and PTSD symptomatology is mixed. Specifically, a number of studies have been conducted regarding the mediating role of social support as far as the outcome of PTSD. One study conducted by Vranceanu examined the relationship between a history of multi-type child maltreatment and PTSD symptomatology in low SES women and found that social support acted as a partial mediator (Vrancenu et al., 2007). But, this sample consisted of equal numbers of Caucasian and African American women but the impact of race was not examined. However,

another study examining the relationship between IPV and PTSD symptomatology in a sample of African American women did not find social support to be a significant mediator (Fowler & Hill, 2004). Regarding social support as a moderator, a set of studies with police officers found that emotional support moderated the link between trauma and PTSD symptoms (Stephens, 1997; Stephens & Long, 1999) Also, in examining the relationship between community victimization and PTSD symptomatology, Scarpa found that PTSD levels were significantly higher at low versus high levels of social support, suggesting that social support acted to strongly moderate this relationship (Scarpa, Haden, & Hurley, 2006). But, again, both of these samples were comprised of both males and females, all who were primarily Caucasian. However, a study conducted with low-income, abused, suicidal African American women examining the link between childhood maltreatment and PTSD failed to identify social support as a significant moderator of the aforementioned relationship (Bradley et al., 2005).

Two different models, the main effect model and the buffering effect model, have been proposed to understand the role of social support on physical and emotional well-being. The main effect model posits that social support may have an influence independent of situations and may be related to well-being since it is associated with positive affect, predictability and stability, and positive self-esteem (Cohen & Willis, 1985). Thus, the main effect model conceptualizes social support as a mediator. The buffering effect model may occur in two different ways in that social support may come between the stressor and the reaction to the stressor by influencing cognition, or social support may decrease the person's reaction to the stressor by helping to create a solution. Specifically, for many, experiencing a single stressor may not be particularly overwhelming; however, individuals who have a history of multiple past

stressors, or who are experiencing chronic ongoing stressors may have a diminished ability to cope adaptively. The buffering effect model conceives of social support as a moderator.

The interplay of coping methods and social support. Coping and social support may actually act in combination to impact a relationship depending on the situation. Specifically, the literature suggests that when taken together, coping tends to serve as a mediator, and social support tends to serve as a moderator – often in such a way as to impact coping. For example, low levels of social support have been thought to foster maladaptive coping in the face of stressful or traumatic events because it does not provide the appropriate environment for the development and utilization of more adaptive coping responses (Lepore, Evans, & Schneider, 1991; Thoits, 1986, 1995). In their international conceptual framework, Moos and Holahan posit that social resources affect the selection and use of coping in response to specific stressful situations and provide information and guidance that aid in assessing threat and in planning coping responses (Moos & Holahan, 2003). A lack of social support has been associated with poor coping (Nolen-Hoeksema, Parker, & Larson, 1994) and one study of individuals with combat-related PTSD, found that more intense symptoms were associated with maladaptive coping styles and insufficient social support (Solomon et al., 1988). With regard to individuals with a history of childhood maltreatment, a study conducted with a sample of college students found that the effects of childhood maltreatment on adjustment in adulthood was predominantly accounted for by social support and coping, with the majority of the variance being due to social support (Runtz & Schallow, 1997). Furthermore, a study conducted with a sample of abused African American females examined the role of social support as a moderator of the association between coping and PTSD. Results revealed that higher levels of maladaptive coping were

associated with higher PTSD symptomatology, but only when social support was low (Kocot & Goodman, 2003).

The interplay between coping and social support is also outlined by Lazarus and Folkman's transactional model. Specifically, although it is posited that coping acts as a mediator, the nature of the coping methods implemented in response to a stressor depends on how the stressor is appraised, which in turn, is influences by other external factors. For example, if an individual feels that s/he possesses adequate resources to cope with a given stressor, the level of stress that is produced as a result of the stressor is likely to be significantly reduced. (Lazarus & Folkman, 1984; Lazarus, 1990, 1993). When considering the transaction model with regard to the interplay between coping and social support, it is then plausible to expect that individuals who feel more supported by their friends, family and significant others (who have higher levels of social support) are more likely to feel better equip to deal with stress, and thus, less likely to employ maladaptive coping strategies.

Summary of the Literature and Current Guiding Model

The aforementioned review of the literature led to the formulation of the model that guides this research. See Figure 1 for a pictorial presentation of the guiding model.

Childhood maltreatment was chosen as the independent variable due to its pervasive impact on both child development and later adult mental health. Research suggests that females who experience childhood maltreatment are at a significantly higher risk of chronic traumatization in the form of experiencing future negative events, including IPV and suicidal behavior (attempts and associated suicidal ideation). Therefore, women who have experienced all three traumas (childhood maltreatment, IPV, and suicidal behavior (attempts and associated ideation) may be considered to be an extra vulnerable population with regard to negative mental

health outcomes, such as PTSD symptomatology. Subsequently, current level of PTSD symptomatology was selected as the dependent variable. While the link between childhood maltreatment and PTSD symptomatology has been found consistently, recent research has suggested that this association may be dependent upon other factors that serve to mediate and/or moderate the relationship.

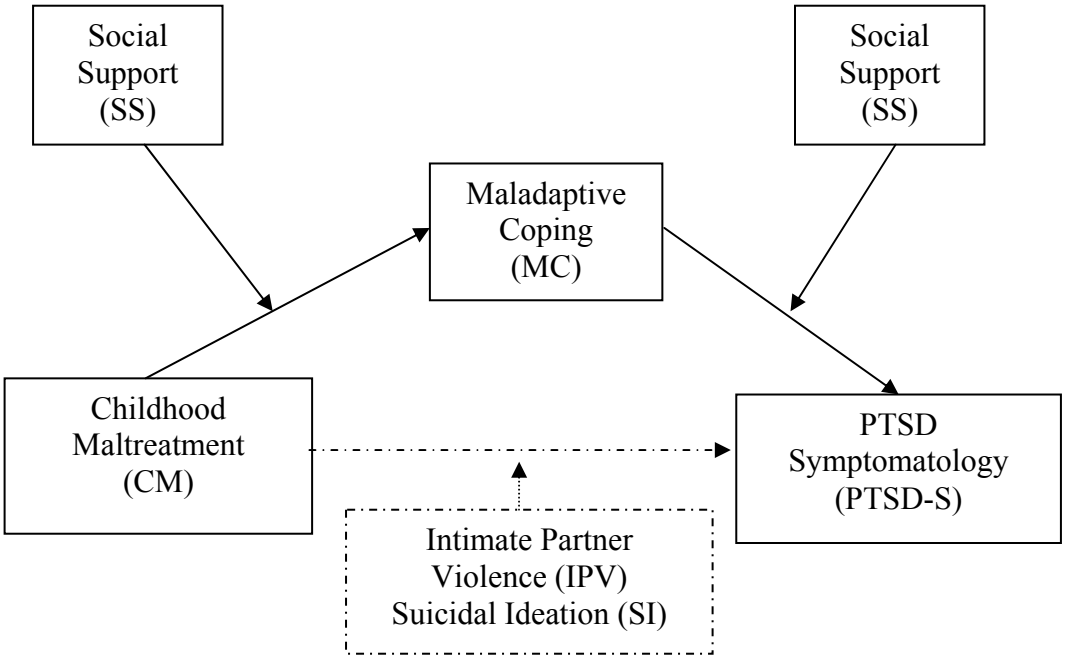

Figure 1: *Guiding Model*

In this model, among a sample of low-income, recently abused and suicidal African American women, coping is seen as a mechanism for change (i.e., mediator). That is, higher levels of childhood maltreatment are posited to lead to higher levels of maladaptive coping, which in turn is expected to lead to higher levels of adult PTSD symptomatology. Thus, maladaptive coping was chosen as a potential mediator of the link between childhood maltreatment and PTSD symptomatology. This determination is consistent with the transactional model of coping, which suggests that the impact of traumatic or stressful events is mediated by

individuals' appraisals of the stressor and subsequent coping responses (Folkman & Moskowitz, 2004; Lazarus, 1999).

Social support in the context of the current study is best described by the buffering effect model and thus was conceptualized as a moderator. However, the moderating effect of social support was considered pertinent only in combination with the mediation of maladaptive coping on the childhood maltreatment-PTSD symptomatology link. In other words, it was posited that coping and social support would not act independently of one another, but rather act together as a mechanism in explaining the childhood maltreatment-PTSD symptomatology link. That is, in individuals with a history of childhood maltreatment, low levels of social support may increase their propensity to utilize maladaptive coping strategies. Further, when maladaptive coping levels are high, social support is less likely to act as a buffer with regard to the development of PTSD symptomatology. In simple terms, social support is thought to interact with childhood maltreatment and maladaptive coping, as well as between maladaptive coping and PTSD symptomatology.

Finally, in the current model, IPV and suicidal behavior (the ideation associated with attempts) are considered to be factors related to experiencing childhood maltreatment, but are not conceptualized as being directly, independently related to the development of PTSD symptomatology. Therefore, although both IPV and suicidal ideation may account for some of the variance in the childhood maltreatment-PTSD symptomatology link, neither were primary variables of interest and thus were considered to be extraneous variables to be statistically controlled.

Study Purpose, Aims, Hypotheses and Significance

As articulated above, the overarching purpose of the current study was to examine the relationship between childhood maltreatment and current PTSD symptomatology, and the interplay of coping and social support with regard to the impact on this relationship in a sample of low-income, abused, suicidal African American women.

The current study had three specific aims and associated hypotheses. The first specific aim was to examine the specific factor structure of the CTQ, a retrospective self-report measure used to collect information regarding childhood maltreatment in the current study sample population. Multiple different types of childhood maltreatment exist and the literature suggests that the impact on adult mental health may be partially dependent upon the specific type of childhood maltreatment experienced, thus, using a total childhood maltreatment score was not considered appropriate. The CTQ often has been found to yield five distinct factors, each related to a different type of maltreatment (sexual abuse, physical abuse, emotional abuse, emotional neglect and physical neglect). However, these factors were obtained when conducting research with demographically heterogeneous populations and thus it was important to ascertain the factor structure for this measure in this more homogeneous sample with regard to gender, race, and social class. It was hypothesized that, consistent with previous findings, several discrete childhood maltreatment types would emerge from the overall childhood maltreatment data. However, given previous factor structures were based on more diverse samples than that incorporated in the current study, it was predicted that the exact nature of individual childhood maltreatment factors may differ from the normative samples.

The second specific aim was to examine the relation between each of the discrete childhood maltreatment factors retained through the aforementioned factor analysis and the level

of current PTSD symptomatology, while controlling for recent level of IPV and suicidal ideation. It was hypothesized that participants who endorsed higher levels of each of the childhood maltreatment factors would be more likely to report higher levels of current PTSD symptomatology, even after controlling for levels of IPV and suicidal ideation.

The third specific aim was first to determine if maladaptive coping acted as a mediator of the childhood maltreatment-PTSD symptomatology link, and then, if maladaptive coping interacted with social support in such a way as to impact the relation between childhood maltreatment and current PTSD symptomatology. First, it was predicted that maladaptive coping would mediate the previously hypothesized childhood maltreatment-PTSD, such that utilization of maladaptive coping strategies was believed to underlie this relationship as a causal factor. Second, it was further hypothesized that the strength of the mediating effect of maladaptive coping on the childhood maltreatment – PTSD symptom link would depend on level of social support. Therefore, it was believed that social support would moderate the indirect effect of childhood maltreatment on PTSD symptomatology through maladaptive coping. Figure 2 provides a graphical representation of the hypothesized moderated mediation, such that, high levels of childhood maltreatment cause individuals to develop and/or utilize more maladaptive coping strategies, and high levels of maladaptive coping cause individuals to experience higher levels of PTSD symptomatology in adulthood. Additionally, the magnitude of this relationship was expected to be greater when social support was low.

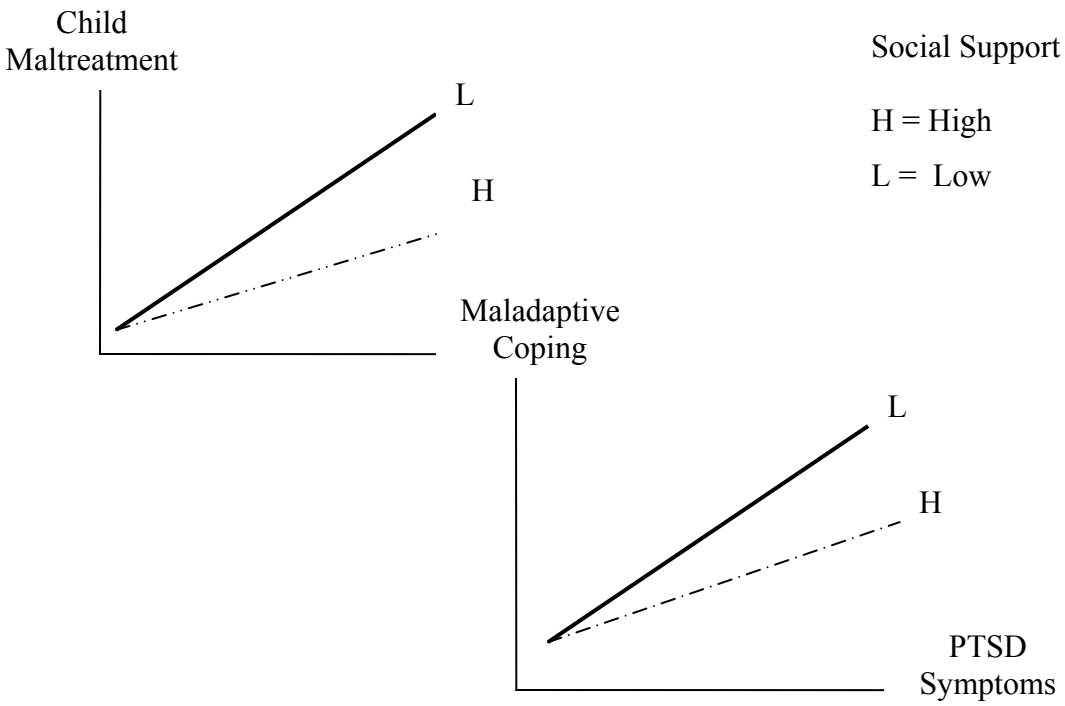

Figure 2: *Hypothesized Moderated-Mediation Outcomes*

The current study extends our current knowledge base in the following ways. First, this study is novel in focusing on the childhood maltreatment-PTSD symptomatology link in a sample of women all of whom have been traumatized during adulthood by virtue of having been in a relationship characterized by IPV and attempting suicide within the year prior to study participation. Second, the present investigation underscores the importance of examining the impact of different types of childhood maltreatment with regard to the development of PTSD symptomatology, rather than conceptualizing childhood maltreatment as a single factor that minimizes the unique contribution of each of its subtypes and their interplay. Third, this is the first empirical examination of the interrelations among childhood maltreatment, coping, social support, and PTSD symptomatology in low-income, African American women - a historically under-researched, high-risk, and underserved population. Finally, and in a related vein, although empirical attention has been paid to both the role of coping and social support in understanding

the impact of childhood trauma and the development of PTSD symptomatology, few if any investigations have focused on how these variables may interact to influence the development of psychopathology.

CHAPTER II

METHOD

The current research was conducted after approval was obtained from the Emory University Institutional Review Board and the Grady Health System (GHS) Research Oversight Committee. The project was funded by a grant from the Centers for Disease Control and Prevention entitled *Preventing Suicidal Behavior in Abused Black Women* that was awarded to Nadine J. Kaslow, Ph.D., ABPP, Principal Investigator of the Grady Nia Project. The project described below is a subproject of this parent study.

Sample

The current sample comprised entirely of 173 low-income, African American females between the ages of 18 and 64 (M = 34.77, SD = 9.38) who sought treatment at a large urban university affiliated public hospital for either medical or psychiatric reasons. All participants reported attempting suicide within the prior year and also reported being in an abusive intimate partner relationship, either currently or during the prior year. The sample characterized as predominantly low SES, with the majority of participants being unemployed (85%) and receiving less than $500 per month in income (72%). Fifty five percent classify themselves as homeless (living on the street, staying in a shelter, of temporarily staying with family/friends). All 173 (100%) of the women in the current sample reported experiencing some degree of childhood maltreatment (see Table 1).

Table 1: *Frequency of Primary Demographic Characteristics of the Current Sample.*

Total N = 173	N	%
Marital Status		
Single	53	30.6
Partner (not living together)	19	11.0
Living with partner	36	20.8
Married	14	8.1
Divorced/separated	47	27.2
Widowed	4	2.3
Children		
Yes	141	81.5
No	31	17.9
Homeless		
Yes	94	54.3
No	79	45.7
Employment		
Employed	25	14.5
Not employed	147	85.0
Education		
Less than 12th grade	67	38.7
High school diploma/GED	60	34.7
Some college/tech diploma	39	22.5
College graduate	7	4.0
Monthly Income		
Individual income < $500	121	70.8
Household income < $1000	74	46.5
Child maltreatment history		
Yes	173	100
No	0	0

Women were excluded from the study if they evidenced significant intellectual or cognitive impairment, or if they were unable to complete the assessment battery due to active severe psychotic illness or substance induced psychosis/impairment.

Procedure

Recruitment. Participants were recruited in two ways. First, African American women ages 18-64 who presented to the hospital's emergency care center or psychiatric emergency center following a suicide attempt (requiring medical attention and/or reporting significant

suicidal intent) or an IPV incident were eligible to be screened and recruited for study participation. The Principal Investigator and other designated research personnel were contacted by pager 24 hours/day, 7 days/week by hospital personnel regarding all potentially eligible participants. Women were considered appropriate for recruitment once they were medically stable. Then, they were approached by a research team member (undergraduate or graduate student, predoctoral intern, postdoctoral fellow) who explained the purpose of the study and answered questions.

Second, women were recruited by research assistants from other medical and psychiatric clinics in the hospital (e.g., family planning clinic, women's urgent care center, urgent care clinic, etc.). Specifically, a research team member was available three hours per day to screen every woman who presents to one of these clinics to explain the purpose of the study, answer questions. The day and shift time rotated to ensure that a representative sample of women who seek services at GHS were recruited.

Screening. Once written informed consent was obtained, a brief screening was conducted at the recruitment site to assess women's suitability for the study. Potential participants were administered a series of questions regarding their experiences of IPV and suicidal behavior over the course of the preceding 12-month period (see Appendix A for Screening Form). The screening form questions related to IPV were drawn from the five-item Universal Violence Prevention Screening Protocol (UVPSP) (Dutton, Mitchell, & Haywood, 1996), which has good construct and predictive validity and sensitivity (Heron, Thompson, Jackson, & Kaslow, 2003). The screening questionnaire included five questions related to suicidal behavior that were developed for the parent study. To qualify for the study, participants needed to answer in the affirmative to one of the five questions regarding the presence of physical or nonphysical IPV at

the hands of a partner at any time over the course of the last year. For the purpose of these screening questions, partner was defined as a person (male or female) with whom the women were dating, living with, or to whom they were in a committed relationship with. Additionally, each woman also must have endorsed making a suicide attempt during the last year. Women who did not meet study criteria were provided with information regarding community resources and support groups (as applicable), and were thanked for their time.

Assessments. Women who met inclusion criterion either were assessed immediately or scheduled for an assessment at a subsequent point in time within one week of the screening. These assessments were conducted by research assistants, all of whom underwent structured training regarding the administration of the assessment battery, and attended weekly group supervision meetings. Each assessment took approximately 2 - 3 hours to complete and was administered in privacy on the units, in the clinics, or in the study research office. The battery consisted of 29 measures. Each participant was provided rating scales that were both written (i.e. 1 = a little, 4 = a lot) and symbolically represented (i.e. * = a little, **** = a lot) to use when answering questions. Upon completion of the assessment battery, each participant received $20 and roundtrip fare for use on the city transit system. If at any time woman was identified as imminently suicidal, homicidal, severely depressed, or as having other acute psychiatric difficulties (e.g., psychotic symptoms) during any stage of the assessment, she was immediately referred to the Psychiatric Emergency Service for appropriate psychiatric intervention (e.g., evaluation, hospitalization, medication, psychotherapy referral). Given the aims of the larger, parent study, participants were assessed at four specific time periods over the course of a year. However, for the purpose of the current study, only data collected during the first assessment, aimed at gathering baseline data, will be utilized.

At the outset of the first assessment, some additional screening occurred. Specifically, women were asked a series of questions regarding their current level of psychotic symptoms using the Psychotic Screen developed for this project (Appendix B). Women who were acutely psychotic were not included in the protocol. Participants were also administered measures aimed at assessing mental status and literacy level using the Mini Mental State Exam (MMSE) (Appendix C) (Folstein, Folstein, McHugh, & Fanjiang, 2001) and the Rapid Estimate of Adult Literacy in Medicine (REALM) (Appendix D) (Williams et al., 1995).Women were excluded if they obtained MMSE scores $\leq$ 21/30 if literate (REALM > 18) or $\leq$ 23/30 if functionally illiterate (REALM $\leq$ 18), as such scores indicate diffuse cognitive dysfunction. Women excluded in this phase of the assessment were not paid but were provided with appropriate referrals and their transportation costs were covered.

Those women who remained in the project after this phase received a comprehensive assessment that consisted of a number of questionnaires aimed at examining individual parameters, past and current stressors, coping mechanisms, social support, and adjustment. Due to the overall low rates of functional literacy in patients who receive services at Grady Health System (Williams et al., 1995), the consent form and all measures were modified to match the overall literacy level of these individuals and each of the questionnaire was read aloud to the women.

Measures

Although 29 self-report questionnaires were administered during the 1st assessment, only those measures pertinent to testing the model that undergirds the current research study are described below.

Demographic Data Questionnaire. This tool was developed for use in previous Grady Nia Project Studies. This in-depth form includes questions about demographics (age, sex, education, religion, socioeconomic status); family composition (presence of dependent children, marital status, sex of partner); living situation (including if the individual is homeless); and personal and family psychiatric, medical, and substance abuse history (Appendix E).

Childhood Trauma Questionnaire – Short Form (CTQ) (Bernstein & Fink, 1998). The CTQ was chosen to measure the construct of childhood maltreatment, the independent variable in the model. It is a 28-item retrospective self-report measure of the level of childhood maltreatment. Items for the measure were constructed based on a review of the childhood maltreatment literature. It has been validated in over 1000 individuals, in both clinical and community samples (Bernstein et al., 1994; Scher et al., 2001). Respondents provide answers regarding their "experiences growing up as a child and a teenager" using a 5-point Likert scale 1 (never true) to 5 (very often true) (Appendix H). Five independent factors of childhood maltreatment have been found in prior studies: sexual abuse, physical abuse, emotional abuse, physical neglect and emotional neglect.

Reported internal consistency reliability estimates for the CTQ range from a median of .66 to a median of .92 across a range of samples (Scher et al., 2001). The measure also has good test-retest reliability, with values ranging from .79-86 over a four month period, suggesting that the CTQ is not likely to be influenced by reporting biases associated with shifts in mood or level of psychological distress (Bernstein & Fink, 1998; Bernstein et al., 1994).

With regard to validity, the content validity of the CTQ compared to other measures of childhood maltreatment is improved by assessing all five domains of maltreatment (Briere & Runtz, 1988a). Additionally, the CTQ has good concurrent validity as indicated by high

correlations between CTQ scores and clinician and therapist assessments of childhood maltreatment (Bernstein, Ahluvalia, Pogge, & Handelsman, 1997; Bernstein & Fink, 1998; Bernstein et al., 1994; Fink, Bernstein, Handelsman, Foote, & Lovejoy, 1995). Furthermore, it has strong convergent and discriminant validity with adult clinical interviews of childhood trauma (Bernstein et al., 1994). While the aforementioned studies provide validity data from the CTQ, a retrospective self-report measure with other retrospective ratings, one investigation with psychiatrically hospitalized adolescents also provided support for the scale with non-retrospective reports of childhood maltreatment (Bernstein et al., 1997). Specifically, this study also gathered structured interview data with the adolescents and their relatives and with referring clinicians and agencies and found using logistic regression analyses comparing CTQ factor scores with therapist ratings good convergent and discriminant validity for the measure. Of note, the kappas for the inter-rater reliability for the clinical interview data between clinician raters were extremely high ($\geq .90$). Finally, in terms of validity, the measure also has high sensitivity and specificity (Bernstein et al., 1997; Bernstein et al., 1994).

Davidson Trauma Scale (DTS) (Davidson, 2003; Davidson et al., 1997). The construct of PTSD symptomatology, which is the dependent variable in the model, was measured using the DTS. The DTS is a 17-item self-report measure that assesses both the severity and frequency of PTSD symptomatology experienced over the course of the previous week. It takes less than 10 minutes to administer (Appendix I). The symptoms listed are comprised of those consistent with the diagnostic criteria for the diagnosis of PTSD as defined by the Diagnostic and Statistical Manual of Mental Disorders (American Psychiatric Association, 2000). Items 1-4 and 17 relate to criterion B, intrusive re-experiencing. Items 5-11 related to criterion C, avoidance and numbness. Items 12-16 related to Criterion D, hyperarousal (Chen, Lin, Tang, Shen, & Lu,

2001). Respondents are asked to identify the most distressing traumatic event that they have experienced in the last year. Then, in response to the identified event, using a five point Likert scale they are asked to rate the frequency; 0 (not at all) to 4 (every day), and the severity; 0 = (not at all distressing) to 4 (extremely distressing) of their symptoms during the previous week. Subscale scores for frequency and severity may be computed separately and each subscale score can range from 0-68. In addition, there is a total score that can be computed and it can range from 0-136.

In a sample of individuals who had experienced myriad forms of trauma (e.g., rape, combat, natural disaster, etc.), internal consistency reliability was .97 for the frequency subscale, .98 for the severity subscale, and .99 for the total score (Davidson, 2003; Davidson et al., 1997). In a sample of women who had experienced childhood trauma, α's were .85 for re-experiencing, .83 for avoidance, and .87 for arousal using total scores (Zlotnick et al., 1996). In the Grady Nia sample, the severity, frequency, and total scales have shown strong internal consistency reliabilities, α's = .79, .89, and .90, respectively. The test-retest reliability of the measure with a sample of females and males who had experienced a variety of traumas was .86 for the total score over a two week time period (Davidson, 1997).

There is also good support for the validity of the DTS. The concurrent validity of the measure has been examined with the Structured Clinical Interview for DSM-III-R (SCID) (Spitzer, Williams, Gibbon, & First, 1992). As predicted, DTS scores were significantly higher for individuals meeting SCID diagnostic criterion for PTSD relative to those who did not ($p <$ .0001) (Davidson, 1997). The measure also has adequate convergent validity when examined against the Clinician Administered PTSD Scale (CAPS) (Blake, 1990), Impact of Events Scale (IES) (Horowitz, 1979), and Dissociative Experiences Scale (Bernstein & Putnman, 1986), with

correlations between .53 and .78 (Davidson, 1997; Zlotnick et al., 1996). Further, the predictive validity of the DTS has been shown with regard to the Clinical Global Impressions (CGI) Improvement Scale (Guy, 1976). The DTS also has been demonstrated to be sensitive to treatment effects in a number of studies (Davidson et al., 1997; Davidson, Pearlstein et al., 2001; Davidson, Rothbaum, van der Kolk, Sikes, & Farfel, 2001). Effect sizes with the DTS has been found to be equal to or better than those with other common measure of PTSD, including the IES, CAPS, and Structured Interview for PTSD (Davidson, Tharwani, & Connor, 2002).

In the current study, the total score was used as the measure of PTSD symptomatology. This is consistent with the good internal consistency reliability and test-retest reliability of the total score, as well as the concurrent validity of the total score with a structured diagnostic interview diagnosis of PTSD (Davidson et al., 1997) . The use of only the total score also helped to streamline the data.

Index of Spouse Abuse (ISA) (Hudson & McIntosh, 1981). The construct of IPV, which served as a covariate in the model, that was controlled for statistically, was assessed via the ISA. The 30 item ISA assesses presence and severity of physical and nonphysical IPV on a 5-point scale. It has good internal consistency reliability, discriminant, content, and construct validity (Campbell, Campbell, King, Parker, & Ryan, 1994; Campbell, 1994; Hudson & McIntosh, 1981; McFarlane, Parker, Soeken, & Bullock, 1992). Along with other investigators, (Campbell et al., 1994), the Grady Nia Project has found the ISA to be reliable and valid with African Americans (Cook, Conrad, Bender, & Kaslow, 2003) (α = .91 for ISA-P and .89 for ISA-NP in the current sample). The women completed the ISA based on their current or most recent partner. The ISA, which served as a control variable for IPV in this study, can be found in Appendix F.

Beck Scale for Suicidal Ideation (BSS) (Beck, Kovacs, & Weissman, 1979; Beck & Steer, 1991). The construct of suicidal behavior, the other covariate in the model, was assessed using a measure of suicidal ideation, namely the BSS. Although one inclusion criterion for the study was a suicide attempt in the past year, since all participants had made an attempt and it is a dichotomous variable, suicide attempt was not the appropriate indicator of suicidal behavior. Rather, suicidal ideation appeared to be a more appropriate indicator, as it is a continuous variable that can be assessed using a psychometrically sound measure. The 19 item BSS gathers data on attitudes, behaviors, and plans to commit suicide on a 3 point scale. Scores range from 0-38. It has excellent inter-rater reliability, moderately high internal consistency reliability ($\alpha = .86$ in the current sample), and good validity (concurrent, discriminant, predictive). The BSS, which served as a control variable for suicidal ideation in this study, can be found in Appendix G.

Brief COPE (B-COPE) (Carver, 1997). The construct of maladaptive coping, the hypothesized mediator in the model, was assessed via a subscale of the B-COPE. The B-COPE is a self-report scale of maladaptive and adaptive skills that has 28 items (Appendix J). It has been translated into multiple languages (Muller & Spitz, 2003). It was developed based on concepts of coping from Lazarus and Folkman's transactional model of stress (Lazarus & Folkman, 1984) and the behavioral self-regulation model of Carver and colleagues (Carver & Scheier, 1981, 1998). This measure is designed to ascertain what extent or how often, in general, the respondent uses particular coping strategies. Respondents answer using a four-point Likert scale; 1 (I haven't been doing this at all) to 4 (I've been doing this a lot). It is derived from the 60 item full COPE scale (Carver et al., 1989). It eliminates two scales from the full COPE that appeared redundant and lacking in value, reduces each scale to the two items that appeared to have the

highest factor loadings and that were the most grammatically clear and understandable, and adds one scale (Carver, 1997).

The B-COPE yields two primary subscales: The maladaptive coping subscale is comprised of the following items: self-distraction, denial, substance use, behavioral disengagement, self-blame, and venting. The adaptive coping subscale is comprised of the following items: active coping, use of emotional support, use of instrumental support, positive reframing, planning, humor, acceptance, and religion. The maladaptive coping scales tend to be associated with undesirable outcomes, whereas the reverse is true for adaptive coping scales (Carver et al., 1993). Given that the current study aimed to examine coping strategies related to an undesirable outcome (i.e., PTSD symptomatology), only the maladaptive coping scale was used in testing coping as the hypothesized mediator.

Data from other samples has yielded internal consistency coefficients ranging from .50-.90 and test-retest reliabilities ranging from .46-.86, suggesting that the measure has adequate reliability (Carver, 1997; Carver et al., 1989). In the current sample, the internal consistency reliability for the maladaptive coping scale was .85, suggesting good internal consistency reliability. Coping styles as assessed by this measure vary based upon personality style (normal, anxious, eccentric) and gender (Deisinger, Cassisi, & Whitaker, 2003), providing convergent validity support for the measure. The measure correlates in the predicted direction with medication adherence in psychiatric patients (Greenhouse, Meyer, & Johnson, 2000; Meyer, 2001) and responses to a national tragedy (i.e., September 11) (Silver, Holman, McIntosh, Poulin, & Gil-Rivas, 2002), suggesting the predictive validity of the scale.

Multidimensional Scale of Perceived Social Support (MSPSS) (Zimet, Dahlem, Zimet, & Farley, 1988). The MSPSS was used to assess the hypothesized moderator that would interact with the proposed mediator in the model that guides the research. This 12-item self-report inventory assesses the current level of social support adequacy received from family, friends or significant others, as perceived by the respondent. Respondents provide answers using a 5-point Likert scale on how strongly they agree/disagree with each statement; 1 (very strongly disagree) to 5 (very strongly agree) (Appendix K). The scale has been used cross-culturally (Eker & Arker, 1995).

The MSPSS has good internal consistency reliability (Dahlem, Zimet, & Walker, 1991; Zimet, Powell, Farley, Werkman, & Berkoff, 1990), which has been found to be true in multiple populations (Canty-Mitchell & Zimet, 2000; Cecil, Stanley, Carrion, & Swann, 1995; Kazarian & McCabe, 1991; Zimet et al., 1990). In the original article describing the measure, the internal consistency reliability for the overall measure was .88, and alphas were .91 for significant other, .87 for family, and .85 for friends. In a confirmation study with a moderately sized sample, internal consistency reliability was high for the total scale ($\alpha = .91$), as well as for all three subscales (α's > .90) (Dahlem et al., 1991). In a study with pregnant women, adolescents, and pediatric residents, the coefficient alphas ranged from .84-.92 for the scale as a whole, from .81-.90 for the Family subscale, from .90-.94 for the Friend subscale, and from .83-.98 for the Significant Other subscale (Zimet et al., 1990). For the Grady Nia sample, the Cronbach's alpha for the total scale was .89, indicating strong internal consistency reliability for the measure. In addition, the subscales have good internal consistency reliability in the Grady Nia sample, ranging between .86-.94 (Bradley et al., 2005). The internal consistency reliability of this measure is comparable for psychiatric and non-psychiatric patients (Cecil et al., 1995).

The MSPSS also has good test-retest reliability. Specifically, over a 2-3 month time period, the test-retest reliabilities were .72, .85, .75, and .85 for the significant other, family, and friends subscales and the total scale respectively (Zimet et al., 1988).

The MSPSS has good factorial subscale validity (family, friends and significant others) (Dahlem et al., 1991; Zimet et al., 1990). A principal component analysis that identified three factors, revealed that combining these factors (i.e., subscales) accounted for 84% of the variance and indicated that items loaded very strongly on their designated subscales, with minimal cross-loading (Dahlem et al., 1991). This three-factor model has been found across multiple studies (Canty-Mitchell & Zimet, 2000; Cecil et al., 1995; Kazarian & McCabe, 1991). The measure's subscales also has been found to have good construct validity (Zimet et al., 1988; Zimet et al., 1990). Some evidence for the discriminant validity of the family subscale of the MSPSS has been found with other measures of family functioning in urban adolescents, many of whom were African American (Canty-Mitchell & Zimet, 2000). None of the measures subscales have been found to correlate with social desirability (Kazarian & McCabe, 1991).

Despite the presence and utility of three factors of the MSPSS, in the current study, for purposes of parsimony and simplicity, the total MSPSS score was used to measure level social support. The reliability and validity of the total score supports its use as an overall measure of perceived social support.

CHAPTER III

RESULTS

All statistical procedures were performed using the Statistical Package for the Social Sciences (SPSS) Version 17. Thirty-five of the initial 208 cases were deleted due to missing data pertaining to the primary variables of interest, resulting in a final sample of 173 women. The

decision was made to delete the cases versus impute data because the validity of the rest of the data obtained for these cases was questionable due to evidence of multiple outliers and unusual response patterns indicative of careless or inconsistent responding. For reasons of parsimony and simplicity, the raw data for the dependent variable (DTS: PTSD symptomatology), moderating variable (MSPSS: social support) and mediating variable (B-COPE: maladaptive coping) were examined and summary scores were computed. Total scores on the DTS (severity + frequency) and on the MSPSS (friends + family + significant other) were computed for use as measures of levels of current PTSD symptomatology and perceived social support, respectively. Given that the current study aimed to focus on the impact of maladaptive coping as a mediator, only the B-COPE total maladaptive coping score was computed. All variables, with the exception of PTSD symptomatology, were centered by subtracting the mean score from each data point to aid with interpretability and guard against multicollinearity. Exploratory analyses confirmed that the data did not violate the required assumptions of normality, linearity and homoscedasticity. All variables were continuous in nature.

Specific Aim 1

To ascertain the factor structure of the CTQ, a principal components analysis (PCA) was chosen. This method was selected due to the fact that the goal was not to identify theoretical underlying latent variables, but to reduce the data as much as possible and, by using the total variance to obtain a simple empirical summary for use in the main analyses. Before conducting the PCA, the data were assessed regarding suitability for this analysis. Consistent with recommendations from Tabachnick and Fidel (Tabachnick & Fidel, 2007), the sample size exceeded the minimum participant to variable ratio of five-to-one and examination of the correlation matrix evidenced many coefficients equal to or greater than .3. The Kaiser-Meyer-

Oklin value was .88, which exceeds the recommended value of .6 (Kaiser, 1970, 1974), and the Bartlett's Test of Sphericity (Bartlett, 1954) was statistically significant (p <0.1). These findings support the factorability of the correlation matrix.

Results of the PCA initially identified six components with eigenvalues exceeding 1, each of which explained 34.2%, 8.8%, 7.2%, 6.4%, 4.8% and 4.2% of the variance respectively. However, examination of the eigenvalues screeplot shows a clear break in the data between the fourth and fifth components (see Figure 3), suggesting that Components 1 through 4 captured much more of the variance then the remaining two components. This was further supported by the results of a Parallel Analysis (Watkins, 2000), which compared the current data to a randomly generated data matrix of the same size (28 variables x 173 participants) and found that only four of the eigenvalues exceeded generated criterion (see Table 2). Subsequently a four-component solution was initially retained.

The four-component solution accounted for a total of 56.64% of the variance, with Component 1 contributing 34.23%, Component 2 contributing 8.80%, Component 3 contributing 7.23% and Component 4 contributing to 6.84%. Oblimin rotation with Kaiser Normalization was performed and revealed a simple structure (Thurstone, 1947), with all four components showing a number of strong loadings. Twenty-three of the 28 variables loaded primarily under one of the four components, the remaining five variables loaded under two separate components, but each was assigned to a single component based on where they each loaded highest.

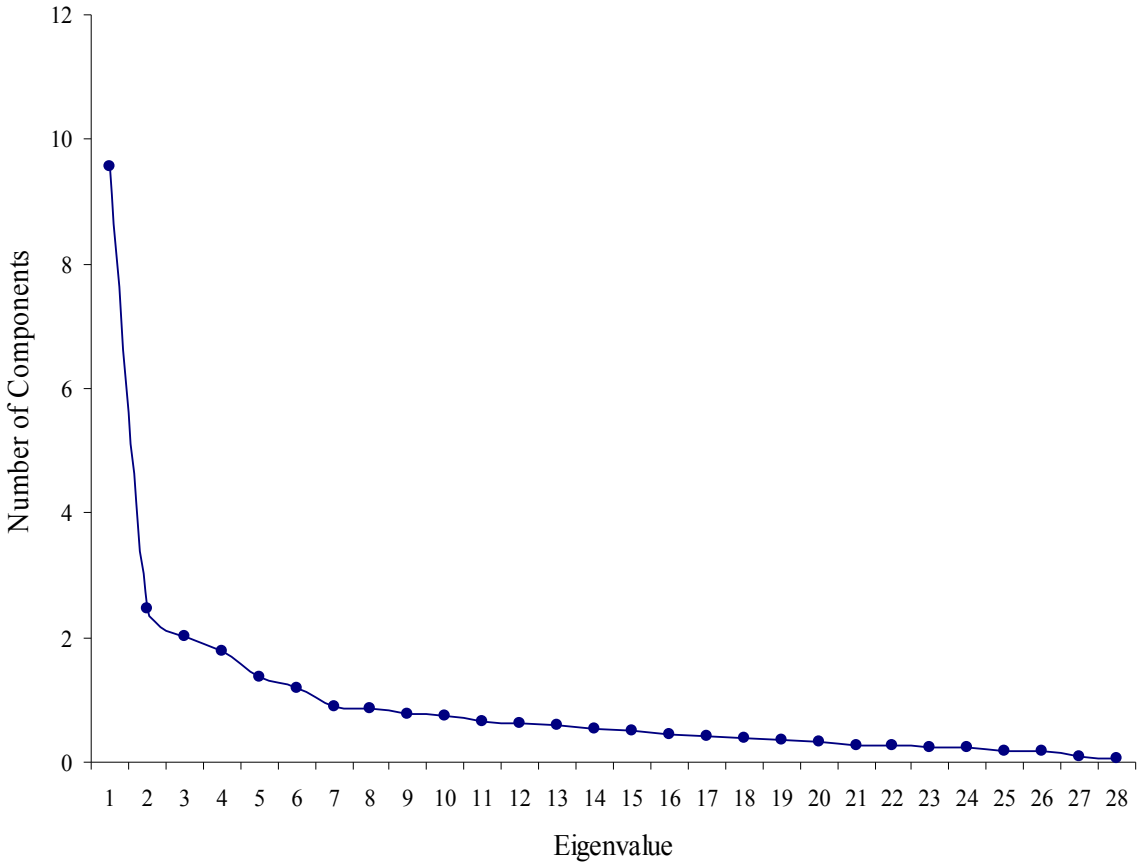

Figure 3: *Scree Plot of Eigenvalues for Each Item Obtained as a Result of PCA.*

Table 2: *A Comparison of Eigenvalues from PCA, and Criterion Values from Parallel Analysis.*

Component Number	PCA Eigenvalue	Parallel Analysis Eigenvalue	Decision Retain/Reject
1	9.59	1.85	Retain
2	2.46	1.71	Retain
3	2.01	1.61	Retain
4	1.79	1.52	Retain
5	1.36	1.46	Reject
6	1.18	1.39	Reject

Table 3 shows the structure and pattern matrices and outlines the component loadings of each of the CTQ items and the correlations between the items and the components. This table

also displays the communalities, which provides information as to how much of the variance in each item is explained.

In order to assess the reliability of the four retained CTQ components, Cronbach alpha coefficients were calculated for each. The Cronbach alpha coefficients for each of the four components were: Component 1 = .89, Component 2 = .94, Component 3 = .77, and Component 4 = .58. These findings show that components one, two and three have good internal consistency. However, component four was discarded because its alpha level fell below the recommended value of .7 (DeVellis, 2003), the eigenvalues obtained from the PCA and the parallel analysis were similar, it consisted of only three items, and it accounted for the smallest percentage of the variance.

Taken together, results from this PCA factor analysis indicated that in this particular sample of low-income, abused and suicidal African American women, a three component model of the CTQ was optimal. Variables related to physical abuse, sexual abuse, and neglect (emotional and physical) each loaded under three separate components, while variables related to emotional abuse loaded either primarily under either the sexual abuse or physical abuse component. Subsequently, each of the three components were named in such a way as to reflect the overall nature of the variables of which they were comprised, and were labeled as follows: Component 1 = Physical-Emotional Abuse (PEA), Component 2 = Sexual-Emotional Abuse (SEA), and Component 3 = Neglect (NE).

Table 3. *Pattern and Structure Matrix for PCA with Oblimin Rotation of Four Component Solution of CTQ items*

Item	Pattern Coefficients Components				Structure Coefficients Components				Communalities
	1	2	3	4	1	2	3	4	
11. People in my family hit me so had it left marks or bruises	**.82**	-.06	.07	.04	**.83**	-.40	-.26	.11	.69
12. People in my family looked out for each other	**.82**	.05	-.01	.01	**.80**	-.31	-.30	.08	.64
17. I got hit or beaten so badly that it was noticed by someone	**.79**	-.01	.05	.10	**.78**	-.34	-.25	.17	.62
9. I got hit so hard by someone in my family that I had to see a doctor	**.74**	-.09	.10	.11	**.76**	-.57	-.37	.09	.59
18. Someone in my family hated me	**.66**	-.07	-.14	-.02	**.75**	-.39	-.21	.18	.57
15. I believe that I was physically abused	**.62**	-.28	-.05	.02	**.74**	-.40	-.41	.05	.66
3. People in my family called me things ("stupid", "lazy", or "ugly")	**.45**	-.01	-.40	-.15	**.64**	-.45	-62	-.12	.52
14. People in my family said hurtful or insulting things to me	**.44**	-.14	-.41	-.17	**.60**	-.32	-.58	-.11	.62
24. Someone molested me (took advantage of me sexually)	-.02	**-.98**	.02	-.05	.40	**-.96**	-.27	.02	.92
27. I believe that I was sexually abused	-.03	**-.94**	-.02	-.00	.39	**-.93**	-.30	.07	.87
23. Someone tried to make me do sexual things or watch sexual things	.01	**-.92**	.01	-.07	.43	**-.92**	-.31	.06	.85
20. Someone tried to touch me or make me touch them in a sexual way	.04	**-.90**	-.02	-.01	.39	**-.92**	-.28	-.00	.85
21. Someone threatened to hurt/lie about me unless I did sexual things with them	.19	**-.69**	.01	.03	.49	**-.77**	-.27	.10	.63
25. I believe that I was emotionally abused	.38	**-.42**	-.25	-.13	.64	**-.65**	-.52	-.06	.65
5. Someone in my family helped me feel important or special	-.17	.00	**-.69**	-.08	.40	-.41	**-.73**	.02	.43

Note: Major items for each loading are **bolded**

Table 3 cont. *Pattern and Structure Matrix for PCA with Oblimin Rotation of Four Component Solution of CTQ items*

Item	Pattern Coefficients Components				Structure Coefficients Components				Communalities
	1	2	3	4	1	2	3	4	
7. I felt loved	.10	-.17	**-.64**	.00	.43	-.37	**-.71**	.03	.58
2. I knew that there was someone to take care of me and protect me	.06	.06	**-.64**	.18	.29	-.18	**-.64**	.18	.44
13. People in my family looked out for each other	.15	-.11	**-.62**	.01	.09	-.13	**-.63**	-.09	.55
1. I didn't have enough to eat	-.00	-.04	**-.58**	.25	.23	-.41	**-.60**	.17	.41
6. I had to wear dirty clothes	-.11	-.28	**-.56**	.16	.36	-.38	**-.60**	.23	.44
4. My parents were too drunk or high to take care of the family	.08	-.17	**-.52**	.21	.25	-.23	**-.59**	.26	.45
10. There was nothing I wanted to change about my family	.20	.19	**-.50**	-.25	.51	-.38	**-.57**	-.07	.36
8. I thought that my parents wished I had never been born	.31	-.13	**-.42**	-.11	.28	-.03	**-.50**	-.24	.45
16. I had the perfect childhood	.14	.01	**-.40**	.37	.32	-.20	**-.45**	.38	.36
26. There was someone to take me to the doctor if I needed one	-.01	.01	**.38**	.19	-.14	.12	**.39**	.19	.19
28. My family was a source of strength and support	-.14	.04	-.15	**.77**	-.04	-.00	-.08	**.76**	.60
19. People in my family felt close to each other	.11	.08	.12	**.72**	.10	.02	.10	**.73**	.55
22. I had the best family in the world	.29	-.05	-.02	**.54**	.29	-.19	-.12	**.56**	.38

Note: Major items for each loading are **bolded**

Specific Aim 2

The relationship between each of the three childhood maltreatment components and current level of PTSD symptomatology was investigated by conducting Pearson product-moment correlation coefficients. Statistically significant positive correlations existed between the physical- emotional abuse childhood maltreatment component and current PTSD symptomatology, $r = .26$, $n = 173$, $p < .01$, as well as between the sexual-emotional abuse childhood maltreatment component and current PTSD symptomatology, $r = .29$, $n = 173$, $p < .01$. The positive correlation between the neglect childhood maltreatment component and current PTSD symptomatology was not statistically significant, but was approaching significance, $r = .13$, $n = 173$, $p = .08$.

In order to determine if physical-emotional abuse and sexual-emotional abuse were both still significantly correlated with current PTSD symptomatology after controlling for potential confounds (current levels of IPV and suicidal ideation), two 2-step linear hierarchical multiple regressions were conducted. For the first regression, IPV and suicidal ideation were entered in at step 1 and explained 23.3% of the variance in current PTSD symptomatology. After the entry of physical- emotional abuse at step 2, the total variance explained by the model as a whole was 26.4%, F (3,164) = 19.60, $p < .01$. Physical- emotional abuse explained an additional 3% of the after controlling for IPV and suicidal ideation, *Adjusted* $R^2 = .26$, F_{change} (1, 164) = 6.90, $p < .01$. For the second regression, IPV and suicidal ideation were entered in at step 1, explaining 48% of the variance in current PTSD symptomatology. After the entry of sexual-emotional abuse at step 2 the total variance explained by the model as a whole was 53%, F (1,164) = 20.85, $p < .01$. Sexual-emotional abuse explained an additional 5% of the after controlling for IPV and suicidal ideation, *Adjusted* $R^2 = .74$, F_{change} (1, 164) = 9.80, $p < .01$. Overall, although the hypothesized

confounding variables (IPV and suicidal ideation) accounted for a large proportion of the overall variance, both physical-emotional abuse and sexual-emotional abuse each still exerted a small, but significant main effect on current PTSD symptomatology independent of the other predictors.

Specific Aim 3

Testing maladaptive coping as a mediator. To test a conventional meditational model, three conditions must first be met: (1) the independent variable (IV) predicts the dependent variable (DV), (2) the IV predicts the mediator, and (3) the mediator predicts the DV (Baron & Kenny, 1986). As shown in Specific Aim 2 above, the findings satisfy condition one, in that two of the childhood maltreatment components (physical- emotional abuse and sexual-emotional abuse) correlated significantly with PTSD symptomatology. Pearson product-moment correlation coefficients were calculated to examine conditions two and three. Results supported the third condition, as maladaptive coping correlated significantly with PTSD symptomatology, $r = .30$, $n = 173$, $p < .01$. However, condition two was not met in that no significant relationships were identified between either of the childhood maltreatment components (physical- emotional abuse and sexual-emotional abuse) and maladaptive coping. Subsequently, in the absence of all three conditions being met, a meditational analysis was not conducted.

Testing moderated mediation. Although no simple mediation existed with regard to maladaptive coping, moderated mediation is still plausible. Specifically, the major hypothesis related to the current study implies that maladaptive coping acts in combination with social support and not alone, which suggests combined effects may still emerge. Therefore, moderated meditation was conducted.

The type of moderated mediational analysis conducted depends on specific variables and the hypothesized outcomes, but can be defined based on which one of five moderated mediation models described by Preacher and colleagues provides the best fit (Preacher, Rucker, & Hayes, 2007). All five models were considered regarding their relevance to the current study based on the aforementioned data. Model 1 examines the potential moderating effect of the IV on the relation between the hypothesized mediator and the DV. Model 2 examines the moderating effect of an outside variable on the relation between the IV and the hypothesized mediator. Model 3 examines the moderating effect of an outside variable on the relation between the mediator and the DV. Model 4 examines multiple potential moderators. Model 5 combines Models 2 and 3 to examine the moderating effect of an outside variable on both the path between the IV and the mediator and the path between the mediator and the DV. Model 5 was selected because the focus of the hypothesis that social support would act to moderate both the pathway between childhood maltreatment and maladaptive coping and between maladaptive coping and current PTSD symptomatology.

In order to test moderated mediation, two regression equations are performed. The first regression predicts the mediator variable from the independent variable (Mediator Variable Model) and the second regression predicts the outcome variable from the predictor and mediator variables (Dependent Variable Model). After specifying the desired model number and composing the appropriate syntax, SPSS macros perform both of these regression analyses simultaneously and provide conditional indirect effects at specific values of the moderator in addition to bootstrap standard errors.

Using SPSS-17 macros, Model 5 was employed in order to test two hypothesized moderated mediational models (see Figure 4), one each examining the physical- emotional abuse

and sexual-emotional abuse components as independent variables. Also, as recommended by Mallinckrodt and colleagues (Mallinckrodt, Abraham, Wei, & Russell, 2006), 10,000 bootstrap iterations were performed.

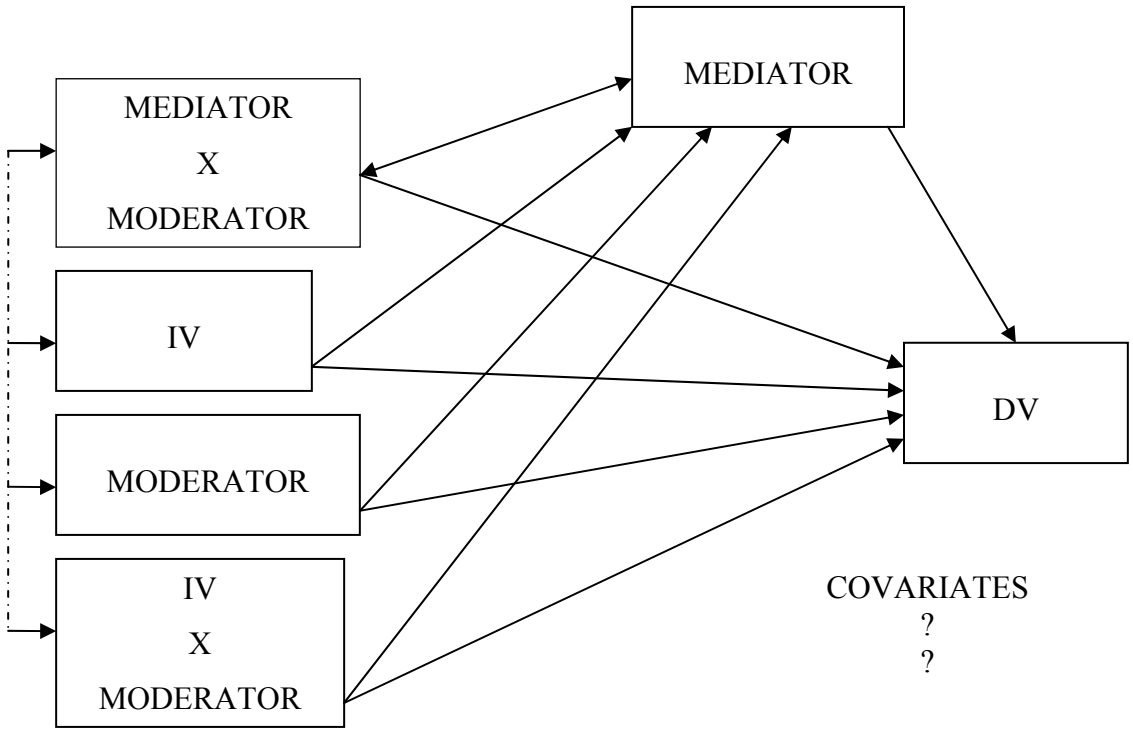

Figure 4: *Moderated Mediation Model 5 (Preacher, Rucker, Hayes)*

First, two simple regressions were conducted in order to discern if either of the childhood maltreatment components (physical- emotional abuse or sexual-emotional abuse), social support, or the interaction of the two predicted maladaptive coping (Mediator Variable Model). IPV and suicidal ideation were both entered as covariates, and due to the moderate correlation between the physical-emotional abuse and sexual-emotional abuse components (r = .6), each component was also entered as a covariate respectively in order to statistically control for any possible confounding effects. However, results of these analyses failed to reveal any significant findings.

Second, two multiple regressions were conducted aimed at predicting PTSD symptomatology from each of the childhood maltreatment components (physical- emotional

abuse and sexual-emotional abuse), social support, maladaptive coping, and the interactions of maladaptive coping by social support and childhood maltreatment by social support (Dependent Variable Model). Again, IPV and suicidal ideation, in addition to the respective childhood maltreatment components, were entered as covariates. However, no significant findings emerged. See Table 4 for a summary of the Mediator and Dependent Variable Model outcome statistics. Conditional indirect effect statistics that were computed at low, medium and high values of the moderator (social support *M* +/- 1SD) also did fail to produce any statistically significant results.

Table 4: *Moderated Meditation Analysis Outcome Data for the Physical-Emotional Abuse (PEA) and Sexual-Emotional Abuse (SEA) Childhood Maltreatment Components after Controlling for IPV, SI and Each Respective CM Component.*

	Mediator Variable Model (Predicting Maladaptive Coping)					
	PEA			SEA		
	B	SE	t	B	SE	t
CM	-.15	.15	-.99	-.11	.14	-.78
SS	-.10	.08	-1.28	-.06	.07	-.81
CM x SS	.01	.01	1.54	.00	.00	1.00
	Moderator Variable Model (Predicting PTSD Symptoms)					
	PEA			SEA		
	B	SE	t	B	SE	t
CM	-.10	.64	-.15	.52	.59	.88
SS	-1.01	.65	-1.55	-.94	.63	-1.48
MC	.17	.76	.23	.18	.76	.24
CM x SS	.01	.02	.45	.00	.02	.19
MC x SS	.03	.03	.89	.03	.03	.90

Note: CM = Child Maltreatment (Component); SS = Social Support; MC = Maladaptive Coping; PEA = Physical-Emotional Abuse; SEA = Sexual-Emotional Abuse; IPV = Intimate Partner Violence; SI = Suicidal Ideation

CHAPTER IV

DISCUSSION

Study Overview and Findings

The current study, conducted with inner-city, low-income, African American women with a recent history of IPV and a suicide attempt, was designed to test a moderated-mediational model in which maladaptive coping and social support were believed to act together to account for the link between various components of childhood maltreatment unique to the sample and current PTSD symptomatology.

With regard to the findings, as hypothesized, childhood maltreatment data collected from the current study population using the CTQ loaded under four specific components as opposed to the five components suggested by the scale's authors. However, due to the lack of validity and reliability of one of the components, only three of the components were used in the subsequent analyses. The three components were named based on the nature and distribution of the items that loaded under them. Specifically, items related to physical and emotional neglect purely loaded onto one component (neglect; NE). Further, although items for physical and sexual abuse also loaded on two separate components, certain emotional abuse items were linked to physical abuse (physical-emotional abuse; PEA), whereas other emotional abuse items were associated with sexual abuse (sexual-emotional abuse; SEA).

Second, a childhood history of physical-emotional abuse and/or sexual-emotional abuse was found to be significantly related to current PTSD symptomatology. A childhood history of neglect was somewhat related to current PTSD symptomatology, but this relation was not statistically significant. Thus, there was partial support for the hypothesis associated with second specific aim.

Third, maladaptive coping did not act to mediate the childhood maltreatment-PTSD symptomatology link in this sample, when taking into account level of IPV and suicidal ideation. Despite the fact that maladaptive coping did not mediate the childhood maltreatment-PTSD symptomatology relation in this sample, the possibility that moderated mediation could have occurred was not excluded due to the presence of social support as a hypothesized moderator. However, maladaptive coping and social support also did not act together to impact the relation between childhood maltreatment and current levels of PTSD symptomatology. Thus, the proposed direct moderated-mediation model was not supported by the data.

Interpretation of Findings

Specific aim 1. With regard to the first aim that focused on the factor structure of the CTQ for this sample, three of the four factors that emerged from this exploratory PCA had moderate to good internal consistency reliabilities, suggesting that these three new factors are a good fit for this population. Although most of the women endorsed experiencing either two or three of the childhood maltreatment types, the presence of three relatively independent factors suggested that consistent with the recommendation of the scale's author, it is more appropriate to consider different subscales reflecting different forms of childhood maltreatment. Thus, even if people have experienced comorbid types of abuse and neglect, examining these types independently provides us with important information about different types of childhood maltreatment experiences and how these inform mental health outcomes.

One of the most interesting findings that emerged from this factor analysis was the difference between the factor structure obtained in this study and that reported by the scale's authors. Specifically, particular emotional abuse items tended to load under either the sexual or physical abuse components for the current sample, as opposed to loading under a separate,

discrete emotional abuse factor as was the case for the sample on which the CTQ was normed originally. Thus, in this sample, emotional abuse tends not to occur in isolation, but rather in combination with other forms of abuse. Previous research has found that women who experience emotional abuse in combination with either physical or sexual abuse are more likely than those who experience only one form of abuse to have negative health outcomes (Moeller et al., 1993). Emotional abuse in childhood is linked to negative outcomes in adulthood, including low self-esteem, depression, social problems and suicidal behavior (McGee, Wolfe, & Wilson, 1997; Mullen, Martin, Anderson, Romans, & Herbison, 1996). It is also reasonable to hypothesize that either normalizing or failing to recognize emotional abuse alone as problematic and warranting attention may leave women more vulnerable to engaging in violent adult partnerships, as such partnerships often begin with emotional abuse and only over time escalate to being physically and/or sexually abusive.

Specific aim 2. The associations found between both physical-emotional abuse and current PTSD symptomatology and sexual-emotional abuse and PTSD symptomatology are consistent with evidence from a number of studies that have found that physically and sexually abused children may be at increased risk for developing PTSD in adulthood (Schaaf & McCanne, 1998; Widom, 1999). The lack of findings regarding childhood neglect on the development of current PTSD symptomatology may be due to the specific psychological ramifications of this form of childhood maltreatment on the psyche of the child. Specifically, although childhood neglect has been linked to multiple negative sequelae in adulthood (Widom, 1999), by definition, the nature of these experiences involve acts of omission, or the denial of basic emotional and/or physical needs. Subsequently, compared to childhood abuse involving acts of commission, childhood neglect tends to be more of a chronic, but predictable stressor and,

although potentially very damaging to the future wellbeing of the child, may not provoke an ongoing "fight or flight" reaction as is thought to be the case in abused children (Horowitz, 2001).

Specific aim 3. The fact that maladaptive coping did not mediate the childhood maltreatment-PTSD symptomatology link is inconsistent with previous data suggesting that coping mediates this association (Filipas & Ulman, 2006; Johnson et al., 2003; Valentiner et al., 1996). There are a number of possible explanations for this result. First, and most notably, although both physical- emotional abuse and sexual-emotional abuse were significantly related after accounting for the potential confounding effects of IPV and suicidal ideation, these latter two variables accounted for a large amount of the overall variance relative to the variance attributable to the childhood maltreatment components. Thus, it is possible, that IPV and/or suicidal ideation may not actually be confounds, but mediators of the childhood maltreatment-PTSD symptomatology link. Second, the assessment of maladaptive coping was relatively limited in this study, as the subscale used to tap this construct was brief , thus there may not have been a comprehensive enough assessment of this construct. Third, although certain coping approaches are classified as "maladaptive", these particular strategies may actually prove to be adaptive for specific individuals or under certain circumstances (Rippetoe & Rogers, 1987) and may not necessarily be related to poorer long-term outcomes, such as PTSD symptomatology (Arata, 1999; Frazier, Mortensen, & Steward, 2005). Fourth, there may be differences in coping styles between African Americans (who are the focus of this study) and individuals from other ethnic and racial backgrounds. Indeed, a few studies have found that African Americans use more maladaptive coping than do their Caucasian American counterparts in coping with health problems in themselves or their children (Culver et al., 2004; Greco, Brickman, & Routh, 1996;

Jordan et al., 1998; Yeates et al., 2002). Thus, the lack of inclusion of a comprehensive culturally relevant measure of coping may have contributed to the lack of significant findings (Utsey, Bolden, Lanier et al., 2007).

Lack of support for the moderated-mediation may most fundamentally be due to the lack of simple mediation and the related reasons enumerated above. However, additional possible reasons include the following. Social support may influence the development of PTSD via its impact on the survivor's interpretation of the trauma, yet such appraisals were not assessed in this study. In addition, the nature of the support received influences the individual's level of emotional distress, such that supportive, receptive, and noncritical responses are associated with reduced stress levels, whereas the opposite social response leads to increased psychological distress (Joseph, Williams, & Yule, 1997; Lepore, 2001). For example, a study with sexual assault survivors found that negative social reactions received upon disclosure (e.g., being treated differently or being blamed, avoided, or given destructive guidance) were associated with higher PTSD symptomatology severity (Ullman & Filipas, 2001). The measure of social support in this study did not sufficiently tap the quality of the social support received. Finally, it may be that another variable not assessed in this study influenced the mediation. For example, there is some evidence that educational attainment powerfully influences the link between coping and health outcomes in African Americans (Cano, Mayo, & Ventimiglia, 2006) and given the low educational attainment in this sample, this factor may have heavily influenced the linkages.

Strengths

One major strength of the current study is that it is one of the first to look explicitly at specific kinds of childhood maltreatment, with regard to the development of PTSD symptomatology in adulthood. Specifically, although previous studies have been conducted

examining the implications of a history of childhood maltreatment as a general construct on negative mental health outcomes, such as PTSD, in adults, few studies have examined the impact of specific types of childhood maltreatment, with virtually no research examining the role of neglect on PTSD symptomatology. Conversely, whereas previous studies have examined the impact of childhood physical and/or sexual abuse, and occasionally emotional abuse, on adult mental health, our literature search did not identify any prior investigations that combined either physical or sexual abuse with highly correlated emotional abuse variables. The inclusion of the physical-emotional abuse and sexual-emotional abuse components along with the neglect component allowed for a more population-specific examination, which subsequently increased the internal validity of the overall results.

Another positive feature of this study pertains to the sample. African Americans who live in high-stress urban neighborhoods are at elevated risk for childhood maltreatment (U.S. Department of Health and Human Services: Administration on Children et al., 2008) and the subsequent development of PTSD symptomatology and disorders (Alim, Charney, & Mellman, 2006). Thus, the focus on childhood maltreatment and PTSD symptomatology as the independent variable and dependent variable respectively in this sample of low-income, inner-city, African American women is noteworthy. Also, although the inclusion of a multiply traumatized sample adds to the complexity of the project, it is a positive feature of the study design.

There are a number of aspects of the data analytic approach that are positive features of this investigation. First, rather than using the CTQ components recommended by the scale's authors, which were not necessarily valid or reliable for the current sample, exploratory factor analysis (PCA) was used to refine the specific CTQ components for the current sample (Floyd &

Widaman, 1995). Second, the study was intended to employ a moderated-mediational approach to analyze the data (Preacher et al., 2007), which is a state of the art data analytic methodology, despite recent efforts to integrate approaches to moderated mediation and mediated moderation (Edwards & Lambert, 2007). In other words, the study was designed to assess if social support would moderate the mediated effects of childhood maltreatment on PTSD symptomatology transmitted through coping (Muller, Judd, & Yzerbyt, 2005).

Limitations

The findings of this investigation need to be considered in light of a number of study limitations related to the sample and measurement issues.

Sample. One major drawback of the current study is that although a statistically significant correlation existed between childhood maltreatment and PTSD symptomatology in this sample, the PTSD symptomatology was not in direct temporal sequence with childhood maltreatment. Subsequently, it is impossible to determine if reported current PTSD symptomatology was truly related to childhood maltreatment experiences. This is further compounded by the fact that the PTSD measure used in the current study did not assess for symptoms related to childhood maltreatment, but rather to symptoms related to a specific trauma identified by the individual that occurred during the course of the preceding 12-months. Similarly, a related problem is that given that the women had experienced multiple traumas in the year preceding the assessment as they all had experienced IPV and made a suicide attempt, these more recent experiences may have been more salient factors than childhood maltreatment in determining the women's PTSD symptom profile.

Another limitation related to the study sample is the presence of multiple chronic and acute traumatic stressors (i.e. childhood maltreatment + IPV + suicidal ideation, etc.) which adds

layers of complexity and makes interpretation of findings difficult. Given that the hypothesized model fundamentally relates to the association between childhood maltreatment and PTSD symptomatology, the sample ideally would have been selected based on their childhood maltreatment status only. Not only is it likely that the presence of IPV and/or suicidal ideation may influence PTSD symptomatology, it also may be the case that these variables influence the women's coping strategies and/or social support levels. For example, previous research with female victims of IPV has suggested that more severe threats to safety may result in more intensive utilization of coping strategies (Goodman, Dutton, Weinhurt, & Cook, 2003). Further, all of the women in the sample also attempted suicide in the preceding 12 month period, which suggests that this is a group of women with a history of childhood maltreatment who have particular difficulties coping and who are more likely to have symptoms of PTSD given the strong association between anxiety problems and suicidal ideation and behavior. It is likely that many of the women were experiencing suicidal ideation to some extent at the time they were interviewed. Once again, although level of suicidal ideation was controlled for in the analyses (as was the level of IPV), it does not change the fact that the women had acted on their suicidal thoughts and feelings within the past year, which may reflect their difficulties adequately coping with stress.

Another problem with the sample is its homogeneous nature with regard to gender, social class, race, and geographical location. While it is valuable to conduct research with specific populations, the lack of heterogeneity with regard to the current sample raises questions regarding the external validity and lack of generalizability of the findings to other demographic groups. Thus, it is unclear if the outcomes of the current study would be the same when examining different populations.

Measurement. Although the measure of childhood maltreatment appeared psychometrically sound with regard to this sample, the veracity of the women's reports regarding their childhood maltreatment history is somewhat questionable given that it is retrospective reporting (Block & Zakay, 1997; Hardt & Rutter, 2004; Krinsely, Gallagher, Weathers, Kutter, & Kaloupek, 2003; Widom, 1999; Williams, 1994). Using retrospective measures in the current study to obtain information regarding childhood maltreatment may have been problematic because current PTSD symptomatology may have significantly influenced self-reports of childhood maltreatment, which in turn, may have created a bias towards a positive childhood maltreatment-PTSD symptomatology correlation. In addition, no collateral data regarding the women's childhood maltreatment histories was obtained, which raises additional questions as to the validity of the women's reports.

Second, the measure used to gather data regarding current PTSD symptomatology assessed the frequency and severity of symptoms related to PTSD, but was not able to definitively confirm the presence or absence of a discrete diagnosis of PTSD. This posed a problem in that a differentiation was unable to be made regarding those participants who met full diagnostic criteria for PTSD and those who were experiencing normal trauma induced reactions that tend to dissipate over time. If this distinction was able to have been made, it is possible that findings for these two groups may have differed from each other.

Third, there was no assessment of culture-specific coping (Utsey, Bolden, Lanier et al., 2007; Utsey, Bolden, Williams et al., 2007) or forms of coping particularly salient in the African American community, such as self-esteem and religious coping (Bradley et al., 2005; Ellison & Taylor, 1996; Pargament, Smith, Koenig, & Perez, 1998; Pargament, Koenig, & Perez, 2000). Therefore, the construct of coping as defined in this study was somewhat limited and

maladaptive coping in this study may not have been a true reflection of the women's actual coping patterns. Further, these more culturally relevant forms of coping serve a more powerful meditational role in this sample than the maladaptive coping tapped by the Brief COPE. In addition, no attention was paid to adaptive coping. People high on maladaptive coping may be either high or low on adaptive coping and these different pairings may differentially influence the associated between childhood maltreatment and PTSD symptomatology.

Finally, the quality of the social support received was not specifically assessed. Also, only perceived social support was assessed in this study. This is despite the fact that an approach for measuring both perceived and received social support has been recommended (Wills & Shinar, 2000). The fact that social support was not found to moderate the meditational effect of maladaptive coping may be a function of the limited social support construct in this study. In addition, the use of a self-report methodology is limited by the women's emotional state and interpersonal style and may not be the most effective method for tapping actual received social support behaviors (Wills & Shinar, 2000).

Clinical Implications

When assessing African American women who present with PTSD symptomatology, it is useful to inquire about their childhood maltreatment histories. Such line of inquiry should not only focus on physical and sexual abuse, but also on physical and/or sexual abuse in combination with emotional abuse. It is important for psychologists working psychotherapeutically with their African American female clients to help them appreciate the harmful nature of the emotional abuse that they may have experienced and to sensitize them to cues of emotional abuse in their adult relationships, so that they reduce the likelihood of becoming involved with emotionally (and potentially ultimately physically or sexually) abusive partners in the future.

Given the negative impact that childhood maltreatment does indirectly have on the mental health functioning of low-income, African American women, these individuals can benefit from therapeutic interactions that assist them in effectively working through their childhood traumas. One such approach is assisting them in generating and constructing a trauma narrative, along with cognitive processing the traumatic events of their childhood (Pennebaker, 1990; Tuval-Mashiach et al., 2004). Cognitive processing therapy has been adapted for use with survivors of childhood maltreatment and also may be a valuable therapeutic approach (Chard, Weaver, & Resick, 1997) and has been found to be associated with reductions in cognitive distortions of these survivors (Owens, Pike, & Chard, 2001).

Future Research Directions

The fact that the PCA for this sample yielded different childhood maltreatment components than those obtained from the normative sample suggests that investigators need to test the psychometric fit of the commonly used CTQ factors for their sample. It is possible that childhood maltreatment is experienced differently by individuals from different cultural, ethnic, racial, and social class backgrounds. Culturally competent research on childhood maltreatment needs to focus on specific ethnic/racial groups (Korbin, 2002) and empirical studies need to do a better job of disentangling culture, ethnicity, and social class (Elliott & Urquiza, 2006).

Future studies should be designed to redress the limitations noted with this study with regard to sample and measurement issues. With regard to the sample, it will be valuable to study more heterogeneous samples, to include women and men with and without histories of childhood maltreatment and/or histories of IPV and suicidal behavior. In terms of measurement issues, it behooves future investigators to gather collateral data on childhood maltreatment, to conduct

structured diagnostic interviews in order to diagnose PTSD, and to include measures of culturally relevant methods of coping.

A series of investigations have examined the relation between childhood maltreatment and female hypothalamic-pituitary-adrenal (HPA) axis function later in life. Taken together, results from these studies indicate that HPA axis disregulation may influence the development of depression and/or PTSD in women with a childhood history of childhood maltreatment (Heim et al., 2000). It has been argued from these results that reducing cortisol levels in abused children may change the developmental course of the brain, which in turn would reduce the risk of negative mental health outcomes for individuals with a childhood maltreatment history (Shea, Walsh, MacMillan, & Steiner, 2005). In addition, there is an exciting growing body of research suggesting a gene-environment interaction as being key to the expression of mental health symptoms in individuals abused as children. For example, Bradley and colleagues found that a gene (*CRHR1* risk or protective alleles) X environment (history of child abuse) interaction is key in the expression of depressive symptoms in adults (Bradley et al., 2008). Another recent study with primarily low-income African Americans showed that four single-nucleotide polymorphisms of the *FKBP5* gene interacted with childhood maltreatment severity to predict adult symptoms of PTSD (Binder et al., 2008). Thus, expanding the current model to include biological/genetic factors as another possible variable that may impact the childhood maltreatment-PTSD symptomotology link may prove valuable.

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APPENDIX A

INTERVENTION SCREENING QUESTIONAIRE

Date:_____ Participant Initials: _____

Interviewer:_____ Date of Birth:_____/_____/_____

Location:_____ Race:_____

Interviewer: *The questions that I am going to ask you are sensitive in nature, and may be hard for some people to answer. Your responses will be kept private, so please try to answer as honestly as you can.*

1)In the past year have you:

a) intentionally taken pills to overdose?	No	Yes
b) cut yourself (describe)_____?	No	Yes
c) tried to shoot yourself or jump from a high place?	No	Yes
d) intentionally (on purpose) tried to take your life?	No	Yes
e) attempted to commit suicide?	No	Yes

2) Have you been in a relationship with a partner in the past year?	No	Yes
*If **Yes** to #2, has this partner:*		
a) slapped, kicked, pushed, choked, or punched you?	No	Yes
b) forced or coerced you to have sex?	No	Yes
c) threatened you with a knife or gun to scare or hurt you?	No	Yes
d) made you afraid that you could be physically hurt?	No	Yes
e) repeatedly used words, yelled, or screamed in way that frightened you, threatened you, put you down, or made you feel rejected?	No	Yes

3) Do you have any children between the ages of 8-12?	No	Yes

*If "Yes" response to any question 1 a-e, **AND** "No" to 2a-e, refer to Nia-Suicide*
*If "Yes" response to any question 1a-e **AND** "Yes" to any 2a-e, refer to Nia-DV*
*If "Yes" response to any question 2a-e **AND** "Yes" to #3, refer to SAFETY-IPV+*
*If "Yes" response to #3, **AND** "No" response to 2a-e, refer to SAFETY-IPV-*

Status of Screener:
____1) Screened and meets (check all that apply):
Nia-Suicide Criteria____ Nia-DV Criteria____ SAFETY Criteria____
____2) Screened and does not meet criteria:
No IPV in past year ____ No attempt in the past year____
____3) Screened and Refused ____4) Refused to be screened

The Nia Project at Grady Hospital works with women who have experienced violence in their relationships and with women who have tried to hurt themselves or end their lives. Based on your responses to the questions that I just asked, you qualify to participate in a research project for women who have had these experiences. Would you be willing to participate?

No Yes

If **Yes:** We would like to keep in touch with you throughout the following months to keep you updates on the program:

Address:_____ Okay to send mail: No Yes
_____
_____

Home #: (____)_____-_____ Message Okay: No Yes
Cell #: (____)_____-_____ Message Okay: No Yes
Other#: (____)_____-_____ Message Okay: No Yes

Are there other people we can contact in case we have trouble reaching you?

Name:_____ Relationship:_____
Address:_____ Okay to send mail: No Yes
_____
_____

Home #: (____)_____-_____ Message Okay: No Yes
Cell #: (____)_____-_____ Message Okay: No Yes
Other#: (____)_____-_____ Message Okay: No Yes

Name:_____ Relationship:_____
Address:_____ Okay to send mail: No Yes
_____
_____

Home #: (____)_____-_____ Message Okay: No Yes
Cell #: (____)_____-_____ Message Okay: No Yes
Other#: (____)_____-_____ Message Okay: No Yes

Notes: _____
_____
_____

APPENDIX B

PSYCHOTIC SCREEN

For the past week, please answer the following questions using the following scale.
0 = Not at all
1 = A little bit
2 = Moderately
3 = Quite a bit
4 = Extremely

In the past week, have you :

_____ 1. Heard voices that other people do not hear

_____ 2. Seen things that other people have not seen

_____ 3. Believed people were out to get you, hurt you, or kill you

_____ 4. Felt that you were being talked about behind your back or watched all the time

_____ 5. Received special messages from the TV, radio, or newspaper

_____ 6. Felt that you were really great or had special powers to do things that other people couldn't do

_____ 7. Felt that your thoughts were being broadcast out loud so that other people could actually hear what you were thinking

_____ 8. Felt that someone could read your mind

What is your current psychiatric diagnosis, if any? _____

What medications are you currently taking? _____

Call the study pager if anyone scores a $\geq$ 2 on any of the items.
Before doing so, get as much information as possible about each of these items.

APPENDIX C

MINI MENTAL STATUS EXAM (MMSE)

Instructions: Words in boldface type should be read aloud clearly and slowly to the examinee. Item substitutions appear in parentheses. Administration should be conducted privately and in the examinee's primary language. Circle 0 if the response is incorrect or 1 if the response is correct. Begin by asking the following questions: **Do you wear corrective lenses? Do you have any hearing difficulties or use hearing aids? May I ask you some questions about your memory?**

ORIENTATION TO TIME		RESPONSE
SCORE		
(circle one)		
What is the… year?		_____
0 1		
	season?	_____
0 1		
	month of the year?	_____
0 1		
	day of the week?	_____
0 1		
	date?	_____
0 1		

ORIENTATION TO PLACE*

Where are we now? What is the...	
state (province)?	_____
0 1	
county (or city/town)?	_____
0 1	
city/town (or neighborhood)?	_____
0 1	
building (name or type)?	_____
0 1	
floor of the building (room number or address)?	_____
0 1	

*Alternative place words that are appropriate for the setting and increasingly precise may be substituted and noted.

REGISTRATION*

Listen carefully. I am going to say three words. You say them back after I stop. Ready? Here they are... APPLE [*pause*]**, PENNY** [*pause*]**, TABLE** [*pause*]**. Now repeat those words back to me.** [*Repeat up to 5 times, but score only the first trial.*]

APPLE _____
0 1
PENNY _____
0 1
TABLE _____
0 1

Now keep those words in mind. I am going to ask you to say them again in a few minutes.

*Alternative word sets (e.g.. PONY. QUARTER, ORANGE) may be substituted and noted when retesting an examinee.

ATTENTION AND CALCULATION [Serial 7s]*

Now I'd like you to subtract 7 from 100. Then keep subtracting 7 from each answer until I tell you to stop.

What Is 100 take away 7? [93] _____
0 1

If needed, say: Keep going. [86] _____
0 1

If needed, say: Keep going. [79] _____
0 1

If needed, say: Keep going. [72] _____
0 1

If needed, say: Keep going. [65] _____
0 1

*Alternative Item (WORLD backward should only be administered if the examinee refuses to perform the Serial 7s task.

Substitute and score this item only if the examinee refuses to perform the Serial 7s task.

Spell WORLD forward, then backward.

Correct forward spelling if misspelled,
but score only the backward spelling.

____ ____ ____ ____ ____ ____

(D-l) (L-l) (R-l) (0-1) (W-l)

RECALL RESPONSE
SCORE

What were those three words I asked you to remember? [*Do not offer any hints*.]

APPLE _____
0 1
PENNY _____
0 1
TABLE _____
0 1

NAMING*

What is this? [*Point to a pencil or pen*.] _____

0 1

What is this? [*Point to a watch*.] _____

0 1

*Alternative common objects (e.g., eyeglasses, chair, keys) may be substituted and noted.

REPETITION

Now I am going to ask you to repeat what I say. Ready? "NO IFS, ANDS, OR BUTS." Now you say that. [*Repeat up to 5 times, but score only the first trial*.]

NO IFS, ANDS, OR BUTS. _____

0 1

Detach the next page from the packet. Use this paper for the next four items.

COMPREHENSION

Listen carefully because I am going to ask you to do something.

Take this paper in your right hand [*pause*]**, fold it in half** [*pause*]**, and put it on the floor (**or **table).**

TAKE IN RIGHT HAND _____

0 1

FOLD IN HALF _____

0 1

PUT ON FLOOR (or TABLE) _____

0 1

READING

Please read this and do what it says. [*Show examinee the words on the stimulus form*.]

CLOSE YOUR EYES _____

0 1

WRITING

Please write a sentence. [*If examinee does not respond, say:* **Write about the weather**.]

0 1

Place the blank piece of paper (unfolded) in front of the examinee and provide a pen or pencil. Score 1 point if the sentence is comprehensible and contains a subject and a verb. Ignore errors in grammar or spelling.

DRAWING

Please copy this design. [*Display the intersecting pentagons on the stimulus form*.]

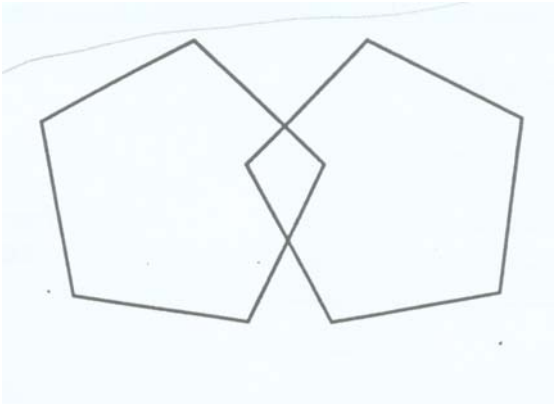
Score 1 point if the drawing consists of two 5-sided figures that intersect to form a 4-sided figure.

Assessment of level of consciousness:

Alert/ Responsive	Drowsy	Stuporous	Comatose/ Unresponsive

Total Score= _____
(sum all item scores) (30

CLOSE YOUR EYES



APPENDIX D

RAPID ESTIMATE OF ADULT LITERACY IN MEDICINE (REALM)

**Only administer if MMSE = 22 or 23, otherwise omit.
If administered, total REALM must be greater than or equal to 18.

LIST 1	**LIST 2**	**LIST 3**
fat____	fatigue____	allergic____
flu____	pelvic____	menstrual____
pill____	jaundice____	testicle____
dose____	infection____	colitis____
eye____	exercise____	emergency____
stress____	behavior____	medication____
smear____	prescription____	occupation____
nerves____	notify____	sexually____
germs____	gallbladder____	alcoholism____
meals____	calories____	irritation____
disease____	depression____	constipation____
cancer____	miscarriage____	gonorrhea____
caffeine____	pregnancy____	inflammatory____
attack____	arthritis____	diabetes____
kidney____	nutrition____	hepatitis____
hormones____	menopause____	antibiotics____
herpes____	appendix____	diagnosis____
seizure____	abnormal____	potassium____
bowel____	syphilis____	anemia____
asthma____	hemorrhoids____	obesity____
rectal____	nausea____	osteoporosis____
incest____	directed____	impetigo ____

APPENDIX E

DEMOGRAPHIC DATA QUESTIONAIRE

1. What is your current relationship status?
(1) Single, never married (2) Partner not living together (3) Partner living together
(4) Married (5) Divorced (6) Separated (7) Widowed

2. If you are currently involved in a relationship, is your partner:
(0) Male (1) Female (2) N/A

3. If you are currently in a relationship, is it abusive? For example, has your partner verbally or physically abused you (e.g., said means things to you; frightened you; slapped, punched, choked, or kicked you; forced you to have sex)?
(0) No (1) Yes (2) N/A

4. If you are currently in a relationship, how long have you been in it?
(1) Less than a week (2) 1 week-1 month (3) 1 month-6 months
(4) More than 6 months (5) N/A

5. Including your current partner, how many partners have you had in the last year? ____

6. Of these relationships, how many were abusive? For example, how many partners verbally or physically abused you (e.g., said means things to you; frightened you; slapped, punched, choked, or kicked you; forced you to have sex)? ____

7. When you attempted suicide, were you in an abusive relationship?
(0) No (1) Yes

8. Do you have children?
(0) No (1) Yes (If yes, list below.)

Name	Age	Do they live with you?	If no, where do they live?

9. Do you consider yourself homeless?
(0) No (1) Yes

10. How many people live in your home/household (including you)? ____

11. What was the highest grade you completed in school?
(1) less than 12th (2) 12th Grade (HS graduate) (3) GED (4) Some college or technical school (5) Technical school graduate (6) College graduate
(7) Graduate school

12. Are you currently employed?
(0) No (1) Yes

13. What kind of work do you or did you last do? _____

7. Unskilled (attendant, janitor, construction, unspecified labor, included unemployed).
6. Semiskilled - Machine Operator (hospital aide, painter, bartender, bus driver, cutter, cook, drill press, garage, guard, watchman, checker, waiter, spot welder, cashier).
5. Skilled Manual (baker, barber, brakeman, chef, electrician, fireman, machinist, mechanic, paperhanger, painter, repairman, tailor, welder).
4. Clerical and Sales, Technician, Little Businesses (bank teller, bookkeeper, clerk, draftsman, timekeeper).
3. Administrative Personnel, Small Businesses, Minor Professionals (art gallery, decorator, plumber, actor, reporter, travel agent).
2. Business Manager, Medium Businesses, Lesser Professionals (sales people, policemen, managers, nurses, pharmacist, social workers, teachers).
1. Higher Executives, Major Professionals, Owners of Larger Business (post grads).

14. What are your current sources of income? (Circle all that apply)
(1) Job (2) TANF (3) Food-stamps (4) Social Security/social supportI/Disability
(5) Partner (6) Child Support (7) Parents (8) Family member - other than parent
(9) Other

15. What is your approximate individual monthly income?
(1) $0-249 (2) $250-499 (3) $500-999 (4) $1,000-1,999 (5) $2,000+

16. What is your approximate household monthly income?
(1) $0 - 249 (2) $250 - 499 (3) $500 - 999 (4) $1,000 - 1,999 (5) $2,000 - +

17. Have you ever been hospitalized or in a treatment program for psychiatric or substance abuse treatment?
(0) No (1) Yes

18. **What medical problems do you have?**

_____

_____

19. Are you currently taking any medications?
(0) No (1) Yes

List all the medications you are currently taking:

_____

_____

20. What religion, if any, are you a part of or do you believe in?
(1) Baptist (2) Jehovah's Witness (3) Catholic (4) Holiness (5) 7th Day Adventist (6) Muslim (7) Methodist (8) Christian/Non-denominational
(9) Other _____ (10) None

APPENDIX G

INDEX OF SPOUSE ABUSE (ISA)

Please answer questions for: _____Current Partner
_____Partner within last year

This questionnaire is designed to measure the degree of abuse you have experienced in your relationship with your partner. It is not a test, so there are no right or wrong answers. Answer each item as carefully and accurately as you can by placing a number beside each one as follows:

1 Never
2 Rarely
3 Occasionally
4 Frequently
5 Very Frequently

_____ 1. My partner belittles me (makes me feel unimportant or small).
_____ 2. My partner demands obedience to his/her whims (demands that I do everything that he or she says).
_____ 3. My partner becomes surly (rude, mean) and angry if I tell him/her that he/she is drinking too much.
_____ 4. My partner makes me perform sex acts that I do not enjoy or like.
_____ 5. My partner becomes very upset if dinner, housework or laundry is not done when he/she thinks it should be.
_____ 6. My partner is jealous and suspicious of my friends.
_____ 7. My partner punches me with his/her fists.
_____ 8. My partner tells me I am ugly and unattractive.
_____ 9. My partner tells me I really couldn't manage or take care of myself without him/her.
_____ 10. My partner acts like I am his/her personal servant.
_____ 11. My partner insults or shames me in front of others.
_____ 12. My partner becomes very angry if I disagree with his/her point of view.
_____ 13. My partner threatens me with a weapon.
_____ 14. My partner is stingy in giving me enough money to run our home.
_____ 15. My partner belittles me intellectually (makes me feel like I'm not smart).
_____ 16. My partner demands that I stay home to take care of the children.
_____ 17. My partner beats me so badly that I must seek (get) medical help.
_____ 18. My partner feels that I should not work or go to school.
_____ 19. My partner is not a kind person.
_____ 20. My partner does not want me to socialize (get together) with my friends.
_____ 21. My partner demands sex whether I want it or not.
_____ 22. My partner screams and yells at me.
_____ 23. My partner slaps me around my face and head.
_____ 24. My partner becomes abusive (is mean or mistreats me) when he/she drinks.
_____ 25. My partner orders me around.
_____ 26. My partner has no respect for my feelings.
_____ 27. My partner acts like a bully towards me.
_____ 28. My partner frightens me.
_____ 29. My partner treats me like a dunce (like I'm stupid).
_____ 30. My partner acts like he/she would like to kill me.

APPENDIX H

CHILD TRAUMA QUESTIONAIRE (CTQ) – SHORT FORM

Directions: These questions ask about some of your experiences growing up as a child and a teenager. For each question, circle the number that best describes how you feel. Although some of these questions are of a personal nature, please try to answer as honestly as you can. Your answers will be kept confidential.

When I was growing up, . . .		Never true	Rarely true	Some times true	Often true	Very Often true
1.	I didn't have enough to eat.	1	2	3	4	5
2.	I knew that there was someone to take care of me and protect me.	1	2	3	4	5
3.	People in my family called me things like "stupid", "lazy", or "ugly".	1	2	3	4	5
4.	My parents were too drunk or high to take care of the family.	1	2	3	4	5
5.	There was someone in my family who helped me feel important or special.	1	2	3	4	5
When I was growing up, . . .						
6.	I had to wear dirty clothes.	1	2	3	4	5
7.	I felt loved.	1	2	3	4	5
8.	I thought that my parents wished I had never been born.	1	2	3	4	5
9.	I got hit so hard by someone in my family that I had to see a doctor or go to the hospital.	1	2	3	4	5
10.	There was nothing I wanted to change about my family.	1	2	3	4	5
When I was growing up, . . .						
11.	People in my family hit me so hard that it left me with bruises or marks.	1	2	3	4	5
12.	I was punished with a belt, a board, a cord (or some other hard object).	1	2	3	4	5
13.	People in my family looked out for each other.	1	2	3	4	5
14.	People in my family said hurtful or insulting things to me.	1	2	3	4	5
15.	I believe that I was physically abused.	1	2	3	4	5

When I was growing up, . . .		Never true	Rarely true	Some times true	Often true	Very Often true
16.	I had the perfect childhood.	1	2	3	4	5
17.	I got hit or beaten so badly that it was noticed by someone like a teacher, neighbor, or doctor.	1	2	3	4	5
18.	Someone in my family hated me.	1	2	3	4	5
19.	People in my family felt close to each other.	1	2	3	4	5
20.	Someone tried to touch me in a sexual way or tried to make me touch them.	1	2	3	4	5
When I was growing up, . . .						
21.	Someone threatened to hurt me or tell lies about me unless I did something sexual with them.	1	2	3	4	5
22.	I had the best family in the world.	1	2	3	4	5
23.	Someone tried to make me do sexual things or watch sexual things.	1	2	3	4	5
24.	Someone molested me (took advantage of me sexually).	1	2	3	4	5
25.	I believe that I was emotionally abused.	1	2	3	4	5
When I was growing up, . . .						
26.	There was someone to take me to the doctor if I needed it.	1	2	3	4	5
27.	I believe that I was sexually abused.	1	2	3	4	5
28.	My family was a source of strength and support.	1	2	3	4	5

APPENDIX I

DAVIDSON TRAUMA SCALE

Please identify the trauma (terrible and painful experience) that is most disturbing to you during the past 12 months

_____

_____

_____

Each of the following questions asks you about a specific symptom. For each question, consider how often in the last week each symptom troubled you and how sever it was:

Frequency	Severity
0 = Not at all	0 = Not at all distressing
1 = only once	1 = Minimally distressing
2 = 2-3 times	2 = Moderately distressed
3 = 4-6 times	3 = Markedly distressed
4 = Every day	4 = Extremely distressed

		FREQUENCY	SEVERITY
1.	Have you ever had painful images, memories, of thoughts of the event?	_____	_____
2.	Have you ever had distressing dreams of the event?	_____	_____
3.	Have you felt as though the event was recurring? Was it as if you were reliving it?	_____	_____
4.	Have you been upset by something that reminded you of the event?	_____	_____
5.	Have you been physically upset by reminders of the event? (This includes sweating, trembling, racing heart, shortness of breath, nausea, or diarrhea.)	_____	_____
6.	Have you been avoiding any thoughts or feelings of the event?	_____	_____

7.	Have you been avoiding doing things or going into situations that remind you of the event?	_____	_____
8.	Have you found yourself unable to recall important parts of the even?	_____	_____
9.	Have you had difficulty enjoying things?	_____	_____
10.	Have you felt distant or cut off from people?	_____	_____
11.	Have you been unable to have sad or loving feelings?	_____	_____
12.	Have you found it hard to imagine having a long life span and fulfilling your goals?	_____	_____
13.	Have you had trouble falling asleep or staying asleep?	_____	_____
14.	Have you been irritable or had outbreaks of anger?	_____	_____
15.	Have you had difficulty concentrating?	_____	_____
16.	Have you felt on edge, been easily distracted, or had to stay “on guard”?	_____	_____
17.	Have you been jumpy or easily startled?	_____	_____

APPENDIX J

BRIEF COPE

These items deal with ways you've been coping with the stress in your life. There are many ways to try to deal with problems. These items ask what you've been doing to cope with this one. Obviously, different people deal with things in different ways, but I'm interested in how you've tried to deal with it. Each item says something about a particular way of coping. I want to know to what extent you've been doing what the item says. How much or how frequently? Don't answer on the basis of whether it seems to be working or not–just whether or not you're doing it. Use these response choices.

1 = I haven't been doing this at all 2 = I've been doing this a little bit
3 = I've been doing this a medium amount 4 = I've been doing this a lot

_____ 1. I've been turning to work or other activities to take my mind off things.
_____ 2. I've been concentrating on doing something about the situation I'm in.
_____ 3. I've been saying to myself "this isn't real."
_____ 4. I've been using alcohol or other drugs to make myself feel better.
_____ 5. I've been getting emotional support from others.
_____ 6. I've been giving up trying to deal with it.
_____ 7. I've been taking action to try and make the situation better.
_____ 8. I've been refusing to believe that it has happened.
_____ 9. I've been saying things to let my unpleasant feelings escape.
_____10. I've been getting help and advice from other people.
_____11. I've been using alcohol or other drugs to help me get through it.
_____12. I've been trying to see it in a different light, to make it more positive.
_____13. I've been criticizing myself.
_____14. I've been trying to come up with a strategy about what to do.
_____15. I've been getting comfort and understanding from someone.
_____16. I've been giving up the attempt to cope.
_____17. I've been looking for something good in what is happening.
_____18. I've been making jokes about it.
_____19. I've been doing something to think about it less, such as going to the movies, watching TV, reading, daydreaming, sleeping, or shopping.
_____20. I've been accepting the reality of the fact that it has happened.
_____21. I've been expressing my negative feelings.
_____22. I've been trying to find comfort in my religion or spiritual beliefs.
_____23. I've been trying to get help from other people about what to do.
_____24. I've been learning to live with it.
_____25. I've been thinking hard about what steps to take.
_____26. I've been blaming myself for things that happened.
_____27. I've been praying or meditating.
_____28. I've been making fun of the situation.

APPENDIX K

MULTIDIMENTIONAL SCALE OF PERCIEVED SOCIAL SUPPORT

1	2	3	4	5	6	7
Very Strongly Disagree	Strongly Disagree	Mildly Disagree	Neutral	Mildly Agree	Strongly Agree	Very Strongly Agree

Indicate how you feel about each statement.

____ 1. There is a special person who is around when I am in need.

____ 2. There is a special person with whom I can share my joys and sorrows.

____ 3. My family really tries to help me.

____ 4. I get the emotional help and support I need from my family.

____ 5. I have a special person who is a real source of comfort to me.

____ 6. My friends really try to help me.

____ 7. I can count on my friends when things go wrong.

____ 8. I can talk about my problems with my family.

____ 9. I have friends with whom I can share my joys and sorrows.

____ 10. There is a special person in my life who cares about my feelings.

____ 11. My family is willing to help me make decisions.

____ 12. I can talk about my problems with my friends.