Summer 8-7-2012

The Mediating Role of Coping on the Relationship Between Attachment Style and Posttraumatic Stress Disorder Among Suicidal African American Women

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ACCEPTANCE

This dissertation, THE MEDIATING ROLE OF COPING ON THE RELATIONSHIP BETWEEN ATTACHMENT STYLE AND POSTTRAUMATIC STRESS DISORDER AMONG SUICIDAL AFRICAN AMERICAN WOMEN, by WENDY HEATH-GAINER, was prepared under the direction of the candidate's Dissertation Advisory Committee. It is accepted by the committee members in partial fulfillment of the requirements for the degree, Doctor of Philosophy, in the College of Education, Georgia State University.

The Dissertation Advisory Committee and the student's Department Chairperson, as representatives of the faculty, certify that this dissertation has met all standards of excellence and scholarship as determined by the faculty. The Dean of the College of Education concurs.

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ABSTRACT

THE MEDIATING ROLE OF COPING ON THE RELATIONSHIP BETWEEN ATTACHMENT STYLE AND POSTTRAUMATIC STRESS DISORDER AMONG SUICIDAL AFRICAN AMERICAN WOMEN

by

Wendy Heath-Gainer

The literature on clinical interventions for suicide prevention indicates that low-income, suicidal African American females are an historically underserved population. Contributing to this lack of service are the intersecting influences of race, ethnicity, culture, gender, sexual orientation, socioeconomic status and related oppressions (APA, 2007). In suicidal African American females, a higher level of reported symptoms of posttraumatic stress disorder has been found in suicide attempters as compared to nonattempters (Kaslow et al., 2000), and PTSD has been shown to be associated with heightened risk of an ensuing suicide attempt (Wilcox, Storr, & Breslau, 2009). One factor affecting manifestation of PTSD symptoms is attachment style. When a person with an insecure attachment style experiences a traumatic event(s), they are more likely to develop PTSD (Dieperink, Leskela, Thuras, & Engdahl, 2001). However, if effective coping methods are learned, more severe symptoms of PTSD are less likely (e.g., DeRoma et al., 2003; Johnsen, Eid, Laberg, & Thayer, 2002). Multiple studies examining the relationship between attachment style and coping find insecure attachment linked to poor coping skills (e.g., Schmidt, Nachtigall, Wuethrich-Martone, & Strauss, 2002; Yih-Lan, 2003). Those with insecure attachment styles are more likely to employ less effective coping methods leading to increased distress and interpersonal problems. However, there is research to support the possibility of insecure attachment style shifting to a more secure form, potentially through learning coping skills that offset maladaptive

coping. This study examined the mediating role of coping on the relationship between attachment style and PTSD symptoms. One hundred and fifty African American women enrolled in a project designed to understand the experiences of low income, African American women completed a *Demographic Data Questionnaire, The Relationship Style Questionnaire* (*RSQ*) (Griffin & Bartholomew, 1994), *The Ways of Coping, Revised* (Folkman & Lazarus, 1985), and *The Posttraumatic Diagnostic Scale* (*PDS)* (Foa, Cashman, Jaycox, & Perry, 1997). The relationships among factors were examined using Structural Equation Modeling. Results indicated a significant direct path between Insecure Attachment and PTSD Symptoms of moderately weak strength, between Insecure Attachment and Emotion-Focused Coping of moderate strength, and between Insecure Attachment and Problem-Focused Coping of moderately weak strength. However, neither Emotion-Focused nor Problem-Focused Coping mediated the relationship between Insecure Attachment and PTSD symptoms. Clinical implications, limitations of the study, and future directions are discussed in terms of these results.

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A Dissertation

Presented in Partial Fulfillment of Requirements for the
Degree of
Doctor of Philosophy
in
Counseling Psychology
in
the Department of Counseling and Psychological Services
in
the College of Education
Georgia State University

Atlanta, GA
2012

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CHAPTER 1

THE MEDIATING ROLE OF COPING ON THE RELATIONSHIP BETWEEN ATTACHMENT STYLE AND POSTTRAUMATIC STRESS DISORDER AMONG SUICIDAL AFRICAN AMERICAN WOMEN

In a review of the literature on suicide prevention, low-income, suicidal African American females emerge as an historically underserved population with respect to mental health care and clinical interventions (Ojeda & McGuire, 2006; Padgett, Patrick, Burns & Schlesinger, 1994; Rosen, Tolman, Warner & Conner, 2007; Sue, 1977). There are several factors that contribute to the notable lack of services offered to these women, which include the intersecting influences of race, ethnicity, culture, gender, sexual orientation, socioeconomic status, and related oppressions (APA, 2007).

A salient research finding on low-income, suicidal African American females includes a higher level of reported symptoms of posttraumatic stress disorder in suicide attempters as compared to nonattempters (Kaslow et al., 2000). Further, PTSD has been shown to be associated with heightened risk of an ensuing suicide attempt (Wilcox, Storr, & Breslau, 2009).

One factor that seems to impact the manifestation of PTSD symptoms is an individual's attachment style. Individuals with an insecure attachment style who are exposed to a traumatic event(s) are more likely to develop PTSD (Dieperink, Leskela, Thuras, & Engdahl, 2001) or distressful states such as depression, anxiety, somatization, and hostility (Mikulincer, Florian, & Weller, 1993) as compared to secure individuals. However, if these individuals use effective coping methods, it is less likely that they will develop more severe symptoms of PTSD (e.g., DeRoma et al., 2003; Johnsen, Eid,

Laberg, & Thayer, 2002).

Multiple studies have examined the relationship between attachment style and coping (e.g., Lopez and Gormley, 2002; Lopez, Mauricio, Gormley, Simko, & Berger, 2001; Seiffge-Krenke & Beyers, 2005). In particular, insecure attachment has often been linked to poor coping skills. Those with insecure attachment style are more likely to employ less effective coping methods (Schmidt, Nachtigall, Wuethrich-Martone, & Strauss, 2002; Yih-Lan, 2003), which leads to increased distress (Wearden, Cook, & Vaughan-Jones, 2003) and limited interpersonal relationships/support (Fullam, 2002; Gick & Sirois, 2010; Hawkins, Howard, & Oyebode, 2007). However, there is research to support the notion that attachment style can be shifted to a more secure form, which is helpful in allowing the individual to have more beneficial relationships and lower stress (see Mikulincer and Shaver, 2007). It is also possible that a person with a more insecure style may learn coping skills that would offset some of the maladaptive coping and interaction styles associated with insecure attachment; this has been demonstrated by use of security priming (Sohlberg, Claesson & Birgegard, 2003), Transference-Focused Psychotherapy (Levy et al., 2006), and Mentalization-Based Therapy (Fonagy & Target, 1997).

Suicidal Low-income African American Women, Attachment Style, and Coping

In African American men and women ages 15 to 24, suicide is the third leading cause of death, while it is the seventh leading cause of death in African American men and women in the 35 to 44 age group (Anderson et al., 1997). Although completed suicides are higher in African American males, African American females are more likely than males to attempt suicide (CDC, 2005).

It is probable that reported suicide rates underestimate the number of suicides in African Americans. Suicides in African Americans, compared with any other ethnic group, are more likely to be miscategorized (Phillips & Ruth, 1993; Warhauser & Monk, 1978). One likely reason for underreporting of suicides is avoidance of stigma surrounding suicidal behaviors in African Americans (Gibbs, 1997; Range et al., 1999); these stigma are often linked to religious beliefs against suicide (Barnes, 2006), cultural taboo, and a view of depression and suicide as personal weakness or moral failure (Poussaint & Alexander, 2000). Another reason is the possibility that suicides are wrongly classified as an accident or a homicide (Poussaint & Alexander, 2000; Satcher, 1998). For example, a "victim-precipitated homicide" may be construed as a suicide when the person intentionally behaves in a life-threatening manner that almost ensures that another, such as a police officer, will kill them (Parent, 1999; Wolfgang, 1958). Therefore, the number of completed suicides reported for African Americans, in general, and African American women, specifically, may underestimate the severity of the problem.

A connection has been noted with respect to African American adolescents' likelihood to attempt suicide when attachment to caregivers is potentially compromised. In a study by Lyon et al. (2000), suicide attempters, when compared with controls, were over 20 times more likely to have been threatened with separation by a parent/caregiver. Fortunately, there are therapeutic treatments such as Attachment Based Family Therapy for youth who attempt suicide, which focus on mending relational ruptures and reconnecting trustworthy relationships within the family which, in turn, reduce risk factors for depression (Diamond, Siqueland, & Diamond, 2003). In fact, Attachment-

Based Family Therapy has been shown to significantly reduce suicidal ideation post-treatment and at follow-up (Diamond et al., 2010).

As adults, suicidal African American females have been found to display a significantly higher level of insecure attachment when compared to a control group (Twomey, Kaslow, and Kroft, 2000). Santorelli, Jackson, Woods, and Kaslow (2010) found that attachment style in suicidal, abused African American females accounted for 17% of the variance in stressful life events. Further, after controlling for effects from each attachment style, only fearful/insecure attachment style significantly predicted stressful life events. Likewise, after controlling for effects from each attachment style, only fearful attachment was associated with social victimization and difficult cultural and social life experiences (2010). Additionally, suicidal and abused African American females with insecure attachment style (fearful) who were experiencing interpersonal hassles (social victimization, lack of social acceptability, and perceived social differences) were found to be less likely to attend group psychotherapy (Ilardi & Kaslow, 2009).

In general, African American women who attempt suicide are more likely to utilize maladaptive coping skills than those who do not attempt suicide (Kaslow et al., 2000; Kaslow, Thompson, Meadows, Jacobs, & Chance, 1998). African American female suicide attempters report lower levels of coping skills as well as feeling more hopeless, receiving lower levels of social support, being less effective at procuring material resources, having less spiritual well-being, and feeling less self-efficacious when compared to nonattempters (Kaslow, Thompson, Okun, Price, and Young, 2002). Additionally, research on African American women has identified specific coping

methods employed to deal with adverse conditions. In one study elucidating these specific coping behaviors, African American suicide attempters (of both genders), as compared to nonattempters, displayed a higher likelihood of utilizing maladjustive coping methods like escape avoidance, along with a depressive attribution style, while being less inclined to use adaptive strategies including planful problem solving, seeking social support, and positive reappraisal (Kaslow et al, 2004). Qualitative research, seeking to identify African American women's beliefs regarding coping behaviors in relation to mental illness, uncovered participants' endorsements that professional counseling, informal support, religious coping, self-help, and avoidance or denial of their problems were helpful; while feelings on using medication were mixed, with most preferring counseling to medication (Ward, Clark & Heidrich, 2009).

Alternatively, several types of protective factors and coping have been highlighted as promoters of resilience in suicidal African American females. In a study examining suicidal African American females, high levels of positive religious coping have been shown to foretell an increase in religious well-being over a period of time (Arnette, Mascaro, Santana, Davis & Kaslow, 2007). Studies on protective factors in prevention of depression (Reed, McLeod, Randall & Walker, 1996) and suicide (Meadows, Kaslow, Thompson & Jurkovic, 2005), in African American females, point to social support via family as a significant coping factor. Hope, self-efficacy, spirituality, social support via friends, coping and being effective at obtaining resources also predict a higher rate of protection in suicidal African American women who had endured recent intimate partner violence (Meadows et al., 2005). Incorporating these factors into therapeutic interventions will likely prove beneficial in similar populations. These

findings necessitate development of culturally tailored interventions designed to reduce depression and suicidal behaviors within this population.

Posttraumatic Stress Disorder in Suicidal Low-income African American Women

Alim et al. (2006) reported that, of African American primary care patients, 51% of those who had been exposed to trauma developed PTSD during their lifetime. In an empirical study by Bradley, Schwartz & Kaslow (2005) with suicidal African American females who had a history of interpersonal violence, the overall sample reported an average score on the Davidson Trauma Scale (DTS) which met criteria for PTSD. In the same study, a significant positive correlation was detected between a history of childhood maltreatment and interpersonal violence (in adulthood) and level of PTSD symptoms. Further, lower levels of self-esteem and higher levels of negative religious coping (i.e. appraisals related to demonic forces or God as a punishing entity, expression of spiritual discontent) were found to increase the likelihood of participants having experienced PTSD. In comparison to African American females who did not attempt suicide, those who did indicate more symptoms of posttraumatic stress disorder, psychological distress, and hopelessness (Kaslow et al., 2000; Kaslow et al., 1998; Kaslow et al., 2002; Thompson, Kaslow, Bradshaw, & Kingree, 2000; Thompson, Kaslow, Kingree, Puett, & Thompson, 1999). In fact, attempters were almost seven times more likely to indicate global distress and about four times more likely to report PTSD symptoms (Kaslow et al., 2000).

Within the population of suicidal African American females, the relationship between low income and symptoms of PTSD and depression can be attributed to three main sources (Bryant-Davis, Ullman, Tsong, Tillman, Smith, 2010). First, women living

in impoverished environments have a greater chance of coming into contact with community violence, and as a result, their mental health symptoms are heavily impacted by exposure to several traumatic events instead of one isolated event (Brown, Hill & Lambert, 2005; Dennis, Key, Kirk, & Smith, 1995; Kiser & Black, 2005). Second, having a low income or no income at all can block access to adequate mental health care (Kubiak, 2005; Ngui & Flores, 2007; Paranjape, Heron & Kaslow, 2006; Teruya et al., 2010). Third, societal trauma, oppression, and discrimination are related to the intersecting identities of being African American, female, and impoverished (Ancis & Davidson, in press; APA, 2007; Bryant-Davis & Ocampo, 2006). These sociocultural factors must be taken into consideration in understanding, providing care for, and retaining in therapy suicidal African American female clients who have PTSD or associated symptoms.

The following sections introduce relevant constructs that will be examined in a more in-depth manner as well as demonstrate how they are interrelated.

Attachment Style

Individual differences likely play a pivotal role in the process of adaptation and coping (Lazarus & Folkman, 1984). One of the key identified individual differences is attachment style. A fundamental concept of John Bowlby's theory is that the security of one's attachments can be conceptualized as an "inner resource" that can help a person successfully organize experience and manage distress (Mikulincer & Florian, 1998). Attachment style has also been identified as one of the interpersonal factors influential in the development of PTSD (van der Kolk, 1988; Sable, 1995; Dieperink, Leskela, Thuras, & Engdahl, 2001).

Attachment is a concept originally attributed to the adult attachment styles theorized by Bowlby (1969, 1973, 1980) and used in the often cited Strange Situation paradigm (Ainsworth et al., 1978). The original attachment types include secure, avoidant, and anxious/ambivalent. According to attachment theory, early relationships with parents or caregivers (during infancy, childhood, and adolescence) lead to mental models of self and others, which influence support seeking and giving as an adult. Moreover, these mental models are conceptualized as trait-like and stable over time (Kirkpatrick & Hazen, 1994; Scharfe & Bartholomew, 1994; Waters, Merrick, Treboux, Crowell, & Albersheim, 2000).

In extension of the initial theory of attachment, adult love relationships have been conceptualized through the idea of romantic attachment. This concept was initially presented by Hazen and Shaver (1987) in their effort to extend the infant-mother attachment styles of Mary Ainsworth and colleagues to adult romantic attachment types. Hazen and Shaver's romantic attachment types, like Ainsworths', included secure, anxious/ambivalent, and avoidant (1987). In augmenting the types of romantic attachment proposed by Hazen and Shaver, Bartholomew and Horowitz (1991) added a fourth adult attachment type – dismissing (avoidant) – to the pre-existing secure, preoccupied (anxious/ambivalent), and fearful (avoidant) types.

Since various studies use either the Hazen and Shaver's three attachment types (anxious/ambivalent, avoidant, secure), or the Bartholomew and Horowitz's four attachment types (fearful, dismissing, preoccupied, and secure), this can be confusing at times. While the secure types correspond, there is some departure with the insecure types. Within the insecure types, Hazen and Shaver's anxious/ambivalent corresponds

with Bartholomew and Horowitz's preoccupied type. Hazan and Shaver's avoidant type was divided into two types by Bartholomew and Horowitz, which include fearful and dismissing types.

Two fundamental dimensions comprise the basis of the adult romantic attachment types – anxiety and avoidance (Brennan, Clark, & Shaver, 1998; Crowell, Fraley, Shaver, 1999). On one hand, the securely attached adult is viewed as possessing low levels of anxiety and avoidance, whereas the fearful individual scores high on both. Preoccupied adults often score lower on avoidance and higher on anxiety, while dismissing persons possess high levels of avoidance and low levels of anxiety (Brennan et al., 1998). Individual differences in attachment security have been shown to play an essential role in negative emotion regulation. Accordingly, the security provided by attachment relationships has been predicted to be integral in the formation and continuation of emotional regulation throughout the lifespan (Cassidy, 1994; Magai, 1999; Mikulincer, Shaver, & Pereg, 2003).

Coping

In a general sense, coping involves thoughts and behaviors employed to modulate the external and internal burdens of events perceived as stressful (Lazarus & Folkman, 1984). Coping mechanisms are utilized during stressful times wherein the ability to endure the stress relies greatly on the adaptiveness of the coping (Lazarus & Folkman, 1984). Further, coping has been defined as the "constantly changing cognitive and behavioral efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of that person" (Lazarus & Folkman, 1984, p. 141). When stressful events occur, varied strategies are used to cope with either the stressor

itself or subsequent emotions in order to maintain an individual's psychological homeostasis (Lazarus & Folkman, 1984).

Before coping is employed, a form of evaluation takes place to ascertain the necessity of utilizing a coping mechanism. According to Lazarus and Folkman (1984), "'cognitive appraisal' is an evaluative process that determines why and to what extent a particular transaction or series of transactions between the person and the environment is stressful" (p. 19, 1984). Within this process, two types of appraisal occur. Of these types, primary appraisal seeks to answer the questions, "'Am I in trouble or being benefitted, now or in the future, and in what way?'; while secondary appraisal attempts to understand, 'What if anything can be done about it?'"(p. 31, 1984). The interaction of primary and secondary appraisals shapes the extent of stress as well as the strength and content/quality of the emotional response (1984). These two types of appraisal provide a meditational role between the stress reaction and coping process (1984).

The four main empirically identified categories of coping consist of emotion-focused coping, problem-focused coping, meaning-focused coping, and social coping (Folkman & Moskowitz, 2004). Coping that is focused toward altering or managing the problem that is creating distress is known as "problem-focused coping," whereas coping that involves adjustment of emotional reaction to the problem is referred to as "emotion-focused coping" (Folkman & Lazarus, 1980). Typically, when an appraisal has been made that is threatening, harmful, challenging, and/or conditions cannot be altered for the better, utilization of emotion-focused efforts are more probable; however, problem-focused types of coping are more likely when these types of conditions are evaluated as having the possibility of being changed (Folkman & Lazarus, 1980). Additionally,

"meaning-focused coping" involves a person focusing on acquirement of meaning from a stressful situation. Further, social coping is another type of coping that has been considered as an additional category, and entails support-seeking from others (Folkman & Moskowitz, 2004).

Different methods of coping have been identified as impacting emotional well-being and decreasing distress (Folkman & Moskowitz, 2004). This information has been utilized to create interventions that increase coping efficacy in dealing with stress (2004). In spite of the need for research on coping, the task of establishing coping effectiveness is still one of the most confounding in coping research (Somerfield & McCrae, 2000). In finding effective coping methods for the appropriate population, a contextual approach appears to be the best choice (i.e. Lazarus, 1966; Moos & Holahan, 2003). In coping research, the contextual approach clearly dictates that coping methods are not intrinsically good or bad (Lazarus & Folkman, 1984). As such, the adaptive characteristics of coping processes must be measured in the situation-specific context of stress while keeping in mind that the context changes; so, what might prove to be effective coping near the beginning of a stressful circumstance may become ineffective later in the same situation (Folkman & Lazarus, 1985). Evaluating coping from a contextual position calls for two key components. First, significant personal goals/outcomes must be chosen, and second, the quality of fit between coping and the demands of a situation must be observed (Folkman & Moskowitz, 2004).

Research has shown that African American attempters of suicide are more likely to cope utilizing a depressive attributional style and escape avoidance rather than adaptive coping methods such as planful problem solving, seeking social support,

positive reappraisal, religious involvement, and spiritual well-being (Kaslow et al., 2004). In line with a contextual approach, although certain types of coping are not considered "adaptive," they may nonetheless allow for survival in a suicidal individual until more optimal conditions are encountered. Withdrawal from others may be adaptive in one circumstance and not so in another. For example, depression-related withdrawal may lead a woman to cut ties from her domestically abusive in-law family, which shields her from further abuse. However, the same type of withdrawal from nurturing family members who provide help with child-rearing duties could be detrimental. Overall, taking culture into consideration may also allow for a more comprehensive view of what is normative or adaptive in various situations. For example, African American women may find certain types of coping, such as withdrawal, to be a buffer in getting through difficult times encountered via racial discrimination or traversing adverse socio-economic situations. However, the same type of coping may become self-destructive when help is needed and she is thus prevented from doing so.

One question concerning the measurement of coping involves the degree to which coping approaches are influenced by cultural factors. Action-oriented coping has been demonstrated to be strongly associated with positive psychological outcomes, while emotion-focused and avoidance strategies have frequently been related to lower levels of mental health (Endler & Parker, 1990; Seiffge-Krenke, 1993). However, the emphasis on personal agency and problem-focused coping within coping research may indicate cultural bias (Bandura, 1982; Dunahoo et al., 1998), as both of these concepts are emphasized and held valuable by individualistic cultures (Yeh, Arora &Wu, 2006). It is possible that previous coping research has not utilized diverse or representative samples

that may have found alternatives to action-oriented coping as adaptive. It is also likely that placing a greater emphasis on the context of coping may yield scenarios where emotion-focused and avoidance coping are found to be more adaptive.

Posttraumatic Stress Disorder

As Briere and Scott (2006) indicate, there is frequently a lack of clarity in the general use of the term "trauma". Some authors have defined trauma as an event that causes distress, while others describe trauma as the distressful reaction itself. The accurate use of the term "psychological trauma" solely denotes the event, not the resultant reaction (Briere & Scott, 2006). This event is of a magnitude that is overwhelming to the person experiencing it. Some of the events that would fall into the category of "trauma," according to the *Diagnostic and Statistical Manual of Mental Disorders,* 4th edition, Text Revision, include sexual and physical assault, combat, being kidnapped, robbery, terrorist attacks, torture, being taken hostage, severe automobile accidents, natural disasters, witnessing death or serious injury (by accidents, disaster, war, or violent assault), or life–threatening illnesses (American Psychiatric Association [DSM-IV-TR], 2000). It is sometimes mistakenly assumed that everyone that encounters one of these traumatic events will develop Posttraumatic Stress Disorder. However, research has shown that only a portion of those exposed to a traumatic event will go on to develop PTSD (Breslau, Davis, Andreski, & Peterson, 1991; Elliot, 1997; Kulka, Schlenger, Fairbank, Hough, & Jordan, 1990).

According to the, *DSM-IV-TR,* Posttraumatic Stress Disorder involves the development of specific symptoms following exposure to an extreme traumatic stressor, which entails direct personal experience of an incident that includes actual or threatened

death or serious injury, or other threat to one's physical integrity; or witnessing an event that involves death, injury, or a threat to the physical integrity of another person; or finding out about unexpected or violent death, serious harm, or threat of death or injury experienced by a family member or other close associate (Criterion A1). The person's response to the event must involve intense fear, helplessness, or horror (or in children, the response must involve disorganized or agitated behavior) (Criterion A2). The characteristic symptoms resulting from the exposure to the extreme trauma include persistent reexperiencing of the traumatic event (Criterion B), persistent avoidance of stimuli associated with the trauma and numbing of general responsiveness (Criterion C), and persistent symptoms of increased arousal (Criterion D). The full symptom picture must be present for more than one month (Criterion E), and (Criterion F) the disturbance must cause clinically significant distress or impairment in social, occupational, or other important areas of functioning (4th ed.,TR; American Psychiatric Association, 2000).

Overall, among those exposed to extreme trauma, about 9 percent develop post-traumatic stress disorder (Breslau et al., 1998). Assessing the prevalence of PTSD in African Americans has been a problem due to insufficient sample size, which is a limitation in epidemiological studies. Accurate estimates in more representative African American populations have yet to be calculated (Alim, Charney, & Mellman, 2006). Gender-related studies indicate that women are twice as likely as men to develop PTSD, and the disorder tends to have a longer duration for women as compared to men (Kessler, Sonnega, Bromet, Hughes, & Nelson, 1995). Additionally, chronic PTSD is diagnosed approximately four times more often in women compared with men (Breslau & Davis, 1992).

Attachment and Coping

Attachment security has often been measured according to a four scale model – secure, preoccupied, fearful, and dismissive, as in The Relationship Style Questionnaire (RSQ) developed by Griffin & Bartholomew (1994), or a three scale model – secure, anxious/ambivalent, and avoidant as described by Hazen and Shaver (1987). The literature on attachment and coping points to a strong relationship between insecure attachment styles and less adaptive forms of coping. In a study on college students, anxious attachment was significantly related to reactive coping, while avoidant attachment was significantly related to suppressive and reactive coping (Lopez, Mauricio, Gormley, Simko, & Berger, 2001). In another study by Lopez and Gormley (2002), first-year college students who were classified as remaining secure throughout the first year showed significantly higher adaptive problem coping; this entailed maintenance of security that was related to improving their ability to modulate negative feelings that tend to hamper effective coping. In the same study, losing attachment security corresponded to a decline in the maintenance of security that enhances effective coping. Lopez and Gormley found that those who remained insecure over freshman year evidenced increased use of suppressive coping (avoidance, denial, lack of persistence, confusion) and likely increased the probability of dropping out of school. In another study with hospice nurses, those with dismissing or fearful attachment style were less likely to seek emotional social support in coping with stress as compared to nurses with a preoccupied or secure attachment style (Hawkins, Howard, & Oyebode, 2007).

In studies examining attachment style and coping with health issues, insecure styles have been more predictive of less effective coping styles. For example, anxious

and avoidant attachment styles were negatively correlated with coping efficacy and perceived social support in female patients with Inflammatory Bowel Disease (Gick & Sirois, 2010); avoidant attachment was weakly predictive of emotional preoccupation and symptom reporting as ways of coping with health problems (Wearden, Cook, & Vaughan-Jones, 2003); and insecure attachment was related to less flexible coping in participants with chronic disease (Schmidt, Nachtigall, Wuethrich-Martone, & Strauss, 2002).

Research related to attachment and coping in adolescents found secure attachment to be positively associated with rational coping/support seeking, dismissing attachment as positively linked to distancing and self-reliance coping, preoccupied attachment positively related to rational coping/support seeking, and fearful attachment as positively associated with avoidance coping and negatively with rational coping/support seeking (Yih-Lan, 2003). In a similar population, adolescents through young adulthood, Seiffge-Krenke & Beyers (2005) found that secure individuals handled their problems more actively via use of their social network. In the same study, secure and dismissing persons were found to use more internal coping than individuals with a preoccupied attachment style.

Overall, those with secure attachment appear to cope more adaptively. However, for those with insecure attachment, coping outcome may depend to a greater extent on the context or type of problem.

Can those with insecure attachment styles learn or possess adaptive coping skills? The behaviors associated with insecure attachment include those that are emotive, impulsive, reflexive, and lacking in cognitive processing; more specifically, these tend to

include maladaptive dependence, clinging, submission, and inability to realize danger when a perpetrator is involved (Steele, van der Hart, & Nijenhuis, 2001). In one study, those with fearful and dismissing attachment showed poorer coping in response to a laboratory-induced-stressor as demonstrated by decreased immune response and increased heart rate, while securely attached participants displayed a level of coping that was significantly better (Fullam, 2002). Overall, those categorized as insecure participated in interpersonal and intimate relationships of lower quality, expected negative things to happen, were more prone to display psychopathology, and showed compromised physiological responses to stress as compared to securely attached individuals (Fullam, 2002). Insecure attachment can be seen as a possible risk factor contributing to ineffective coping and maladjustment (Mikulincer & Florian, 1998; Shaver & Hazan, 1993).

One important question concerns whether those with insecure attachment can learn to cope or alter their present coping style in order to experience less distress and better adjustment. One technique that has appeared to have value in this area is security priming. Four recent studies have shown promise in using security priming to increase feelings of security in the insecure individual. In a study by Sohlberg, Claesson, and Birgegard (2003), participants who had been primed with the statement, “Mommy and I are one,” when compared with controls conveyed more secure attachment/lower level of anxious and avoidant attachment, lower levels of depression, and less fear of intimacy. Similarly, Dandeneau, Baldwin, Baccus, Sakellaropoulo, and Preuessner (2007) found that an experimental group “primed” to see loving/smiling/accepting faces felt significantly less stress after five days of this activity, and that these effects persisted

after the fifth day. Moreover, after five days in which participants had been primed with the faces, those in the experimental group showed a significant gain in self-esteem, decrease in self-reports of stress and cortisol levels, improved sales performance, and higher self-confidence ratings by supervisors in comparison to the control group.

In another study that examined the possibility of changing one's attachment style (Carnelley and Rowe, 2007), the experimental group was security primed by having them write about an attachment figure and imagine themselves surrounded by supportive others that would help them in a problematic situation. Those in the experimental group had increased positive expectations of the behavior of their relationship partner as well as more positive views of self. Attachment anxiety was shown to be decreased, but with no significant change in avoidant attachment.

Another study utilized repeated priming to discern whether this process would extend the benefits to one week post-priming sessions (Gillath & Shaver, 2007). Every other weekday, for a three week period, participants in the experimental group were primed with words such as "love," "secure," and "embrace," while the neutral group was exposed to more neutral words such as "lamp" and "funnel." At the conclusion of this study, those in the experimental group displayed higher scores on positive mood, self-esteem, and compassion towards others than those in the control group; although the experimental group showed greater scores on creativity, the difference for creativity was not significant.

In addition to the technique of security priming, some forms of psychotherapy have been shown to play a role in helping insecure attachments shift to more secure styles. Researchers found that in comparing three types of therapeutic styles used with

insecurely attached clients over a 12 month period, one type – transference-focused psychotherapy (TFP) facilitated a significant number of shifts from insecure to secure classification (Levy et al., 2006). Other therapeutic techniques such as Mentalization-Based Therapy (MBT) have demonstrated promising results (Bateman & Fonagy, 1999, 2001, 2003). Mentalization refers to an ability to recognize one's own and others' mental states, and to view these mental states as distinct from behavior; this includes the ability to think about emotions, thoughts, wishes, needs and desires in one's self and others, and to discern that while these internal states impact the actions of self and others, they are separate from those actions (Bateman & Fonagy, 2004). As described by Fonagy and Target (1997), mentalizing allows others' behavior to become predictable and meaningful. Fonagy and Bateman (2006) assert that the evidence obtained thus far to support mentalization's efficacy shows "…that psychotherapy has the potential to recreate an interactional matrix of attachments in which mentalization develops and flourishes. The therapist's mentalizing in a way that fosters the patient's mentalizing is seen as a critical facet of the therapeutic relationship and the essence of the mechanism of change. The crux of the value of psychotherapy is the experience of another human being's having the patient's mind in mind" (p.415).

One last area of research that suggests that a person who is insecurely attached early in life may develop a more secure style involves the concept of "earned-secure attachment." According to multiple studies on the possibility of changing attachment style, it is likely that certain developmental processes allow individuals to transcend poor parenting histories and become more secure than what would have typically been predicted (Paley, Cox, Burchinal, & Payne, 1999; Pearson, Cohn, Cowan, & Cowan,

1994; Phelps, Belsky, & Crnnic, 1998; Sroufe, Carlson, Levy, & Egeland, 1999). The findings of a follow-up study on this subject examined earned-security from a retrospective and prospective standpoint. This study found that from a retrospective viewpoint earned-secures indicated somewhat more internalizing distress in adults than in those who were categorized as continuously secure. However, prospective measures failed to discriminate between secure adults with history of insecure infant attachment from secure adults who were designated as secure from infancy through adulthood (Roisman, Padron, Sroufe, & Egeland, 2002). So, it is possible for an initially insecure individual to become secure at some point in life. The above studies indicate a capacity for those with an insecure attachment style to acquire, via specific techniques or general therapeutic relationship, more adaptive coping.

Coping and PTSD

Coping styles have been demonstrated to be a predictive factor in whether or not a person develops PTSD. Research indicates that spiritual/religious coping, death anxiety, and pain level predicts PTSD in individuals with spinal injuries (Martz, 2004). An empirical study by Clark, Amster, Irish, Sledjeski, and Delahanty (2007) revealed that the coping method utilized significantly predicted emergence of PTSD symptoms six weeks post motor vehicle accident. Clark et al. also found that the use of self-distraction coping and venting were strongly significant predictors of PTSD development, while self-blame, seeking emotional support and religious coping were marginally significant. A study examining Vietnam veterans found that social support (emotional and instrumental) and problem-solving coping were negatively and significantly related to PTSD, while wishful-thinking coping was positively and significantly related to PTSD (Martz, Bodner,

& Livneh, 2010). Research on college students who experienced a significant loss revealed only avoidant emotional coping was a significant predictor of PTSD and complicated grief severity, when trauma frequency and time since loss were controlled for (Schnider, Elhai, & Gray, 2007).

Adaptive coping has been shown to have a positive effect on the recovery of individuals with Post Traumatic Stress Disorder. A study examining bereaved, young adults showed that cognitive transformation occurred via recognition that coping with difficult situations led to new opportunities and that the re-evaluation of the experience from traumatic/threatening to growth-promoting led to adaptation and resilience; this in turn likely reduced risk trajectory (Tebes, Irish, Vasquez, & Perkins, 2004). A study on Vietnam veterans found that problem solving coping and emotional social support helped lessen the influence of disability on level of PTSD (Martz, Bodner, & Livneh, 2010). In research on healthcare professionals who had been deployed during Operation Iraqi Freedom, repressor coping scores obtained predeployment negatively predicted symptoms of PTSD experienced postdeployment (McNally et al., 2011). Likewise, an empirical study by Smeets, Giesbrecht, Raymaekers, Shaw and Merckelbach (2010) also found that those who experienced trauma and typically utilized repressive coping (defined in this study as low anxiety, high defensiveness) report a lower number of posttraumatic stress symptoms.

Conversely, less adaptive forms of coping may prolong trauma symptoms or thwart healing from PTSD. For instance, interpersonal violence survivors who were higher on emotion-focused coping had more PTSD symptoms than women who rarely utilized emotion- focused coping (Lilly & Graham-Bermann, 2010). In a study on female

survivors of assault, those who relied heavily on avoidant coping strategies and tended to be highly reactive to reminders of trauma were at the highest risk of maintaining or increasing their symptoms of PTSD in the first few months after the trauma (Pineles et al., 2011). Another study on participants who had experienced a heart attack found that dysfunctional coping (avoidance, thought suppression) and perceived consequences of illness (e.g., negative perceived consequences, illness identity, emotional response to the illness, and belief that it would be chronic) were highly associated with symptoms of PTSD after past history and myocardial infarction variables were controlled (Ayers, Copland, & Dunmore, 2009).

Interventions targeting specific types of coping offer promise in reducing the impact of PTSD. In this vein, a study on women in substance abuse treatment found that interventions for this population should focus on stopping interpersonal loss spirals while building healthy interpersonal relationships in order to minimize PTSD severity (Schumm, Hobfoll, & Keogh, 2004).

Attachment and PTSD

Attachment style has been shown to have a direct effect on the experience of trauma and eventual development of PTSD. In particular, in a study by Dieperink, Leskela, Thuras, and Engdahl (2001), prisoner of war veterans identified as having secure attachment scored significantly lower on PTSD assessment than those identified as insecure. Dieperink et al. also found that attachment style more strongly predicted intensity of PTSD symptoms than trauma severity. Further, insecure attachment style may offer interpersonal and interpsychic blockages to recovery after exposure to trauma. A failure in early attachment experiences/behavior could lead to a cognitive bias that

others will not be available when stressful times arise. These biases, along with insufficient affect regulation, could culminate in an individual's propensity to become overwhelmed by trauma and to display diminished resilience in its wake. Due to insecurely attached individuals' likelihood to see relationships as unreliable, they are also apt to underutilize them or use them less effectively during coping and recovering efforts after a trauma (Dieperink et al., 2001). A commensurate finding by Muller, Sicoli, and Lemieux (2000) revealed that those assessed as having preoccupied and fearful attachment styles, with the concomitant negative view of self, acquired the highest average scores on posttraumatic symptoms.

In another study on Israeli Jewish settlers, Mikulincer, Horesh, Eilati, and Kotler (1999), found a positive relationship between avoidant and anxious-ambivalent attachment styles and measures of symptomatology. Moreover, whereas anxious-ambivalent attachment was related to psychopathology in both the high-threat and control groups, avoidant attachment was only related to psychopathology in the high-threat condition. Further, Declercq and Willemsen (2006) found that preoccupied and fearful-avoidant attachment styles reported more stress than secure and dismissive insecure style. These same attachment styles differentiate those who will or will not develop PTSD. More specifically, Declercq and Willemsen found that attachment anxiety appears to be more indicative of psychological distress and the development of PTSD than attachment avoidance.

In contrast, some research partially contradicts previously mentioned findings. Fraley, Fazzari, Bonnano, and Dekel (2006) found that those dismissing insecure styles showed neither increases or decreases in adjustment (as reported by friends and family)

following the September 11th attacks on the World Trade Center, despite their self-report of fairly high levels depression and PTSD. A study performed by Nye et al. (2008) on combat veterans with PTSD found that although insecure attachment style was associated with unresolved mourning after loss, it was not differentially associated with combat-related PTSD. Despite these findings, the majority of studies point to a connection between insecure attachment style (most often preoccupied or fearful/avoidant types) and PTSD symptoms.

Conclusion

Many studies have examined the constructs of attachment, coping, and PTSD (or other form of psychological distress/clinical disorders). Populations studied include Israeli college students (Besser & Neria, 2011; Milkulincer, Florian & Weller, 1993), American college students (Lopez, Mauricio, Gormley, Simko, & Berger, 2001; Wei, Heppner & Mallinckrodt, 2003), Dutch non-university adult students (O'Connor & Elklit, 2008), adult Canadian trauma survivors (Benoit, Bouthillier, Moss, Rousseau, & Brunet, 2010), female adult survivors of childhood abuse (Cloitre, Stovall-McClough, Zorbas & Charuvastra, 2008), adolescent survivors of childhood abuse (Shapiro & Levendosky, 1999), divorcing couples (Birnbaum, Orr, Mikulincer & Florian, 1997), and Icelandic parents of chronically ill children (Guomundsdottir, Guomundsdottir & Elklit, 2006).

Coping as a mediator between attachment and distress has been investigated (Besser & Neria, 2011; Wei, Heppner & Mallinckrodt, 2003; Lopez, Mauricio, Gormley, Simko, & Berger, 2001; and Birnbaum, Orr, Mikulincer, & Florian, 1997). Although these studies have established the significant meditational role of coping between attachment and distress symptoms, no studies exist that explore the role coping plays in

mediating the relationship between attachment style and PTSD in suicidal African American females. It is likely that this relationship also exists in low income, suicidal African American females because of their vulnerability to unhealthy coping and traumatizing events that increase the likelihood of developing PTSD (Bryant-Davis, Ullman, Tsong, Tillman, & Smith, 2010). Additionally, prior research on suicidal African American females has found significant relationships between attachment and coping, coping and PTSD, and attachment and PTSD, which increases the likelihood that these relationships exist in this study. The specific purpose of this study is to investigate a model where coping mediates the effects of attachment to PTSD symptoms.

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CHAPTER 2

COPING AS A MEDIATOR BETWEEN ATTACHMENT STYLE AND POSTTRAUMATIC STRESS DISORDER AMONG SUICIDAL AFRICAN AMERICAN WOMEN

Suicide is one of the top ten causes of death in African American females ages 10 – 35, and one of the top five causes in the 15 – 19 year age group (Centers for Disease Control and Prevention [CDC], 2006). The number of completed suicides reported for African Americans, in general, and African American women, specifically, may underestimate the severity of the problem. Due to the stigma associated with suicidal behaviors in African Americans, completed suicides may be underreported (Gibbs, 1997; Range et al., 1999), while they may also be wrongly classified as homicides or accidents more often than in any other ethnic group (Phillips & Ruth, 1993; Warhauser & Monk, 1978).

Low-income, African American females are an historically underserved population with respect to mental health care (Ojeda & McGuire, 2006; Padgett, Patrick, Burns & Schlesinger, 1994; Rosen, Tolman, Warner & Conner, 2007; Sue, 1977). Multiple factors influence the deficiency of services for this population, which include the intersecting influences of race, ethnicity, culture, gender, sexual orientation, socioeconomic status, and related oppression (APA, 2007). In attending to these factors, culturally relevant and effective practice remains limited (Ancis, 2004).

Low-income, African American female suicide attempters report a higher level of posttraumatic stress disorder compared to nonattempters (Kaslow et al., 2000). In fact,

compared with African American, female nonattempters, those who attempted suicide were almost seven times more likely to indicate global distress and about four times more likely to report PTSD symptoms (Kaslow et al., 2000). Moreover, PTSD has been shown to be associated with heightened risk of an ensuing suicide attempt (Wilcox, Storr, & Breslau, 2009).

Attachment style is one factor that has been shown to affect the manifestation of PTSD symptoms. Research has demonstrated that when a person with an insecure attachment style is exposed to a traumatic event(s), they are more likely to develop PTSD (Dieperink, Leskela, Thuras, & Engdahl, 2001) or distressful states such as depression, anxiety, somatization and hostility (Mikulincer, Florian, & Weller, 1993). Fortunately, adaptive coping has been shown to lessen the likelihood of developing more severe symptoms of PTSD (e.g., DeRoma et al., 2003; Johnsen, Eid, Laberg, & Thayer, 2002).

The relationship between attachment style and coping has been examined in multiple studies. Specifically, insecure attachment has frequently been linked to poor coping skills. Individuals with insecure attachment styles are more likely to utilize less effective coping methods, which leads to increased distress and limited interpersonal relationships/support. In spite of this, research supports the concept that attachment style can be modified through a therapeutic relationship to allow an individual to become more secure – having better, more trusting relationships and minimal distress (Mikulincer & Shaver, 2007). Kohut (1977) describes this repair through psychotherapy, which has been empirically connected to attachment theory (see Banai, Mikulincer, & Shaver, 2005). Further, it has been demonstrated that a person with a more insecure style may learn more adaptive coping that could counteract or replace some of the maladaptive

coping and interaction styles associated with insecure attachment through security priming (as in Sohlberg, Claesson & Birgegard, 2003), Transference-Focused Psychotherapy (Levy et al., 2006), and Mentalization-Based Therapy (Fonagy & Target, 1997).

Posttraumatic Stress Disorder

Psychological trauma denotes an event of a magnitude that is overwhelming to the person experiencing it (van der Kolk & McFarlane, 1996). Some of the events that fall into the category of "trauma," according to the *Diagnostic and Statistical Manual of Mental Disorders*, 4th edition, Text Revision (1994), include sexual and physical assault, combat, being kidnapped, robbery, terrorist attacks, torture, being taken hostage, severe automobile accidents, natural disasters, witnessing death or serious injury (by accidents, disaster, war, or violent assault), or life–threatening illnesses. It is sometimes mistakenly assumed that everyone that encounters one of these traumatic events will develop Post Traumatic Stress Disorder. However, research has shown that only a portion of those exposed to a traumatic event will develop PTSD (Breslau, Davis, Andreski, & Peterson, 1991; Elliot, 1997; Kulka, Schlenger, Fairbank, Hough, & Jordan, 1990;).

Overall, among those exposed to extreme trauma, about 9% develop post-traumatic stress disorder (Breslau et al., 1998). Assessing the prevalence of PTSD among African Americans has been a problem due to insufficient sample size, which has led to a limitation in epidemiological studies; accurate estimates in more representative African American populations have yet to be calculated (Alim, Charney, & Mellman, 2006). Gender-related studies indicate that women are twice as likely as men to develop PTSD, and the disorder tends to have a longer duration for women as compared to men (Kessler,

Sonnega, Bromet, Hughes, & Nelson, 1995). Additionally, chronic PTSD is diagnosed approximately four times more often in women compared with men (Breslau & Davis, 1992).

With respect to Posttraumatic Stress Disorder in African American primary care patients, 51% of those who had been exposed to trauma developed PTSD during their lifetime (Alim et al., 2006). In one empirical study by Bradley, Schwartz and Kaslow (2005), suicidal African American females who had a history of interpersonal violence reported an average score which met criteria for PTSD on the Davidson Trauma Scale (DTS). Further, lower levels of self-esteem and higher levels of negative religious coping (i.e. appraisals related to demonic forces or God as a punishing entity, expression of spiritual discontent) were found to increase the likelihood of subjects having experienced PTSD (Bradley, Schwartz & Kaslow, 2005).

PTSD has been shown to be a significant risk factor for suicidal behavior (Davidson, Hughes, Blazer, & George, 1991; Rudd, Dahm, Fajab, & Rajab, 1993), and specifically among suicidal African American females (Thompson, Kaslow, Lane, & Kingree, 2000). In comparison to African American females who do not attempt suicide, those who do indicate more symptoms of posttraumatic stress disorder, psychological distress, and hopelessness (Kaslow et al., 2000; Kaslow et al., 1998; Kaslow et al., 2002; Thompson, Kaslow, Kingree, Puett, & Thompson, 1999; Thompson, Kaslow, Lane, & Kingree, 2000).

Specific factors have been identified as contributing to PTSD development among low income, African American females. Low income impacts symptoms of PTSD and depression through three main sources (Bryant-Davis, Ullman, Tsong, Tillman, & Smith,

2010). First, higher exposure to community violence often leads to the experience of several traumatic events instead of a single event (Kiser & Black, 2005). Second, having a low income can block access to adequate mental health care (Ngui & Flores, 2007). Third, experiences of oppression related to the intersections of being African American, female, and impoverished represent societal trauma (Bryant-Davis & Ocampo, 2006).

Attachment Style

Attachment is a concept originally attributed to John Bowlby's theory of adult attachment styles (1969, 1973, 1980). Attachment theory states that early relationships with parents or caregivers (during infancy, childhood, and adolescence) lead to mental models of self and others, which influence support seeking and giving as an adult. Moreover, these mental models are conceptualized as trait-like and stable over time. A fundamental concept of Bowlby's theory is that the security of one's attachments can be conceptualized as an "inner resource" that can help a person successfully organize experience and manage distress (Mikulincer & Florian, 1998). Individual differences in attachment security have been shown to play an essential role in negative emotion regulation. Accordingly, the security provided by attachment relationships has been predicted to be integral in the formation and continuation of emotional regulation throughout the lifespan (Cassidy, 1994; Magai, 1999; Mikulincer, Shaver, & Pereg, 2003).

The original infant-caregiver attachment types described by Ainsworth and colleagues (1978) include secure, avoidant, and anxious/ambivalent. Hazen and Shaver (1987) extended the infant-mother attachment styles of Mary Ainsworth to adult romantic attachment types; like the original types these included secure, anxious/ambivalent, and

avoidant. Bartholomew and Horowitz (1991) added dismissing (avoidant) as a fourth adult attachment type.

Since various studies use either the Hazen and Shaver's three attachment types (anxious/ambivalent, avoidant, secure), or the Bartholomew and Horowitz's four attachment types (fearful, dismissing, preoccupied, and secure), this can be confusing at times. While the secure types correspond, there is some departure with the insecure types. Within the insecure types, Hazen and Shaver's anxious/ambivalent corresponds with Bartholomew and Horowitz's preoccupied type. Hazan and Shaver's avoidant type was divided into two types by Bartholomew and Horowitz, which include fearful and dismissing types.

Insecure attachment has been identified as a factor that is related to suicidal behavior in African American females. Developmentally, adolescent African American female suicide attempters, when compared with controls, were over 20 times more likely to have been threatened with separation by a parent/caregiver (Lyon et al., 2000). As adults, suicidal African American females have been found to display a significantly higher level of insecure attachment when compared to a control group (Twomey, Kaslow, and Kroft, 2000). Santorelli, Jackson, Woods and Kaslow (2010) found that fearful attachment style in suicidal African American females significantly predicted stressful life events and difficult social and cultural life experiences. Therefore, insecure attachment has been identified as a factor that influences suicidal behavior.

Insecure Attachment and PTSD

Insecure attachment style has been shown to have a direct effect on the experience of trauma and eventual development of PTSD. For example, insecurely attached Prisoner

of War veterans scored significantly higher on PTSD assessment than those who were securely attached, where attachment style was a stronger predictor of intensity of PTSD symptoms than trauma severity (Dieperink, Leskela, Thuras, & Engdahl, 2001). Two commensurate findings revealed that those assessed as having preoccupied and fearful attachment styles reported more stress than those with secure and dismissing styles (Declercq & Willemsen, 2006) and earned the highest average scores on posttraumatic symptoms (Muller, Sicoli, & Lemieux, 2000). In another study, avoidant and anxious-ambivalent attachment styles were related to higher posttraumatic and psychiatric symptomatology in a high threat condition, while only anxious-ambivalent style was related to these symptoms in the control condition (Mikulincer, Horesh, Eilati, & Kotler, 1999). High risk professionals with dismissing insecure attachment style showed neither increases nor decreases in adjustment as reported by friends and family, even though they self-reported high levels of depression and PTSD (Fraley, Fazzari, Bonnano, & Dekel, 2006).

In contrast, in a study on combat veterans, insecure attachment was not differentially associated with combat-related PTSD (Nye et al., 2008). Overall, however, the majority of studies in this area point to a connection between insecure attachment style (most often preoccupied or fearful/avoidant types) and PTSD symptoms.

Coping

In a general sense, coping involves thoughts and behaviors employed to modulate the external and internal burdens of events perceived as stressful (Lazarus & Folkman, 1984). Coping mechanisms are utilized during stressful times wherein the ability to endure the stress depends greatly upon the adaptiveness of the mechanisms (Lazarus &

Folkman). Further, coping has been defined as the "constantly changing cognitive and behavioral efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of that person" (Lazarus & Folkman, p. 141). When stressful events occur, varied strategies are used to cope with either the stressor itself or subsequent emotions in order to maintain an individual's psychological homeostasis (Lazarus & Folkman).

It has been hypothesized that one method of decreasing the effects of insecure attachment on developing PTSD symptoms involves the mediating factor of coping. Four studies have examined factors similar to those in the current study, while seeking to confirm a mediational relationship. The four studies demonstrated relationships in which coping mediated the relationship between attachment style and distress/mental health status; these include Besser and Neria (2011); Wei, Heppner and Mallinckrodt (2003); Lopez, Mauricio, Gormley, Simko, and Berger (2001); and Birnbaum, Orr, Mikulincer, and Florian (1997). Further, Folkman and Lazarus (1988) found coping to be a mediator of emotion during stressful situations, and identified positive reappraisal, confrontive coping, planful problem solving, and distancing as types of coping strongly associated with changes in emotion.

An important process that directly precedes coping is cognitive appraisal, which involves assessing the necessity of utilizing a coping mechanism. Groups and individuals differ in their vulnerability and sensitivity to certain events, and consequently, to their interpretations and reactions (Lazarus & Folkman, 1984). According to Lazarus and Folkman (1984), "'cognitive appraisal' is an evaluative process that determines why and to what extent a particular transaction or series of transactions between the person and the

environment is stressful" (Lazarus & Folkman, p. 19). Within this process, two types of appraisals occur. Of these types, primary appraisal seeks to answer the questions, "'Am I in trouble or being benefitted, now or in the future, and in what way?'; while secondary appraisal attempts to understand, 'What if anything can be done about it?'"(Lazarus & Folkman, p. 31). The interaction of primary and secondary appraisals shapes the extent of stress as well as the strength and content/quality of the emotional response; these two types of appraisals provide a meditational role between the stress reaction and coping process (Lazarus & Folkman).

The four main empirically identified categories of coping consist of emotion-focused coping, problem-focused coping, meaning-focused coping, and social coping (Folkman & Moskowitz, 2004). Coping that is focused toward altering or managing the problem that is creating distress is known as "problem-focused coping," whereas coping that involves adjustment of emotional reaction to the problem is referred to as "emotion-focused coping" (Folkman & Lazarus, 1980). Typically, when an appraisal has been made that is threatening, harmful, or challenging, and/or conditions cannot be altered for the better, utilization of emotion-focused efforts are more probable; however, problem-focused types of coping are more likely when these types of conditions are evaluated as having the possibility of being changed (Folkman & Lazarus, 1980). Additionally, "meaning-focused coping" involves a person focusing on acquiring meaning from a stressful situation; while, "social coping" entails support-seeking from others (Folkman & Moskowitz, 2004).

In general, African American women who attempt suicide are more likely to utilize maladaptive coping skills than those who do not attempt suicide (Kaslow et al.,

2000; Kaslow et al., 1998). For example, African American suicide attempters (of both genders), as compared to nonattempters, displayed a higher likelihood of utilizing maladjustive coping methods like escape avoidance, along with a depressive attribution style, while being less inclined to use adaptive strategies including planful problem solving, seeking social support, and positive reappraisal (Kaslow et al, 2004). Suicidal African American women reported lower levels of coping skills as well as feeling more hopeless, receiving lower levels of social support, being less effective at procuring material resources, having less spiritual well-being and feeling less self-efficacious when compared to nonattempters (Kaslow et al., 2002).

Studies on protective factors in prevention of depression (Reed, McLeod, Randall & Walker, 1996) and suicide (Meadows, Kaslow, Thompson & Jurkovic, 2005) in African American females point to social support via family as a significant coping factor. Hope, self-efficacy, spirituality, social support via friends, coping and being effective at obtaining resources also predict a higher rate of protection in suicidal African American women who had endured recent intimate partner violence (Meadows et al., 2005).

Adaptive coping and PTSD

Coping has been identified as a predictive factor in determining if a person develops PTSD in several studies. Coping has been demonstrated to be a significant positive predictor of PTSD symptoms. Martz (2004) found that spiritual/religious coping positively predicted PTSD in individuals with spinal injuries. Another study revealed that use of self-distraction coping and venting were highly significant predictors of PTSD development, while self-blame, seeking emotional support and religious coping were

marginally significant (Clark, Amster, Irish, Sledjeski, & Delahanty, 2007). A study examining Vietnam veterans found that wishful-thinking coping was positively and significantly related to PTSD (Martz, Bodner, & Livneh, 2010). Research on college students who experienced a significant loss revealed only avoidant emotional coping as a significant predictor of PTSD and complicated grief severity (Schnider, Elhai, & Gray, 2007).

Alternatively, coping has been found to negatively predict PTSD symptoms. A study examining Vietnam veterans found that social support (emotional and instrumental) and problem-solving coping were negatively and significantly related to PTSD (Martz, Bodner, & Livneh, 2010). Two additional studies on healthcare professionals deployed during Operation Iraqi Freedom and traumatized individuals, respectively, found that repressive coping (low anxiety, high defensiveness) negatively predicted symptoms of PTSD (McNally et al., 2011; Smeets, Giesbrecht, Raymaekers, Shaw and Merckelbach, 2010).

In addition to a significant and negative relationship between certain types of coping and PTSD symptoms, adaptive coping has been shown to have a positive effect on the recovery of individuals with Post Traumatic Stress Disorder. Tebes, Irish, Vasquez, and Perkins (2004) found that in acutely bereaved young adults, cognitive transformation (recognizing that new opportunities result from coping with adversity and reevaluating an event from traumatic/threatening to growth enhancing) predicts resilience, and may reduce risk and facilitate adaptation after trauma. Martz, Bodner, and Livneh (2010) found that problem solving coping and emotional social support helped lessen the influence of disability on level of PTSD in Vietnam veterans.

On the other hand, less adaptive forms of coping may prolong trauma symptoms and slow healing from PTSD. For instance, participants utilizing high levels of emotion focused coping (Lilly & Graham-Bermann, 2010), those who rely heavily on avoidant coping strategies in the first few months after trauma (Pineles et al., 2011), and similarly, those employing dysfunctional coping (defined as avoidance and thought suppression) (Ayers, Copland, & Dunmore, 2009) tend to have higher levels of PTSD.

Insecure Attachment and Coping

The literature points to a strong relationship between insecure attachment styles and less adaptive forms of coping. Studies on college students have found anxious attachment was significantly related to reactive coping, while avoidant attachment was significantly related to suppressive and reactive coping (Lopez et al., 2001). Moreover, first-year college students who lost attachment security had a decline in problem coping, while those who remained insecure over freshman year demonstrated greater use of suppressive coping (avoidance, denial, lack of persistence, confusion) (Lopez & Gormley, 2002). In a study examining hospice nurses, those with dismissing or fearful attachment styles were less likely to look for emotional social support in coping with stress as compared to nurses with a preoccupied or secure attachment style (Hawkins, Howard, & Oyebode, 2007).

Insecure styles have also been predictive of less effective coping in participants with health issues. For example, anxious and avoidant attachment styles were negatively correlated with coping efficacy and perceived social support in female patients with Inflammatory Bowel Disease (Gick & Sirois, 2010); avoidant attachment was weakly predictive of emotional preoccupation and symptom reporting as ways of coping with

health problems (Wearden, Cook, & Vaughan-Jones, 2003); and insecure attachment was connected with less flexible coping in participants with chronic disease (Schmidt, Nachtigall, Wuethrich-Martone, & Strauss, 2002).

Research that examined attachment and coping in adolescents and young adults found preoccupied attachment positively related to rational coping/support seeking, and fearful attachment as positively associated with avoidance coping and negatively with rational coping/support seeking (Yih-Lan, 2003). Dismissing attachment, in particular, was positively linked to distancing and self-reliance coping (Yih-Lan, 2003), as well as increased internal coping when compared to preoccupied attachment style (Seiffge-Krenke & Beyers, 2005). Although approaches to coping vary among the different insecure attachment styles, overall, research points to a strong relationship between insecure attachment styles and less adaptive forms of coping.

Coping as a Mediator of Attachment and PTSD

Coping as a mediator between attachment and distress has been investigated, and the significant meditational role of coping between attachment and distress/PTSD symptoms has been demonstrated (Wei, Heppner & Mallinckrodt, 2003; Lopez, Mauricio, Gormley, Simko, & Berger, 2001; and Birnbaum, Orr, Mikulincer, & Florian, 1997). Besser and Neria (2011) tested social support as a variable that mediated the relationship between attachment style and PTSD symptoms with research design similar to the current study.

In testing the direct association model of the Besser and Neria (2011) study, a direct relationship between attachment anxiety and PTSD was first confirmed, and attachment anxiety was significantly related to high levels of PTSD. A meditational

model was established where attachment anxiety had a direct connection to PTSD and an indirect path via perceived social support. The relationship between attachment anxiety and PTSD was mediated by perceived social support at a significant level (Besser & Neria, 2011).

The current study is similar to Besser and Neria (2011) in that attachment is identified as the predictor variable, social support (a type of coping) is labeled as the mediator variable, and PTSD symptoms comprise the criterion variable. Additionally, the research hypotheses are evaluated via Structural Equation Modeling (see Hoyle & Smith, 1994), and both studies examine alternative models – a direct model and a mediational model.

Although the two studies are similar in the aforementioned ways, the current study uses emotion-focused and problem-focused coping rather than social support as the coping factors. Social support, similar to emotion-focused and problem-focused coping, is seen as a resource utilized in stress coping. However, coping is used in the current study because of its preexisting theoretical and empirical links to attachment and PTSD symptoms/distress. Additionally, the populations are different in that the current study examines low income, suicidal African American females, and Besser and Neria's (2011) study examined Israeli evacuees under missile threat.

Conclusion

Low-income, African American females are an historically underserved population who are prone to experience adverse circumstances that increase the likelihood of developing PTSD (Bryant-Davis, Ullman, Tsong, Tillman, & Smith, 2010). Some of these circumstances include greater exposure to community violence and

traumatic events (Kiser & Black, 2005), low income, which precludes receiving necessary mental health services (Ngui & Flores, 2007), and societal trauma from the intersecting identities of being African American, female and poor (Bryant-Davis & Ocampo, 2006). This adversity is frequently accompanied by other problems such as interpersonal violence, substance abuse/dependence, and suicidal behavior, which are detrimental to survival and well-being.

Due to a higher level of reported symptoms of posttraumatic stress disorder found among female African American suicide attempters as compared to nonattempters (Kaslow et al., 2000), and PTSD having been associated with a heightened risk of ensuing suicide attempts (Wilcox, Storr, & Breslau, 2009), clinically targeting factors that contribute to PTSD will likely be helpful in reducing associated distress. Insecure attachment style is one factor that has been identified as increasing the likelihood of PTSD development after trauma exposure (Dieperink, Leskela, Thuras, & Engdahl, 2001). However, if effective coping methods are learned, development of more severe symptoms of PTSD is less likely (e.g., DeRoma et al., 2003; Johnsen, Eid, Laberg, & Thayer, 2002).

Since insecure attachment is linked to poor coping skills (e.g., Schmidt et al., 2002; Yih-Lan, 2003), which often leads to interpersonal problems and increased distress, a promising area to investigate involves the mediating role of coping on the relationship between attachment style and PTSD symptoms. Accordingly, suicidal, low-income African American females present as a population in which there is a serious need for research uncovering methods to improve coping.

Additionally, although literature examining attachment, coping, and PTSD as

individual constructs in suicidal African American females exists, research examining relationships between these factors in the same model is limited to non-existent. Research has shown significant relationships between attachment and coping, coping and PTSD, and attachment and PTSD. It has also been demonstrated that coping mediates the relationship between attachment and distress/PTSD symptoms in undergraduate student, divorced and married couples, and Israeli evacuee populations. Currently, there are no studies that explore the role coping plays in mediating the relationship between attachment style and PTSD in suicidal African American females. Due to this gap in the literature, this study is being pursued to determine the relationship of these variables.

In keeping with the previously discussed literature, the following hypotheses were formulated to test direct and mediational relationships between insecure attachment, coping, and PTSD symptoms.

Hypotheses

For the purpose of the current study's hypotheses, only the three insecure types – fearful, dismissing, and preoccupied - will be included as variables. There are several reasons that secure attachment will not be measured. Theoretically, coping can be seen as a protective factor for insecure individuals, whereas securely attached individuals are intrinsically more resilient and likely to use more adaptive forms of coping. Second, in an empirical capacity, the inclusion of three types of insecure attachment on one factor will help to compensate for the lower than desirable Cronbach's alpha levels. Third, the model study by Besser and Neria (2011) solely examines insecure attachment; and is similar to three other studies (Birnbaum et al., 1997; Lopez et al., 2001; Wei et al., 2003) that examine the same variables in a meditational model.

It is hypothesized that coping styles mediate the relationship between insecure attachment style and the development of PTSD.

Therefore, the research questions being examined in the present study are:

$R_{1:}$ Does insecure attachment style predict PTSD symptoms?

$R_{2:}$ Does insecure attachment style predict coping?

$R_{3:}$ Does coping account for a significant portion of the relationship between insecure attachment style and PTSD symptoms?

Method

Sample and Procedures

The research data set includes 150 African American women who participated in a project designed to understand the experience of low income, African American women with the goal of improving clinical services for this population. With a sample size of 150, and anticipated effect size of .25 (Cohen, 1988; Fritz, Morris, & Richier, 2012; Hedges, 1982), statistical power was estimated at .99. Statistical power was estimated using a post-hoc statistical power calculator for multiple regression (Soper, 2006-11). Alternatively, the sample size required for statistical power of .80 was found to be 57 participants using an a-priori sample size calculator (Soper, 2006-11).

Participants were recruited based on the following inclusion criteria: female, self-identified as African American or Black, between the ages of 18 and 64, and having had a prior suicide attempt. Participants were recruited in the emergency care center, psychiatric emergency center, and other clinics serving women (e.g., women's urgent care center, family planning clinic, and urgent care clinic) of a large urban Level 1 Trauma Center in the southeastern United States.

After suitability for study participation was assessed, participants who were going to take part in the study were scheduled for an assessment within the next week. The assessment took two to three hours, and consisted of several self-report questionnaires (three of which are used for the current study). The assessment for the purposes of the current study involved collection of baseline data, although the larger parent study required participants to be assessed four times over the course of the following year. Modifications were made to the consent form and measures to match the overall literacy level of participants, and all questionnaires were read aloud to them.

Demographics

All of the participants were female and self-identified as African American or Black. Participants ranged from 18 – 61 years of age, with the following breakdown in age categories: 18-20 (10.4%), 21-30 (22.4%), 31-40 (27.2%), 41-50 (28%), 51-60 (10.4%), and 61-64 (.8%). Fifty-two percent identified as homeless. In terms of monthly household income, 37.1% were in the $0–249 range, 12.9% in the $250-499 range, 25% in the $500-999 range, 14.5% in the $1000-1999 range, and 10.5% in the $2000+ range. Participants' religious affiliation included: 50.7% Baptist, 15.5% Christian/Non-denominational, 14.2% No religious affiliation, 5.4% Holiness, 4.1% Other, 3.4% Jehovah's Witness, 3.4% Catholic, 2% Muslim, and 1.4% Methodist. The "Other" category was further specified by respondents to include Agnostic, African Methodist Episcopal (AME), Church of God in Christ (COGIC), Lutheran, Pentecostal, Protestant, and "Spiritual."

In regard to history of psychiatric treatment, 70.8% of participants responded affirmatively, while 29.2% denied having received treatment. Incidents of previous

psychiatric hospitalizations were divided into “never” 44.9%, “once” 42.2%, “twice” 8.8%, and “three or more” 4.1%. Participants indicated that they had been diagnosed with the following mental health conditions: Schizophrenia 19.1%, Depression 61%, Bipolar Disorder 38.3%, Anxiety Disorder 24.8%, and Personality Disorder 6.4%. Four percent of participants responded that they had other diagnoses, which they identified as “homicidal,” “PTSD,” and “substance abuse.” In terms of psychiatric medications prescribed to participants, 44.3% indicated antipsychotics, 8.6% anticholinergics, 56% antidepressants, 7.9% mood stabilizers, and 12.9% anxiolytic medications.

Instruments

***The Demographic Data Questionnaire*.** This questionnaire assessed demographic information (e.g., age, sex, education, religion, socioeconomic status); family structure (e.g., marital status, sex of partner, presence of dependent children); current living situation (e.g., homeless); and psychiatric, medical, and substance abuse history of the participant and their family.

***The Relationship Style Questionnaire* (*RSQ*).** The RSQ (Griffin & Bartholomew, 1994b) is a self-report measure of adult attachment patterns. It contains 30 statements taken from three other attachment measures (Bartholomew & Horowitz, 1991; Collins & Read, 1990; Hazan & Shaver, 1987). The RSQ is comprised of four scales - secure, preoccupied, fearful, and dismissing attachment, and provides scores on each scale. However, for the purposes of this study only the three insecure attachment scales (preoccupied, fearful, and dismissing) were examined. Each scale has four to five items rated on a 5-point Likert scale that ranges from (1) “not at all like me” to (5) “very much like me.” One sample item from each scale includes, “I find it difficult to trust others

completely"(fearful); "I find that others are reluctant to get as close as I would like"(preoccupied); "I prefer not to have other people depend on me"(dismissing). The RSQ is a dimensional measure. Preoccupied attachment denotes a negative view of self along with a positive view of others; fearful attachment reflects a negative view of both self and others; and dismissing attachment indicates a positive view of self and a negative view of others.

The scales of the RSQ show moderate convergent validity. Convergent validity coefficients between the indirect self-report pattern ratings of the RSQ and interview prototype ratings ranged from .25 to .47 (Griffin & Bartholomew, 1994a). However, internal consistency is not uniform throughout the measure (e.g. α = .70 for Dismissing, α = .41 for Secure). The variable internal consistencies of the scales may be attributed to the attachment styles containing two orthogonal dimensions - model of self and model of other - on which the four category model is based. The four category prototype measures (preoccupied, dismissing, fearful, and secure) are used, in addition to the two underlying dimensions, due to their added interpretational and predictive power relative to the two dimensions. Alternatively, knowledge of individual's fit for all four prototypes of attachment should aid in explaining their intimate relationship behavior above and beyond what is predicted by the underlying attachment dimensions (Griffin & Bartholomew, 1994a). Knowledge of the attachment patterns, as opposed to simply the underlying two dimensions, is also vital because individuals displaying these patterns use qualitatively different emotional regulation strategies (Hazan & Shaver, 1994).

In the current study, the following Cronbach's alphas were found, using the four-scale model insecure types: .58 for fearful, .11 for dismissing, and .32 for preoccupied.

As this study examines the insecure attachment types and omits the secure type, the collective Cronbach's alpha for the three insecure patterns was .45.

The Ways of Coping, Revised (Folkman & Lazarus, 1985) is a 67-item, empirically derived questionnaire in which participants describe a recent stressful event and then indicate the extent to which they employed multiple types of cognitive and behavioral coping strategies. Answer choices are provided on a Likert scale from 0-3 (0 = does not apply and/or not used, 1 = used somewhat, 2 = used quite a bit, 3 = used a great deal). Sample items include: "I made a plan of action and followed it," "I felt that time would make a difference," and "Realized I brought the problem on myself." In a study on coping in a middle-aged community sample (Folkman & Lazarus, 1980), factor analysis revealed eight coping scales, which accounted for 46.2% of the variance. These scales, and their respective alphas include confrontive coping (.70), distancing (.60), self-control (.70), seeking social support (.76), accepting responsibility (.66), escape-avoidance (.72), planful problem-solving (.68), and positive reappraisal (.79). Folkman and Lazarus (1986) indicate that it is not possible to establish test-retest reliability with this measure due to the dynamic and context-specific nature of coping.

In the current study, Cronbach's alphas included confrontive coping (.60), distancing (.61), self-control (.58), seeking social support (.75), accepting responsibility (.39), escape-avoidance (.55), planful problem-solving (.65), and positive reappraisal (.15). For the mediation model used in this study, it was desired to reduce the number of variables for coping. Therefore a model study that previously factor analyzed the above scales into two categories was used. In this study by Dunkel-Shetter, Folkman and Lazarus (1987), the eight factors were factor analyzed using principle factoring and

oblique rotation. Two factors were found, conceptually corresponding to problem-focused and emotion-focused coping, which accounted for 51% of the variance. Of the eight coping types measured, seeking social support, problem solving, positive reappraisal, and confrontive coping fell under problem-focused coping, while distancing, escape-avoidance, and accepting responsibility fell under emotion-focused coping; self-control loaded similarly on both factors, and was therefore not included under either. In the current study the emotion-focused and problem-focused coping styles were included, and calculated Cronbach alphas were as follows: Problem-focused (.64), and Emotion-focused (.66).

In general, evidence of WOC-R's discriminant, convergent, and predictive validity is limited. However, one study by Vitaliano, Russo, Carr, Maiuro, and Becker (1985) contrasted participants that chose to be in a therapy support session with those who did not; those who participated scored higher on the Seeking Social Support scale than those who did not. Additionally Folkman, Lazarus, Dunkel-Schetter, DeLongis, and Gruen (1986) report that coping strategies are related to satisfactory outcome with stressful situations.

The Posttraumatic Diagnostic Scale (PDS). The PDS (Foa, Cashman, Jaycox, & Perry, 1997) is a self-report measure comprised of 49 items. It is recommended for use in clinical or research settings to determine PTSD symptom severity as relates to a single identified traumatic event. The PDS evaluates the DSM-IV (1994) criteria for PTSD and elicits information about the past month. In addition to assessing the severity of PTSD symptoms, the PDS measures the experience of a traumatic event, duration of symptoms, and effects of symptoms on daily functioning.

The PDS is considered to be a psychometrically sound instrument overall. This scale was validated on samples in the age range of 16-65 years. This measure has strong face validity, and internal consistency (coefficient alpha = .92). Test-retest reliability over a period of 2 – 3 weeks was substantial (kappa = 0.74). Test-retest on the symptoms severity scores detected a highly significant correlation (kappa = 0.83).

Foa et al. (1997) found that the PDS correlates strongly with self-report instruments measuring PTSD, anxiety, and depression. Higher PDS cluster and total scores were related to higher depression symptomatology on the Beck Depression Inventory (BDI), greater State and Trait anxiety on the State-Trait Anxiety Inventory (STAI), and higher scores on the Intrusion and Avoidance scales of the Revised Impact of Events Scale (RIES). As expected, the PDS Reexperiencing score correlated more strongly with the RIES Intrusion score than the Avoidance score (r = .77 vs. .72). Also, as predicted, the Avoidance scale of the PDS correlated more strongly with the RIES Avoidance score than the Reexperiencing score (r = .69 vs. .51). Further, the PDS total number of symptoms endorsed and total severity score significantly identified those with PTSD diagnoses based on the PTSD portion of the Structured Clinical Interview for DSM-IV (SCID). Lastly, the PDS showed adequate diagnostic effectiveness as compared with the SCID with sensitivity of .89, specificity of .75, efficiency of .82, and kappa of .65 (Foa et al., 1997).

In a review of studies assessing similar populations with the PDS, internal consistency was reported to be high. In three separate studies on African American women, Cronbach's alphas were reported as .94 using Part 3 of the PDS to detect the existence and severity of PTSD symptoms (Houry, Kemball, Rhodes, & Kaslow, 2006);

.94 measuring symptoms severity on three PTSD clusters (Leiner, Compton, Houry, & Kaslow, 2008); and .93 where the PDS was utilized to detect the total number of PTSD symptoms (Bryant-Davis, Ullman, Tsong, Tillman, & Smith, 2010).

In the current study, Cronbach's alpha was found using the six continuous scales contained within the PDS (PTSD Reexperiencing Symptom Severity, PTSD Avoidance Symptom Severity, PTSD Arousal Symptom Severity, PTSD Total Number of Symptoms, PTSD Symptom Severity, and PTSD Severity Rating), and excluding the categorical scale of PTSD Diagnosis. The cumulative Cronbach's alpha for these six scales was .87.

Data Analysis (for mediator variable)

In this study, the variables measured include insecure attachment style (predictor/independent variable), PTSD (outcome/dependent variable), and coping (mediator variable). The three insecure attachment types were examined excluding secure attachment type. Again, one reason for solely using insecure attachment included measuring a construct where the factor of coping is theoretically viewed as protective in these individuals, whereas securely attached individuals tend to be more resilient and likely to use more adaptive forms of coping. Also, empirically, the inclusion of three types of insecure attachment on one factor helps to compensate for the lower than desirable Cronbach's alpha levels, follows previous mediational studies that look at the same factors, and examines insecure attachment to the exclusion of secure attachment (i.e., Besser & Neria, 2011; Birnbaum et al., 1997; Lopez et al., 2001; Wei et al., 2003). Diagrams of the direct association models and the mediation models from the current study are depicted in Appendix E.

According to Baron and Kenny (1986), mediator variables explain part or all of the relationship between the predictor and outcome variable. Further, mediator variables express how or why certain effects take place (Baron and Kenny). Specifically, mediation takes place when an independent variable leads to a mediator variable which leads to a dependent variable (Sobel, 1990).

A mediator variable must meet the following three requirements as outlined by Baron and Kenny (1986). Viewing model B of Appendix E as an example, (1) variations in levels of Insecure Attachment significantly account for variations in the designated mediator, Coping (path *a*). (2) Variations in Coping, the mediator, significantly account for variations in PTSD symptoms, the dependent variable (path *b*). (3) When paths *a* and *b* are controlled, a relationship that had previously been significant between independent and dependent variables is not significant any longer. If path *c* were reduced to zero, this would be a strong indication that there was one dominant mediator; however, if this path is not zero, there is evidence pointing to the existence of multiple mediators.

Additionally, Baron and Kenny (1986) state that because many areas of psychology study variables with multiple causes, a goal that is more realistic may be to find mediators that will significantly decrease Path *c* instead of completely eliminating the relationship between the independent and dependent variables. In theory, a significant reduction indicates that a chosen mediator is strong.

According to MacKinnon, Fairchild, and Fritz (2007), the mediation process is often utilized to aid in the evaluation of prevention and treatment protocol. An intervention may be developed to affect the mediating variable with the goal of bringing about positive change in the outcome/dependent variable. In this study, detecting the

meditational role of coping between attachment style and PTSD could allow for facilitating development or utilization of efficacious coping skills in order to reduce or eliminate symptoms of PTSD.

Statistical Analysis

Structural Equation Modeling (SEM) was employed in the present study. According to MacCallum and Austin (2000), SEM is used to estimate and specify models of variables' linear relationships. Measured variables (MVs) and latent variables (LVs), which are hypothetical factors not directly measured, potentially compose an SEM model. Further, according to Brown (1997), SEM contains two basic sets of equations, which include measurement equations and structural equations. The measured variables and the theoretical constructs that they represent are depicted in the measurement equation. The accuracy of the proposed measurements is assessed by this set of equations. By contrast, the structural equations depict the hypothesized relationships among the theoretical variables, which collectively allow for measurement of the theory being tested (Brown, 1997). The current study investigates the hypothesized relationships of the latent variables in order to test the mediational model that has been proposed.

The SEM used for this study was confirmatory as opposed to exploratory. Confirmatory factor studies involve conditions in which the experimenter has pre-existing knowledge about the variables measured, and thus is in a position to create a hypothesis that outlines some of the included factors (Joreskog, 1969). Confirmatory techniques are typically utilized in a deductive manner in order to test hypotheses (Hoyle, 2000), and are frequently used in data analysis to study the predicted causal relationships

between variables (Hurley et al., 1997). For the present study, prior theoretical and empirical evidence pointed to direct relationships between the variables - insecure attachment, coping, and PTSD symptoms, as well as a mediational relationship, where coping mediates the relationship between insecure attachment and coping.

There are several advantages of using SEM over other analyses in this study (Buhi, Goodson, & Neilands, 2007). First, SEM allows for greater generalizability of findings due to all variables being examined simultaneously. Second, SEM controls for experimentwise or Type I error in the modeling process. Third, in comparison to older methods, researchers can selectively test the paths/relationships they desire without having to put all of the variables in at the same time, and use latent variables that purge measurement errors and often lead to stronger and more accurate relationships between variables. Fourth, SEM allows for advanced treatment of incomplete data with more sophisticated techniques for dealing with missing data.

Results

Statistical procedures involving preliminary analysis were performed using the Statistical Package for the Social Sciences (SPSS), Version 19.0. All structural equation models were executed using LISREL, Version 8.80 Student Edition.

Preliminary Analyses

Prior to testing the model, the data were screened in SPSS to ensure non-violation of univariate normality, linearity, and homoscedasticity assumptions. None of the variables were found to violate these assumptions, and all were continuous. According to the rule of thumb for outliers, there were no univariate outliers, defined by Kline (2011) as scores that fall more than three standard deviations from the mean. Along with lack of

outliers, scatterplots were observed to exhibit linear patterns, of which both exhibit evidence of homoscedacity (Kline, 2011). As suggested by Kline, all skewness scores were lower than what would be considered extremely skewed, or absolute values of < 3; while all kurtosis scores fell below what was considered extreme kurtosis, or absolute values of < 8. Prior to latent path analysis in LISREL, multivariate normality was assessed and observed to be considerable, with a Relative Multivariate Kurtosis of 1.02, which was well below the generally recommended upward cut off of 3 (Finney & DiStefano, 2006) and extremely close the ideal of 1. Descriptive statistics for all observed variables were calculated and are included in Table A1.

Missing responses on the RSQ were no higher than 6% on the three insecure scales. On the WOC-R, missing responses were 14% on the Problem-focused scale and 17.3% on the Emotion-focused scale. One question, which was removed from the Escape-Avoidance sub-scale of the Emotion-focused scale, was left out of the analyses entirely. This question had been omitted unintentionally from the measure presented to participants, and therefore not available for the analysis. For the PDS, the maximum number of missing responses on any of the six scales was 8.7%. Missing data were accounted for in LISREL through Full Information Maximum Likelihood (FIML). FIML uses observed variables for each case to compute a casewise likelihood function (see Arbuckle, 1996). Additionally, FIML uses available complete and implied values of missing data from the observed data in order to estimate parameters (Schiomer, Bauman, & Card, 2010). The two main advantages of FIML when compared to imputation involve that the analysis and imputation taking place in one step, and production of accurate standard errors due to retention of sample size (Schiomer, Bauman, & Card, 2010).

Correlational analysis of the variables was performed using pairwise deletion so that all available data was included. The pairwise method follows from the desire to use as much data as possible in the analysis (Marsh, 1998). Additionally, Brown (1994) emphasized that the pairwise procedure results in consistent estimates under appropriate assumptions.

Correlational Analysis. The relationships between predictor and outcome variables were investigated using Pearson-product moment correlation coefficients. There was a small, positive correlation between Fearful Attachment and Emotion-Focused Coping, $r = .254$, $n = 124$, $p < .01$, Dismissing Attachment and Emotion-Focused Coping, $r = .201$, $n = 124$, $p < .05$. There was also a small, positive correlation between Emotion-Focused Coping and PTSD Arousal Symptom Severity, $r = .179$, $n = 121$, $p < .05$. A small, positive correlation between Fearful Attachment and PTSD Impairment Rating, $r = .248$, $n = 142$, $p < .01$ was found as well as a small, positive correlation between Fearful Attachment and PTSD Avoidance Symptom Severity, $r = .167$, $n = 142$, $p < .05$. All five of these correlations were in the expected direction given the theoretical and empirical support presented thus far. These correlations supported each of the three paths needed for a mediation model; however, only Emotion-Focused Coping was represented among these significant correlations to the exclusion of Problem-Focused Coping. Further, Dismissing Attachment was not represented among the significant correlations, nor were the Symptom Severity or Reexperiencing Symptom Severity observed variables of the latent factor PTSD symptoms. A correlation matrix for all observed variables was calculated and is included in Table A2.

Primary Analyses for Hypotheses Testing

In assessing the following models, model fit statistics are presented for each one,

and decisions about good or bad fit are based on the following criteria. A chi-square probability value greater than .05 indicates acceptable model fit (Barrett, 2007). Additionally, due to the model chi-square's sensitivity to sample size, normed chi-square (chi-square statistic divided by its degrees of freedom [$\chi 2$ /df]) further ascertains model fit (Wheaton, Muthen, Alwin, & Summers, 1977). With regard to normed chi-square, generally, values of < 2 (Tabachnick & Fidell, 2007) to < 5 (Wheaton et al., 1977) are noted to be acceptable. Root Mean Square Error of Approximation (RMSEA) is a badness-of-fit and parsimony-adjusted index in which zero represents the best fit, and does not operate on a central chi-square distribution (Kline, 2011). As a general rule RMSEA should be ≤ .06 (Hu & Bentler, 1999).

Statistical Hypotheses:

H_1: Insecure attachment style significantly predicts PTSD symptoms.

The first step was to determine whether or not there was a significant direct relationship between Insecure Attachment and PTSD Symptoms. The existence of a direct relation between Insecure Attachment and PTSD Symptoms was examined through path analysis with latent variables. This model fit the observed data as follows; χ^2 (42) = 57.45, p = 0.056, χ^2/df = 1.37, RMSEA = 0.05, 90% CI (0.0; 0.079). This model could not be retained since there was negative error variance in one of the observed variables (Total Number of Symptoms), which loads onto the latent variable PTSD Symptoms. Negative error variance can be caused by many sources, which may include sampling fluctuations, structural misspecification, nonconvergence, or underidentification, and which necessitate the need to respecify the model (Kolenikov & Bollen, 2007).

The model was subsequently modified to find a better fit. One of the observed

variables, Total Number of PTSD Symptoms, was removed due to its overly high correlation with the other observed variables that loaded on the latent variable PTSD Symptoms, which most likely resulted in the negative error variance described above. This resulted in a similarly satisfactory model fit according to the following indices: χ^2 (33) = 45.97, p = 0.066, χ^2/df = 1.39, RMSEA = 0.05, 90% CI (0.0; 0.084). The path between Insecure Attachment and PTSD symptoms was significant. (see Appendix F) This path coefficient indicates that for every one standard deviation increase in Insecure Attachment, on average, there is a subsequent .29 standard deviation increase in PTSD symptoms, holding all else constant. Thus, there is a modest relationship between Insecure Attachment and PTSD symptoms. Results also indicated that 8.3% of the variation in PTSD symptoms was explained by the model.

H_2: Insecure attachment style significantly predicts coping.

The Problem-Focused model resulted in a satisfactory model fit according to the following indices: χ^2 (13) = 20.40, p = 0.086, χ^2/df = 1.57, RMSEA = 0.06, 90% CI (0.0; 0.11). The path between Insecure Attachment and Problem-Focused coping was significant (see Appendix G). This path coefficient indicates that for every one standard deviation increase in Insecure Attachment, on average, there is a .37 standard deviation increase in Problem-Focused coping, holding all else constant. So there is a modest relationship between Insecure Attachment and Problem-Focused Coping. Results also indicated that 14% of the variation in Problem-Focused coping is explained by the model. The Emotion-Focused model also had a satisfactory model fit according to the following indices: χ^2 (8) = 8.78, p = 0.361, χ^2/df = 1.10, RMSEA = 0.03, 90% CI (0.0; 0.10). The path between Insecure Attachment and Emotion-Focused Coping was significant. (see

Appendix G) This path coefficient indicates that for every one standard deviation increase in Insecure Attachment, on average, there is a .70 standard deviation increase in Emotion-Focused Coping, holding all else constant. This also means that there is a moderately strong relationship between Insecure Attachment and Emotion-Focused Coping. Additionally, results indicated that 49% of the variation in Emotion-Focused coping is explained by the model.

H_3: Coping accounts for a significant portion of the relationship between insecure attachment style and PTSD symptoms.

Finally, the indirect relationship between Insecure Attachment and PTSD symptoms was submitted to a test of mediation to see if coping significantly accounted for the direct relation between Insecure Attachment and PTSD symptoms. To depict this, a model was specified where Insecure Attachment had a direct path to PTSD symptoms, and an additional indirect path through Coping.

The resulting Problem-Focused model yielded an unsatisfactory fit with the following fit indices: χ^2 (51) = 88.50, p = 0.0009, χ^2/df = 1.74, RMSEA = 0.07, 90% CI [0.045; 0.094]. Problem-Focused coping did not mediate the relationship between Insecure Attachment and PTSD symptoms as the paths between these variables were not significant (see Appendix H). Although the SEM model did not support mediation, this effect was submitted to a Sobel test to confirm this finding. The Sobel test checks for unstandardized indirect effects using a single mediator (Baron & Kenny, 1986). The ratio provided by the Sobel test is considered as a z test of the unstandardized indirect effect (Kline, 2011). Support for mediation was not found as the effect was not significant using the Sobel test, z = -0.11, p = 0.46, and revealed that the effect of

Insecure Attachment on PTSD symptoms was not mediated by Problem-Focused coping.

The Emotion-Focused model yielded a satisfactory fit with the following fit indices: χ^2 (41) = 51.48, p = 0.126, χ^2/df = 1.26, RMSEA = 0.04, 90% CI [0.0; 0.073]. Emotion-Focused coping also did not mediate the relationship between Insecure Attachment and PTSD symptoms; the path from Insecure Attachment to Emotion-Focused coping was significant, but paths from Insecure Attachment to PTSD symptoms and Emotion-Focused coping to PTSD symptoms were not (see Appendix H). Emotion-Focused coping was also tested, with a Sobel test, as a mediator for the effect of Insecure Attachment on PTSD symptoms. Support was not found as the effect was not significant using the Sobel test, z = 1.36, p = 0.09, and revealed that the effect of Insecure Attachment on PTSD symptoms was not mediated by Emotion-Focused coping. However, the indirect effect, calculated by multiplying the two path coefficients composing the indirect path, was .10 as compared with the direct path coefficient, which was .12; this indicates that the indirect path had almost the same effect as the direct path.

Tentative comparisons may be drawn between the models discussed above due to differences in standardization and variations in patterns of missing data from model to model. Additionally, in some cases within and between model comparisons should be made cautiously because certain models have acceptable fit while others less so, and only some paths were significant as indicated above and in appendix diagrams. However, considering overall patterns, the path coefficient in hypothesis one (from Insecure Attachment to PTSD symptoms) was approximately three times larger than the direct paths in the Problem-Focused and Emotion-Focused mediation models of hypothesis three.

In examining the paths of Insecure Attachment to Emotion-Focused Coping and Problem-Focused Coping from hypothesis two, conclusions should also be made cautiously. Both paths were significant; however, when the same paths are examined within their respective mediation models (hypothesis three), only the path from Insecure Attachment to Emotion-Focused Coping remains significant. This suggests that the path between Insecure Attachment and Emotion-Focused Coping is strong even when other factors and paths are introduced through the mediation model, and indicates that this path accounts for a substantial portion of the relationships among those of the mediation model. In cautious comparison of the paths between Coping and PTSD symptoms in the mediation model, as expected, the path between Problem-Focused Coping and PTSD symptoms had a negative value, meaning as there is an increase in problem-focused coping, symptoms of PTSD tend to decrease. On the other hand, there is a positive relationship between Emotion-Focused Coping and PTSD symptoms, suggesting as emotion-focused coping is employed, symptoms of PTSD tend to be higher. Further, the indirect path - Insecure Attachment to Emotion-Focused Coping to PTSD symptoms - did account for a nearly equivalent effect as compared to the direct path between Insecure Attachment and PTSD symptoms.

In comparing the correlations performed in the preliminary analysis to the SEM findings, there was weak support for the three paths necessary for the proposed mediational model. This was demonstrated by Fearful and Dismissing insecure styles having a small correlation to Emotion-Focused Coping, Emotion-Focused Coping having a small correlation to PTSD Arousal Symptom Severity, and Fearful insecure style having a small correlation to PTSD Impairment Rating and PTSD Avoidance Symptom

Severity. However, all of these relationships were not, in turn, replicated through SEM analysis. Instead, support was only found for a modest, direct relationship from Insecure Attachment to PTSD symptoms, as well as a moderate, direct relationship from Insecure Attachment to Emotion-Focused Coping and a modest, direct relationship from Insecure Attachment to Problem-Focused Coping. On the other hand, there was no support for the proposed mediational relationship of Coping between Insecure Attachment and PTSD symptoms.

Discussion

The intention of this study was to fill a gap in the literature by exploring the role coping plays in mediating the relationship between insecure attachment and PTSD symptoms in suicidal African American females. The findings demonstrate variable support for the study's hypotheses. In examining whether insecure attachment style significantly predicts PTSD symptoms for this population, the path between these two variables was significant. This type of relationship has been identified in the literature, in which insecure attachment has been linked to overall higher levels of PTSD symptomatology (Declercq & Willemsen, 2006; Dieperink et al., 2001; Mikulincer et al., 1999; Muller et al., 2000). In this study, although a direct relationship between insecure attachment style and PTSD symptoms has been demonstrated, the moderate weakness of the relationship limits interpretation. In future studies, it is possible that using a larger sample size may reveal a stronger relationship between these factors. Alternately, Insecure Attachment may not have an appreciable impact on PTSD symptoms within this population.

In investigating whether insecure attachment style significantly predicts coping

for low income, suicidal African American females, both models produced good model fit and significant paths, but of varying strength. The path between Insecure Attachment and Emotion-Focused Coping was moderately strong, while the path between Insecure Attachment and Problem-Focused Coping was moderately weak. These findings are consistent with the literature in that insecure attachment is less often related to problem-focused coping and more frequently related to emotion-focused coping. This is demonstrated in a study by Lopez and Gormley (2002) where participants who lost attachment security had a decline in problem coping, while those who were deemed consistently insecure demonstrated greater use of emotion-focused and/or non-coping methods. Further, research points to a strong relationship between insecure attachment styles and less adaptive forms of coping (Gick & Sirois, 2010; Lopez, et al., 2001; Seiffge-Krenke & Beyers, 2005; Schmidt et al., 2002; Wearden et al., 2003; Yih-Lan, 2003). Although approaches to coping vary among the different insecure attachment orientations, overall, the insecure types tend to utilize more maladaptive and emotion-focused styles of coping.

Although research has linked suicidal African American women and insecure attachment style (Twomey, Kaslow, and Kroft, 2000), less adaptive coping (Kaslow et al, 2004; Kaslow et al., 2000; Kaslow et al., 1998), and lower levels of overall coping (Kaslow et al., 2002), a direct connection had not been drawn between insecure attachment and emotion-focused coping in this population. This study demonstrates the existence of a significant direct relationship of moderate strength between insecure attachment and emotion-focused coping in low income, suicidal African American females.

In examining the two mediation models, no mediational relationship of coping (emotion-focused or problem-focused) between insecure attachment and PTSD symptoms was found in either model. The path between insecure attachment and Emotion-Focused Coping was significant, although Emotion-Focused Coping did not mediate the relationship between insecure attachment and PTSD symptoms. Likewise, Problem-Focused Coping did not mediate the relationship between insecure attachment and PTSD symptoms. It is possible that the sample size, which was small relative to that suggested for structural equation modeling, had an impact on the results. However, it is also possible that the proposed mediational relationship does not exist.

Clinical Implications

It is hypothesized that insecure attachment style may offer interpersonal and interpsychic blockages to recovery after exposure to trauma (Dieperink, Leskela, Thuras, & Engdahl, 2001). In a similar vein, one goal of this study was to investigate whether insecure attachment style significantly predicts PTSD symptoms. Study results did not lend strong support to this relationship in which a significant, but moderately weak path was found between insecure attachment and PTSD symptoms for low income, suicidal African American females. Therefore, due to the fact that there was not a strong relationship between Insecure Attachment and PTSD symptoms, this could be interpreted as a positive indication insofar as there may be another factor at work that would be easier to change than insecure attachment. Moreover, focusing on security of attachment may not make an appreciable difference in the clients' experience of PTSD symptoms.

This study demonstrated a moderately strong relationship between Insecure Attachment and Emotion-Focused Coping and a moderately weak relationship between

Insecure Attachment and Problem-Focused Coping. Since African American women who attempt suicide are more likely to utilize maladaptive coping skills than those who do not attempt suicide (Kaslow et al., 2000; Kaslow et al., 1998), this finding emphasizes a possible need to help these persons broaden the types of coping they utilize. It is possible that these individuals use emotion-focused coping to the exclusion of other types of coping in most situations. In this case, it may be beneficial not only to introduce other types of coping (empirically supported and culturally appropriate), but also discuss context specific uses of various forms of coping. For instance, emotion-focused coping may actually be adaptive in certain circumstances where it would be dangerous to utilize more active coping (e.g. in certain stages of interpersonally violent relationships), but teaching a time and place to switch to problem-focused or other type of coping would most likely be beneficial. Additionally, social support coping and meaning-based coping could also be presented as ways to diversify methods of coping. Within this population, emphasis should be placed on culture-specific ways of coping, but also tailored to the types of coping the client would be comfortable with and likely to utilize. Areas of resilience and strength for each individual client may also be identified and emphasized as means to draw on during stressful times.

Although neither emotion-focused nor problem-focused coping was found to play a mediational role in this study, it remains important to investigate any intermediary between insecure attachment and PTSD symptoms that may hasten recovery by removing blockages to healing after exposure to trauma. As previously mentioned, coping has been found to be a mediator between insecure attachment and PTSD symptoms/distress/mental health issues in prior studies (Besser and Neria, 2011; Birnbaum, Orr, Mikulincer, &

Florian, 1997; Lopez, Mauricio, Gormley, Simko, & Berger, 2001; and Wei, Heppner & Mallinckrodt, 2003).

In providing clinicians with information on bolstering adaptive coping, it is valuable to know that African American women who attempt suicide are more likely to utilize maladaptive coping skills (Kaslow et al., 2000; Kaslow et al., 1998). Further, African American suicide attempters, of both genders, display a higher likelihood of using dysfunctional coping methods like escape avoidance and depressive attribution style, while being less inclined to use adaptive strategies such as planful problem solving, seeking social support, and positive reappraisal (Kaslow et al, 2004). Suicidal African American women report lower levels of coping skills as well as feeling more hopeless, receiving lower levels of social support, being less effective at procuring material resources, having less spiritual well-being and feeling less self-efficacious when compared to nonattempters (Kaslow et al., 2002). Knowledge that lower levels of self-esteem and higher levels of negative religious coping (i.e. appraisals related to demonic forces or God as a punishing entity, expression of spiritual discontent) were found to increase the likelihood of PTSD (Bradley, Schwartz & Kaslow, 2005) provides clinicians additional areas to address in facilitating adaptive coping.

Equally important in clinical work with low income, suicidal African American women, is integrating findings about protective factors that may facilitate coping and make suicide less likely. Emphasizing social support provided by family has been identified as a coping factor that aids in prevention of depression (Reed, McLeod, Randall & Walker, 1996) and suicide (Meadows, Kaslow, Thompson & Jurkovic, 2005) in African American females. Additionally, integrating elements of hope, self-efficacy,

spirituality, social support through friends, and effectiveness at obtaining resources would likely provide a higher rate of protection in suicidal African American women who were exposed to intimate partner violence (Meadows et al., 2005).

More specifically, the relationship of insecure attachment to coping must be attended to within the therapeutic relationship. Chronically suicidal women with a trauma history tend to respond more favorably to a relational approach rather than cognitive-behavioral interventions (Davis & Ancis, 2012; Gormely, 2004). Insecure clients may also benefit by reducing feelings of humiliation through working alliances and reframing suicidal behavior as serving the purpose of showing the individual's inability to cope as well as bringing forth attuned, effective interventions (Gormley). Since those with insecure attachment in this population have a tendency to use emotion-focused coping, clinical interventions targeting greater therapeutic alliance and relationship could create a safer environment for clients to try new forms of coping such as more active coping as well as experimenting with other types of coping that would be effective at protecting them from self-harm. Once a close therapeutic relationship is forged, it is hopeful that the new forms of coping that the client has tried (e.g., relying more heavily on social support, planful problem solving, or development of meaningfulness and/or spirituality) will become the default instead of overreliance on emotion-focused coping. Since some of the suicide attempts in these women have been identified as a form of emotion-focused coping (Heron, Twomey, Jacobs, & Kaslow, 1997), having alternative forms of more adaptive coping could promote less of an urge to cope in this self-destructive manner.

A focus on findings regarding insecurely attached women from the current

population allows for more custom clinical applications to improve coping. Of the insecure attachment types discussed in this study, fearfully attached clients of this population present with vulnerabilities, identified in recent studies, which may be targeted specifically to facilitate coping. Findings that difficult social and cultural life experiences and stressful life events are more likely in fearful clients (Santorelli et al., 2010); and that fearfully attached clients in this population who experienced social victimization, lack of social acceptability, and perceived social differences were less likely to attend group therapy (Ilardi & Kaslow, 2009) are specific areas to address. Therefore, interventions would do well to target the fearfully attached clients of this population providing coping skills to buffer the negative impact of stressful life events and difficult social and cultural life experiences. Since fearfully attached individuals tend to have negative views of self and others and have anxious and avoidant tendencies, this gives clinicians many areas on which to focus. Due to feelings of inadequacy, exercises designed to raise self-esteem would likely beneficial, while a relationship focus (e.g., interpersonal or psychodynamic) in therapy may mesh best with these clients' need to form stronger, more trusting bonds with others.

Many interventions could help a fearfully attached individual overcome an avoidant and anxious approach to life. For example, the clinician may encourage the client to initiate new friendships with others or to attend group therapy, to which successful attempts at these behaviors will reinforce and perpetuate healthy risk taking. Additionally, relaxation or biofeedback training by the clinician will likely aid the client in recognition that they have much greater control over their physiological anxiety than they thought possible. Making the client aware of the clinician's participation in

advocacy for the client (their social/culturally-identified group or suicide prevention associations) lets them know that their difficult social/cultural and personal experiences are being understood and worked on by others. It also opens a door that may allow them to advocate for themselves in the future. Taking all of this into account, implementing these changes should provide a well-rounded clinical approach to empowering the client to overcome obstacles that contribute to poor coping, unhealthy relationships, and suicidal behavior.

In sum, integrating the current study's findings with prior research on this population, the clinician should familiarize themselves with: the types of maladaptive coping identified specifically with this population; types of adaptive coping and protective factors; forms of resilience and strengths that buffer the women of this population against future suicide attempts; proper match of therapeutic style (emphasis on relationship and therapeutic alliance); encouragement of alternate forms of coping that will likely prove more effective; discussion with the client on how each type of coping can be valuable if used in the most appropriate time and place; and assessing insecure attachment type in clients to tailor interventions according to the nuance of each type (similar to the manner of suggestions offered above for fearfully attached clients). Covering these points should offer the insecurely attached client a greater repertoire of adaptive coping, above and beyond emotion-focused coping, and reduce the likelihood that suicide becomes an option for coping.

Limitations

In examining the outcomes of the current study, many limitations became apparent. As mentioned earlier, small sample size could have contributed to the

mediation models being non-significant. Additionally, there was a missing question on the Escape-Avoidance scale of Emotion-Focused Coping, which limits generalizability of results. Furthermore, the amount of missing data on the observed variable - Emotion-Focused Coping - likely played a part in the negative error variance observed in the first run of models with Emotion-Focused and Problem-Focused coping loaded on the same "Coping" factor. This in turn led to separating Emotion-Focused and Problem-Focused Coping, and running them in two different models. It is equally plausible that loading less than three observed variable on the Coping factor may have contributed to negative error variance, possibly due to moderately high correlation between these variables. As discussed earlier, other potential origins of negative error variance have been identified as sampling fluctuations, structural misspecification, nonconvergence, or underidentification (Kolenikov & Bollen, 2007). Thus, better model design from the outset may have captured more highly significant relationships among the factors examined in this study.

In examining other possible limitations, whether or not the concept of attachment should be applied universally is an issue that has been raised amongst scholars on the subject of attachment (Wang & Mallinckrodt, 2006; Wei, Russell, Malinckrodt, & Zakalik, 2004). Specifically, questions have been raised as to whether attachment theory emphasizes Western ideals of separation and individualism to the exclusion of emphasizing constructs more familiar to Eastern ideals of attachment such as dependence and connectedness (Burman, 2007). Furthermore, the accuracy of measuring attachment types has been called into question since using different attachment measures yields varying ratios in attachment types across cultures (Yalcinkaya, Rapoza, Mally-Morison, 2010). Additionally, it is hypothesized that parental control, a component of parental

responsiveness, contributes to attachment in different ways in different cultures. For instance, in Taiwan, Japan, Korea, or Turkey parental control may be viewed as common and accepted, whereas in North America or Germany it may be perceived as parental rejection or hostility. These examples of varying contexts show that the same type of parental control could contribute to secure or insecure attachment depending on the culture in which a child is raised (Yalcinkaya, Rapoza, Mally-Morison).

Another limitation of this study is that it could have used measures more representative of African American females. Limitation of assessment of culture specific coping has been described as a problem by Utsey, Bolden, Williams et al. (2007); and more specifically, viewed as a limitation in the areas of assessing self-esteem and religious coping, which have been identified as essential elements of coping in the African American community (Bradley et al, 2005; Pargament Koenig & Perez, 2000). A potential answer to an issue like this one is using instruments such as the Africultural Coping Systems Inventory (Utsey, Adams, & Bolden, 2000), which are designed to assess coping of this population in an accurate and culturally sensitive manner.

In regard to limitations of measuring PTSD symptoms, according to Hinton and Lewis-Fernandez (2011), although there is substantial evidence supporting the cross-cultural validity of PTSD, there is also evidence of cross-cultural variability in a few areas. These areas include the relative importance of avoidance and numbing symptoms, the role played by interpretation of trauma-related symptoms in contribution to overall symptomatology, and somatic symptoms frequency of occurrence (Hinton & Lewis-Fernandez). This difference across cultures could indicate a need for subtle distinctions in PTSD symptoms across cultural groups, and therefore a need to customize the

instruments and interviews designed to measure PTSD symptoms accordingly.

Lastly, the homogenous characteristic of the present study's sample, which encompasses gender, socioeconomic status, ethnicity, race, and geographical location, could be viewed as a limitation in that this sameness of participants limits generalizability of results. On the other hand, it allows for collection of highly specific data that can be used empirically and clinically in improving mental health for this particular population.

Future Directions

Taking into consideration the limitations of the current study, there is promise that replicating this study with a higher sample size may yield significant results with regard to the proposed mediational relationship of hypothesis three as well as stronger direct relationships between the factors examined in hypotheses one and two. Additionally, controlling conditions that may contribute to error variance within SEM models, as discussed above, could provide stronger models from the outset of model design. The hypothesized mediational relationship has been demonstrated within other populations - Israeli evacuees under missile threat, undergraduate college students, divorcing and married couples (i.e., Besser and Neria, 2011; Birnbaum, Orr, Mikulincer, & Florian, 1997; Lopez, Mauricio, Gormley, Simko, & Berger, 2001; and Wei, Heppner & Mallinckrodt, 2003). Therefore, it is possible that attending to corrections of some of the aforementioned limitations could promote the originally predicted outcome.

Since the relationship between Insecure Attachment and Emotion-Focused Coping was the most pronounced finding in this study, further inquiry into the most effective types of coping for these individuals, as matched with their respective appropriate context, would be beneficial to explore in future studies. As discussed

earlier, the four main empirically identified categories of coping have been identified as emotion-focused coping, problem-focused coping, meaning-focused coping, and social coping (Folkman & Moskowitz, 2004). These types of coping provide one avenue of inquiry; however, continuing to examine the types of coping unique and most beneficial to low income, suicidal African American women as well as the most appropriate time/context to use them seems even more important. Additionally, continued development and utilization of culturally normed and standardized instruments should be the foundation of further research .

Aside from the modifications mentioned previously that could improve upon the current study, choice of research design would likely define a more causal role between the variables examined in the current study. Use of a design that implements greater control of the conditions of empirical association, appropriate time order, and nonspuriousness would provide the capability to capture the existence of potential coping interventions that can then be applied clinically.

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APPENDIXES

APPENDIX A

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Subject#:_____

Interview: #:_____

Age _____

DEMOGRAPHIC DATA

1. **Do you consider yourself African American or Black** (0) No (1) Yes

2. **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?

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

If no..

4. **Do you own or rent your residence?** (0) Own (1) Rent

5. **How many people live in your home/household (including you)?**_____
(List all members in the household by name, age, relationship)

Name	Age	Relationship
_____	_____	_____
_____	_____	_____
_____	_____	_____

6. **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

Subject #:_____
Interview #:_____

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

8. If unemployed, have you ever had a job? (0) No (1) Yes

9. What kind of work do you or did you last do? (categorize response)_____

8. Not applicable/ never employed.
7. Unskilled (attendant, janitor, construction, unspecified labor).
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).

10. Do you own a car? (0) No (1) Yes

11. What are your current sources of income? (Circle all that apply)

(1) Job (2) TANF (3) Food-stamps (4) Social Security/SSI/Disability (5) Partner
(6) Child Support (7) Parents (8) Family member - other than parent (9) Other

12. What is your approximate individual monthly income?

(1) $0 - 249 (2) $250 - 499 (3) $500 - 999 (4) $1,000 - 1,999 (5) $2,000 - +

13. What is your approximate household monthly income?

(1) $0 - 249 (2) $250 - 499 (3) $500 - 999 (4) $1,000 - 1,999 (5) $2,000 - +

Subject#:_____

Interview: #:_____

13. What form of health insurance do you have?

___ None
___ Medicaid/Medicare
___ Private insurance

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

15. In the past have you ever:

a) intentionally taken pills to overdose? (0) No (1) Yes
b) tried to shoot yourself or jump from a high place? (0) No (1) Yes
c) cut yourself (describe)_____? (0) No (1) Yes
d) intentionally (on-purpose) tried to take your life? (0) No (1) Yes
e) attempted to commit suicide? (0) No (1) Yes

16. ***If yes to any of the items in 18a-e,*** **indicate the total # of suicide attempts in** past _____

17. Have you been diagnosed with any of the following?

___ Schizophrenia Spectrum Disorders (schizophrenia, schizoaffective disorder)
___ Depressive Disorders
___ Bipolar Disorder (manic depression)
___ Anxiety Disorders (generalized anxiety disorder, panic disorder, PTSD, OCD)
___ Personality Disorders
___ Other (please discribe)

28. Are you currently taking any of the following medications? (Check all that apply)

If don't know, list name and check with Dr. Kaslow.

Antipsychotics

___ Haldol	___ Loxitane	___ Zyprexa
___ Prolixin	___ Thorazine	___ Topomax
___ Navane	___ Mellaril	___ Geodone
___ Stelazine	___ Seroquel	___ Abilify
___ Trilafon	___ Risperdal	

Anticholinergics

___Benadryl ___ Artane ___ Cogentin

Antidepressants

___ Zoloft	___Paxil	___ Prozac	___ Serzone
___ Effexor	___ Wellbutrin	___ Trazadone	___ Celexa

Mood Stabalizers

___ Lithium ___ Tegretol ___ Depakote ___ Valproic Acid

Subject #:_____
Interview #:_____

Antianxiety

___ Librium ___ Valium
___ Tranxene ___ Ativan ___ Xanax
___ Klonopin ___ Vistaril ___ Inderal
___ BuSpar

Other (list medication and reason)

_____ _____

_____ _____

19. Do you have any other medical problems?

_____ _____

_____

20. What religion, if any, are you a part of or 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

21. Have you had any involvement with the legal system? (0) No (1) Yes

22. If yes, have you ever been in jail or prison? (0) No (1) Yes

23. If yes, what was the charge? _____

24. What is your current relationship status?

(1) Single, never married (2) Partner not living together (3) Partner living together but not married
(4) Married (5) Divorced (6) Separated (7) Widowed

25. If you are currently involved in a relationship, is your partner (0) Male (1) Female

26. Indicate an approximate number of partners you have had in a dating or sexual relationship as a teenager (age 18 or earlier)? _____

27. Indicate an approximate number of partners you have had in a dating or sexual relationship as an adult (age 19 and up)? _____

Subject#: _____

Interview: #:_____

28. Have you ever had experiences of violence in your past relationships (which includes any of the following below)? (0) No (1) Yes (DO NOT INCLUDE YOUR CURRENT RELATIONSHIP)
    1) slapped, kicked, pushed, choked, or punch you?
    2) forced or coerced you to have sex?
    3) threatened you with a knife or gun to scare or hurt you?
    4) made you afraid that you could be physically hurt?
    5) repeatedly used words, yelled, or screamed in a way that frightened you, threatened you, put you down, or made you feel rejected?

29. If you are currently involved in a relationship, have you experienced violence in your current relationship (which includes any of the following below)? (0) No (1) Yes
    1) slapped, kicked, pushed, choked, or punch you?
    2) forced or coerced you to have sex?
    3) threatened you with a knife or gun to scare or hurt you?
    4) made you afraid that you could be physically hurt?
    5) repeatedly used words, yelled, or screamed in a way that frightened you, threatened you, put you down, or made you feel rejected?

30. If answered yes to item 6, indicate the total number of dating or sexual relationships, age 18 and earlier, that had some form of violence or physical or emotional abuse? _____

31. If answered yes to item 6 or 7, indicate the total number of adult dating or sexual relationships, age 19 and up, that had some form of violence, physical, or emotional abuse? _____

Subject #:_____
Interview #:_____

CLIENT FOLLOW-UP INFORMATION

Name:_____ Okay to send mail: Yes___ No___

Address:_____

_____

Home Telephone #: ( )_____ - _____ Okay to leave message: Yes___ No__

Work Telephone #: ( )_____ - _____ Okay to leave message: Yes___ No__

Pager #: ( )_____ - _____ Okay to page: Yes___ No__

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

1) Name:_____ Relationship_____
Address:_____ Okay to send mail: Yes___ No___
_____

Home Telephone #: ( )_____-_____ Okay to leave message: Yes___ No___
Work Telephone #: ( ) - Okay to leave message: Yes___ No___
Pager #: ( )_____-_____ Okay to page: Yes___ No___

2) Name:_____ Relationship:_____
Address:_____ Okay to send mail: Yes____ No__
_____

Home Telephone #: ( )_____ -_____ Okay to leave message: Yes___ No__
Work Telephone #: ( )_____ - _____ Okay to leave message: Yes___ No__
Pager #: ( )_____ - _____ Okay to page: Yes___ No__

APPENDIX B

Subject #_____
Interview #_____

RSQ

Please read each of the following statements and rate the extent to which you believe each statement best describes you feelings about close relationships.

Not at all like me		**Somewhat like me**		**Very much like me**
1	2	3	4	5

_____ 1. I find it difficult to depend on other people.
_____ 2. It is very important to me to feel independent.
_____ 3. I find it easy to get emotionally close to others.
_____ 4. I want to merge completely with another person.
_____ 5. I worry that I will be hurt if I allow myself to become too close to others.
_____ 6. I am comfortable without close emotional relationships.
_____ 7. I am not sure that I can always depend on others to be there when I need them.
_____ 8. I want to be completely emotionally intimate with others.
_____ 9. I worry about being alone.
_____ 10. I am comfortable depending on other people.
_____ 11. I often worry that romantic partners don't really love me.
_____ 12. I find it difficult to trust others completely.
_____ 13. I worry about others getting too close to me.
_____ 14. I want emotionally close relationships.
_____ 15. I am comfortable having other people depend on me.
_____ 16. I worry that other don't value me as much as I value them.
_____ 17. People are never there when you need them.
_____ 18. My desire to merge completely sometimes scares people away.
_____ 19. It is very important to me to feel self-sufficient.
_____ 20. I am nervous when anyone gets too close to me.
_____ 21. I often worry that romantic partners won't want to stay with me.
_____ 22. I prefer not to have other people depend on me.
_____ 23. I worry about being abandoned.
_____ 24. I am somewhat uncomfortable being close to others.
_____ 25. I find that others are reluctant to get as close as I would like.
_____ 26. I prefer not to depend on others.
_____ 27. I know that others will be there when I need them.
_____ 28. I worry about having other not accept me.
_____ 29. Romantic partners often want me to be closer than I feel comfortable being.
_____ 30. I find it relatively easy to get close to others.

Subject#_____

APPENDIX C

Page 1 of 3

WAYS OF COPING (Revised)

Tell me about the most stressful situation that has happened to you in the past year._____

Please read each item below and indicate, by circling the appropriate category, to what extent you used it in the situation you have just described.

Not Used	Used Somewhat	Used Quite a Bit	Used a Great Deal
0	1	2	3

____ 1. Just concentrated on what I had to do next--the next step.

____ 2. I tried to analyze the problem in order to understand it better.

____ 3. Turned to work or substitute activity to take my mind off things.

____ 4. I felt that time would make a difference, the only thing to do was to wait.

____ 5. Bargained or compromised to get something positive from the situation.

____ 6. I did something which I didn't think would work, but at least I was doing something.

____ 7. Tried to get the person responsible to change his or her mind.

____ 8. Talked to someone to find out more about the situation.

____ 9. Criticized or lectured myself.

____ 10. Tried not to burn my bridges, but leave things open somewhat.

____ 11. Hoped a miracle would happen.

____ 12. Went along with fate; sometimes I just have bad luck.

____ 13. Went on as if nothing had happened.

____ 14. I tried to keep my feelings to myself.

____ 15. Looked for the silver lining, so to speak; tried to look on the bright side of things

____ 16. Slept more than usual.

____ 17. I expressed anger to the person(s) who caused the problem.

Subject#_____

____ 18. Accepted sympathy and understanding from someone.

____ 19. I told myself things that helped me to feel better.

____ 20. I was inspired to do something creative.

____ 21. Tried to forget the whole thing.

____ 22. I got professional help.

____ 23. Changed or grew as a person in a good way.

____ 24. I waited to see what would happen before doing anything.

____ 25. I apologized or did something to make up.

____ 26. I made a plan of action and followed it.

____ 27. I accepted the next best thing to what I wanted.

____ 28. I let my feelings out somehow.

____ 29. Realized I brought the problem on myself.

____ 30. I came out of the experience better than when I went in.

____ 31. Talked to someone who could do something concrete about the problem.

____ 32. Got away from it for a while; tried to rest or take a vacation.

____ 33. Tried to make myself feel better by eating, drinking, smoking, using drugs or medication, etc.

____ 34. Took a big chance or did something very risky.

____ 35. I tried not to act too hastily or follow my first hunch.

____ 36. Found new faith.

____ 37. Maintained my pride and kept a stiff upper lip.

____ 38. Rediscovered what is important in life.

____ 39. Changed something so things would turn out all right.

____ 40. Avoided being with people in general.

____ 41. Didn't let it get to me; refused to think too much about it.

____ 42. I asked a relative or friend I respected for advice.

____ 43. Kept others from knowing how bad things were.

____ 44. Made light of the situation; refused to get too serious about it.

____ 45. Talked to someone about how I was feeling.

Subject#_____

____ 46. Stood my ground and fought for what I wanted.

____ 47. Took it out on other people.

____ 48. Drew on my past experiences; I was in a similar situation before.

____ 49. I knew what had to be done, so I doubled my efforts to make things work.

____ 50. Refused to believe that it had happened.

____ 51. I made a promise to myself.

____ 52. Came up with a couple of different solutions to the problem.

____ 53. Accepted it, since nothing could be done.

____ 54. I tried to keep my feelings from interfering with others things too much.

____ 55. Wished that I could change what had happened or how I felt.

____ 56. I changed something about myself.

____ 57. I daydreamed or imagined a better time or place than the one I was in.

____ 58. Wished that the situation would go away or somehow be over with.

____ 60. I prayed.

____ 61. I prepared myself for the worst.

____ 62. I went over in my mind what I would say or do.

____ 63. I thought about how a person I admire would handle this situation and used that as a model.

____ 64. I tried to see things from the other person's point of view.

____ 65. I reminded myself how much worse things could be.

____ 66. I jogged or exercised.

APPENDIX D

Post Traumatic Diagnostic Scale

Edna B. Foa, PhD

Part 1

Many people have lived through or witnessed a very stressful and traumatic event at some point in their lives. Below is a list of traumatic events. Put a checkmark in the box next to **ALL** of the events that have happened to you or that you have witnessed.

❑ 1. Serious accident, fire, or explosion (for example, an industrial, farm, car, plane, or boating accident)

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

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

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

❑ 5. Sexual assault by a family member or someone you know (for example, rape, or attempted rape)

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

❑ 7. Military combat or a war zone

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

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

❑ 10. Torture

❑ 11. Life-threatening illness

❑ 12. Other traumatic event

13. If you marked item 12, specify the traumatic event below.

Part 2

14. If you marked more than one traumatic event in Part 1, put a checkmark in the box below next to the event that bothers you most. If you marked only one traumatic event in Part 1, mark the same one below.

❑ Accident
❑ Disaster
❑ Non-sexual assault/someone you know
❑ Non-sexual assault/stranger
❑ Sexual assault/someone you know
❑ Sexual assault/stranger
❑ Combat
❑ Sexual contact under 18 with someone 5 or more years older
❑ Imprisonment
❑ Torture
❑ Life-threatening illness
❑ Other

In the box below, briefly describe the traumatic event you marked above.

Below are several questions about the traumatic event you just described above.

15. How long ago did the traumatic event happen? (circle **ONE**)
1 Less than 1 month
2 1 to 3 months
3 3 to 6 months
4 6 months to 3 years
5 3 to 5 years
6 More than 5 years

For the following questions, circle Y for Yes or N for No.

During this traumatic event:
16. **Y(1) N(0)** Were you physically injured?

17. **Y(1) N(0)** Was someone else physically injured?

18. **Y(1) N(0)** Did you think that your life was in danger?

19. **Y(1) N(0)** Did you think that someone else's life was in danger?

20. **Y(1) N(0)** Did you fell helpless?

21. **Y(1) N(0)** Did you feel terrified?

Part 3

Below is a list of problems that people sometimes have after experiencing a traumatic event. Read each one carefully and circle the number (0-3) that best describes how often that problem has bothered you **IN THE PAST MONTH**. Rate each problem with respect to the traumatic event you described in Item 14.
0 Not at all or only one time
1 Once a week or less/once in a while
2 2 to 4 times a week/ half the time
3 5 or more times a week/almost always

22. **0 1 2 3** Having upsetting thoughts or images about the traumatic event that came into your head when you didn't want them to.

23. **0 1 2 3** Having bad dreams or nightmares about the traumatic event.

24. **0 1 2 3** Reliving the traumatic event, acting or feeling as if it was happening again.

25. **0 1 2 3** Feeling emotionally upset when you were reminded of the traumatic event (for example, feeling scared, angry, sad, guilty, etc.)

26. **0 1 2 3** Experiencing physical reactions when you were reminded of the traumatic event (for example, breaking out in a sweat, heart beating fast).

27. **0 1 2 3** Trying not to think about, talk about, or have feelings about the traumatic event.

28. **0 1 2 3** Trying to avoid activities, people, or places that remind you of the traumatic event.

29. **0 1 2 3** Not be able to remember an important part of the traumatic event.

30. **0 1 2 3** Having much less interest or participating much less often in important activities.

31. **0 1 2 3** Feeling distant or cut off from people around you.

32. **0 1 2 3** Feeling emotionally numb (for example, being unable to cry or unable to have loving feelings).

33. **0 1 2 3** Feeling as if your future plans or hopes will not come true (for example, you will not have a career, marriage, children, or a long life).

34. **0 1 2 3** Having trouble falling or staying asleep.

35. **0 1 2 3** Feeling irritable or having fits of anger.

36. **0 1 2 3** Having trouble concentrating (for example, drifting in and out of conversations, losing track of a story on television, forgetting what you read).

37. **0 1 2 3** Being overly alert (for example, checking to see who is around you, being uncomfortable with your back to a door, etc.).

38. **0 1 2 3** Being jumpy or easily startled (for example, when someone walks up behind you).

39. How long have you experienced the problem that you reported above? (circle one)

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

40. How long after the traumatic event did these problems begin? (circle one)

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

Part 4

Indicate below if the problems you rated in Part 3 have interfered with any of the following arears of you life **DURING THE PAST MONTH**. Circle Y for Yes or N for No.

41. **Y(1) N(0)** Work

42. **Y(1) N(0)** Household chores and duties

43. **Y(1) N(0)** Relationships with friends

44. **Y(1) N(0)** Fun and leisure activities

45. **Y(1) N(0)** Schoolwork

46. **Y(1) N(0)** Relationships with your family

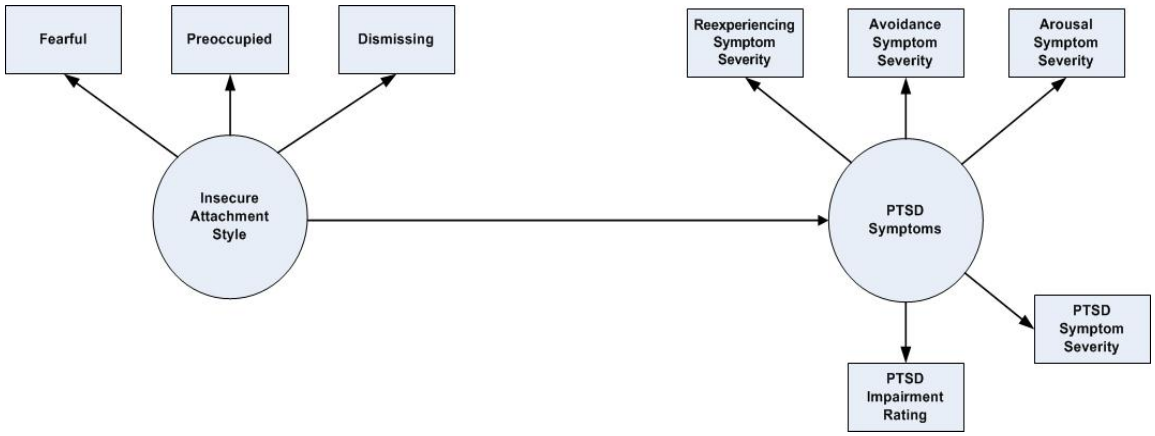
47. **Y(1) N(0)** Sex life

48. **Y(1) N(0)** General satisfaction with life

49. **Y(1) N(0)** Overall level of functioning in all areas of your life

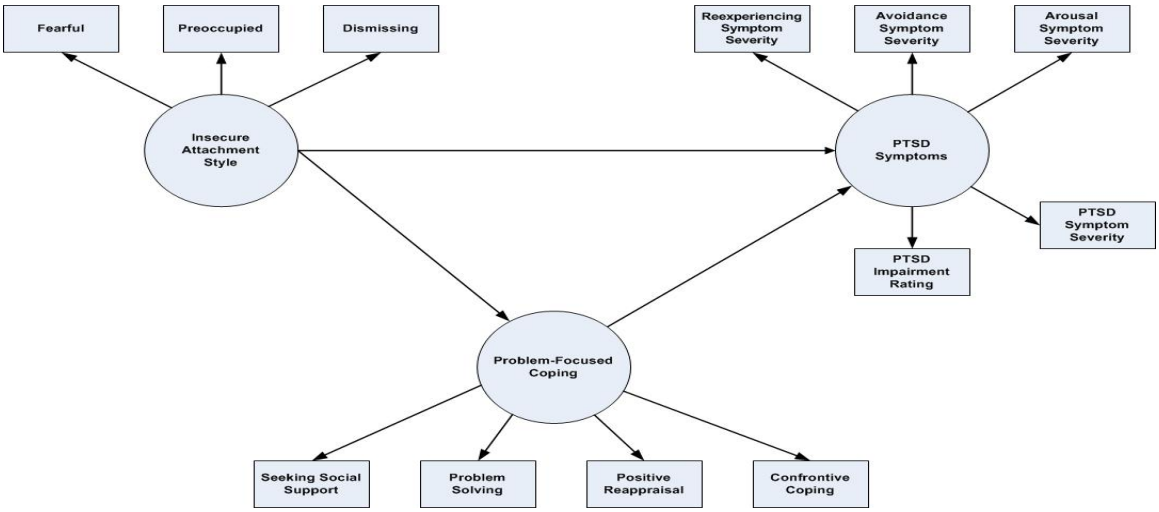
APPENDIX E

A) Direct association model



APPENDIX E (continued)

B) Mediational association model – Problem-Focused Coping



C) Mediational association model – Emotion-Focused Coping

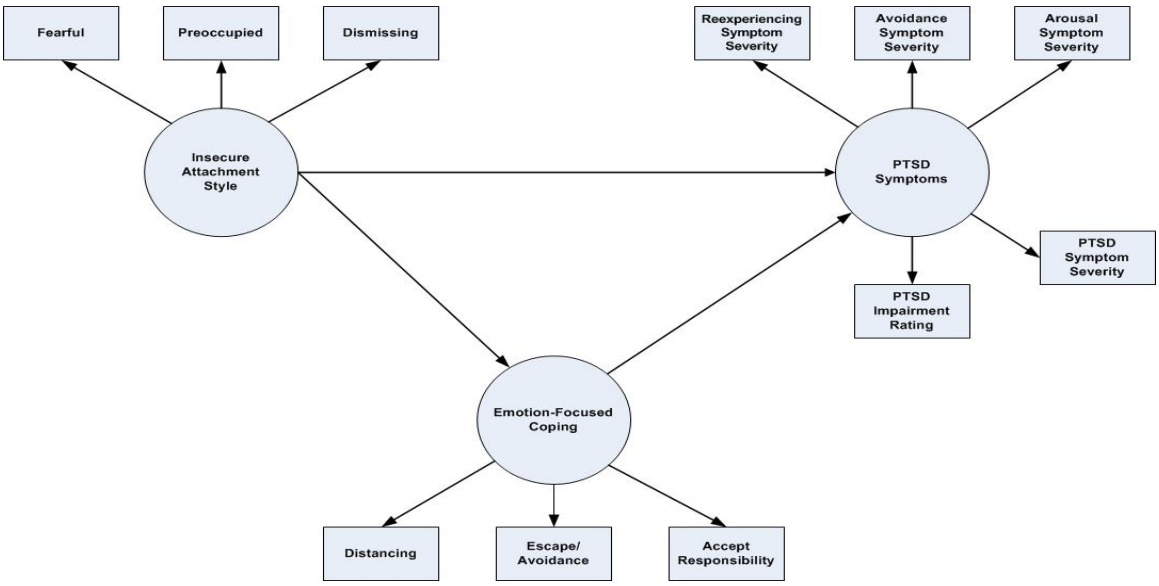
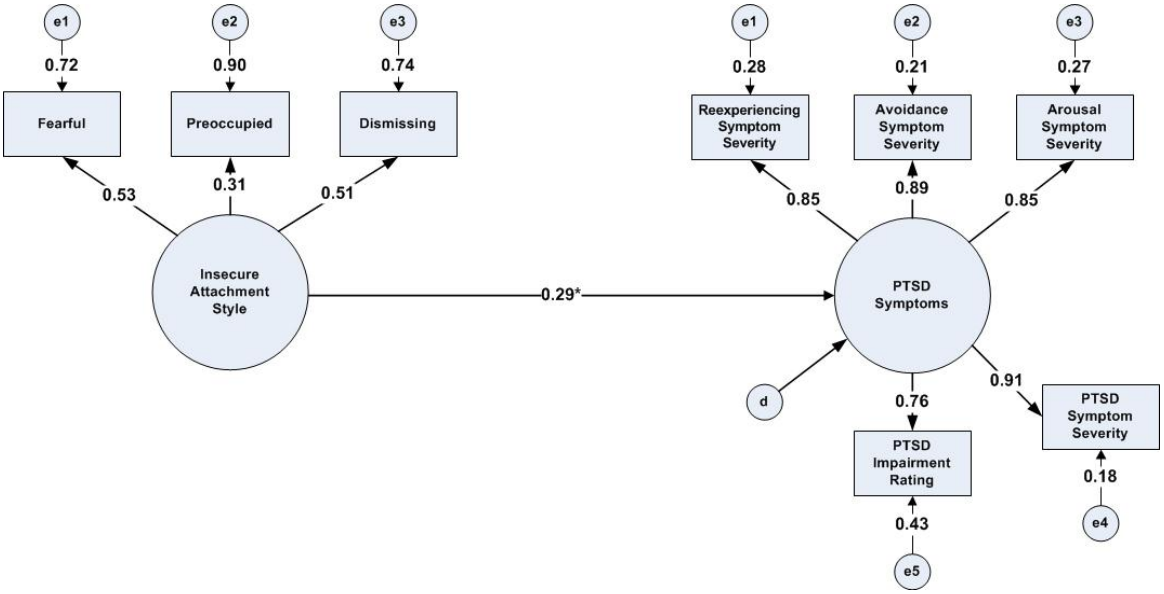


Figure 1. (A) Direct association model. (B) Mediational association model – Problem-Focused Coping. (C) Mediational association model – Emotion-Focused Coping. Rectangles represent measured variables and circles indicate latent factors.

APPENDIX F

Hypothesis 1

Modified Model

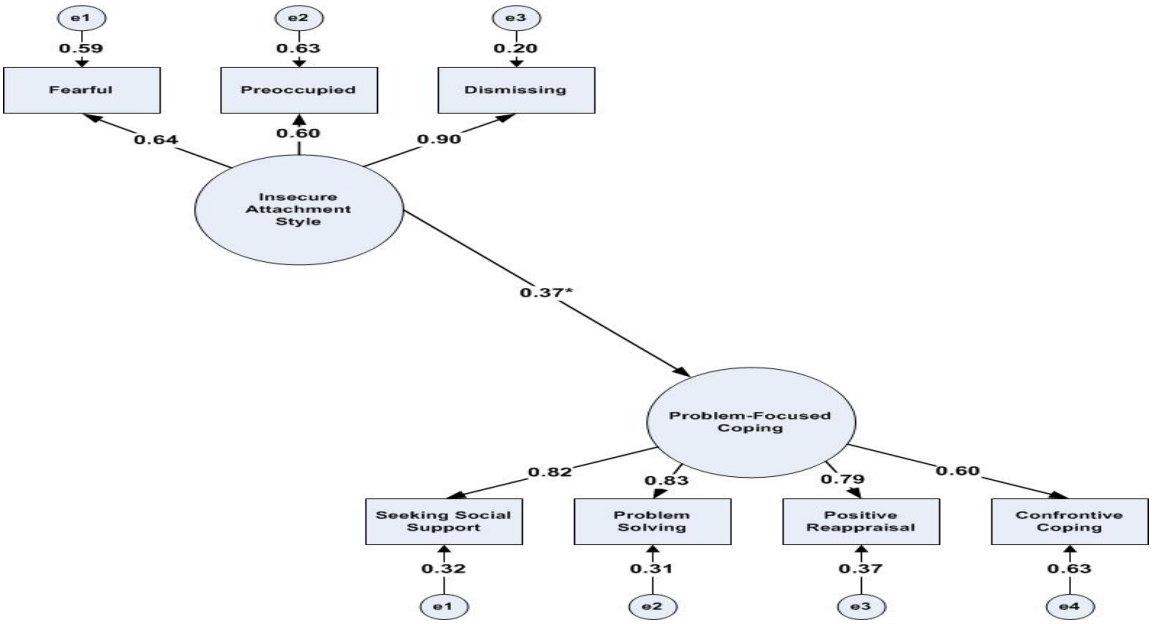


*p < .05

APPENDIX G

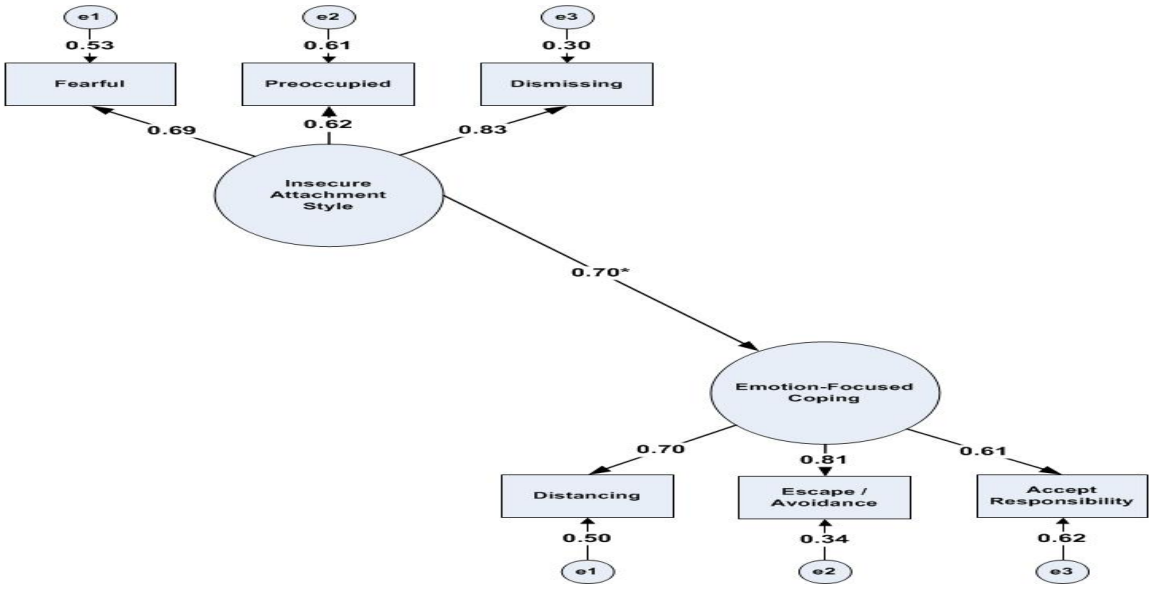
Hypothesis 2

Problem-Focused Model



*p < .05

Emotion-Focused Model

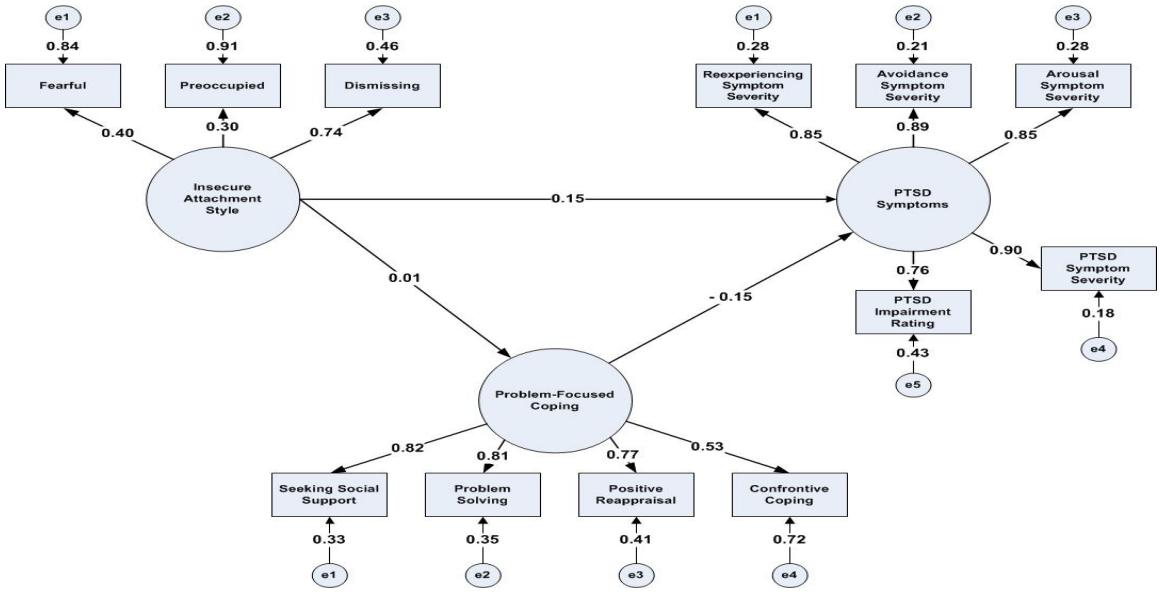


*p < .05

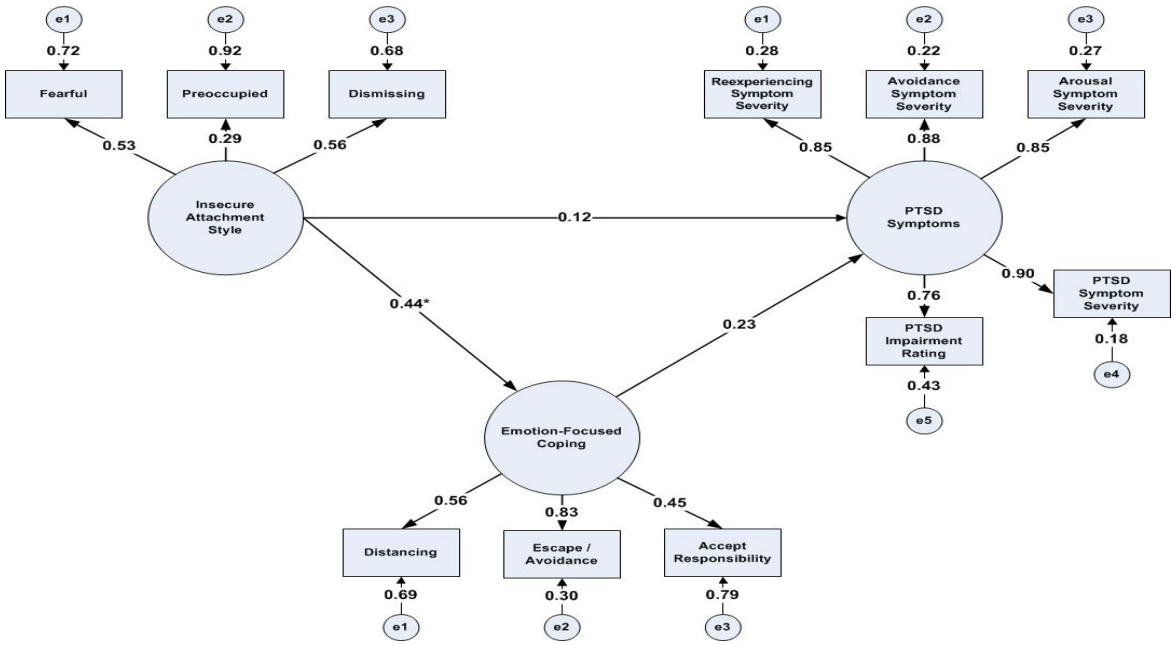
APPENDIX H

Hypothesis 3

Problem-Focused Model



Emotion-Focused Model



p < .05

Table A1

Descriptive Statistics for Predictor and Dependent Variables with Total Sample (N=150)

	N	MIN	MAX	M	SD	Skewness	Kurtosis
Fearful Attachment	142	1.00	5.00	3.61	.98	-.54	-.29
Preoccupied Attachment	141	1.00	5.00	2.96	.80	-.01	-.15
Dismissing Attachment	143	1.00	5.00	3.55	.66	-.47	.85
Problem-Focused Coping	128	.00	13.5	6.06	2.55	-.02	- .02
Emotion-Focused Coping	124	.00	8.57	5.04	1.57	-.23	.34
PTSD Reexperiencing Symptoms Severity	137	.00	15.00	7.66	4.83	-.08	-1.18
PTSD Avoidance Symptom Severity	137	.00	21.00	11.12	5.90	-.45	-.73
PTSD Arousal Symptom Severity	137	.00	15.00	9.68	4.56	-.72	-.45
PTSD Symptom Severity	150	.00	2.00	1.53	.72	-1.21	-.01
PTSD Total Number of Symptoms	150	.00	17.00	11.07	5.72	-.94	-.50
PTSD Impairment Rating	150	.00	4.00	2.75	1.71	-.88	-1.06

Table A2

Intercorrelations of Variables of Interest

Variables	1	2	3	4	5	6	7	8	9	10	11
1. Fearful Attachment	—										
2. Preoccupied Attachment	.08	—									
3. Dismissing Attachment	.29	.23	—								
4. Problem-Focused Coping	.00	.01	.06	—							
5. Emotion-Focused Coping	.25**	.16	.20*	.58	—						
6. PTSD Reexperiencing Symptoms Severity	.06	.09	-.03	-.07	.08	—					
7. PTSD Avoidance Symptom Severity	.17*	.09	.08	-.13	.05	.67	—				
8. PTSD Arousal Symptom Severity	.08	-.01	-.07	.03	.18*	.67	.65	—			
9. PTSD Total Number of Symptoms	.15	.05	.08	-.08	.08	.78	.84	.81	—		
10. PTSD Symptom Severity	.13	.04	.10	-.04	.09	.67	.72	.70	.94	—	
11. PTSD Impairment Rating	.25**	.12	.07	-.09	.02	.52	.60	.51	.73	.68	—

** $p < .01$
* $p < .05$