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RELATIONSHIPS AMONG DEPRESSION, POSTTRAUMATIC STRESS DISORDER, FORGIVENESS, MEANING IN LIFE, AND SPIRITUALITY IN SURVIVORS OF INTIMATE PARTNER VIOLENCE

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To the Graduate Council:

I am submitting herewith a dissertation written by Shannon Marie Rogers entitled "RELATIONSHIPS AMONG DEPRESSION, POSTTRAUMATIC STRESS DISORDER, FORGIVENESS, MEANING IN LIFE, AND SPIRITUALITY IN SURVIVORS OF INTIMATE PARTNER VIOLENCE." I have examined the final electronic copy of this dissertation for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy, with a major in Psychology.

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RELATIONSHIPS AMONG DEPRESSION, POSTTRAUMATIC STRESS DISORDER, FORGIVENESS, MEANING IN LIFE, AND SPIRITUALITY IN SURVIVORS OF INTIMATE PARTNER VIOLENCE

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DEDICATION

This document is dedicated to women all over the world who are both victims and survivors of abuse and assault and those who fight to end the violence against women. Thank you to all of the survivors who participated in this study and to the women with whom I worked who are rebuilding their lives. Your strength and determination inspire and motivate me to continue working with women to advance their lives and reach their goals.

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ABSTRACT

One hundred twenty nine survivors of interpersonal violence completed a paper-and-pencil survey to evaluate depression, PTSD, forgiveness, meaning in life, and spirituality. Five self-report measures were completed including: the Center for Epidemiological Studies-Depression scale, the PTSD Checklist – Stressor Specific version, the Transgression-Related Interpersonal Motivations Inventory, and the Spiritual Involvement and Beliefs Scale. The majority of the participants were female and Caucasian. Significant correlations were found between PTSD and presence of meaning, as well as depression and both presence of and search for meaning. However, hierarchical multiple regressions results indicated that depression and the two meaning in life subscales contributed a negligible increment of explained variance in PTSD severity. Additionally, neither the interaction between depression and search for meaning nor between depression and presence of meaning interactions was significant. Results suggest that there is no evidence that depression moderates the effects of meaning in life in the prediction of PTSD levels among this sample of victims of IPV.

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Chapter 1

Introduction

According to the Centers for Disease Control and Prevention (CDC, 2011) approximately 4.8 million incidents of intimate partner violence (IPV) occur each year, and in 2007, over 2300 of these incidents resulted in death. Though IPV traverses all socioeconomic groups, races and ethnicities, and religions, it disproportionately affects women, with approximately 85% of survivors being female (National Coalition Against Domestic Violence [NCADV], 2007). Survivors of IPV may use maladaptive ways to cope with their traumatic experiences such as using alcohol and drugs, smoking, or engaging in risky sexual behavior (CDC, 2011), emphasizing the need to examine factors that may reduce the negative mental health impact of IPV.

IPV includes physical abuse, emotional/psychological abuse such as threats, and sexual violence that occurs between a person and their partner (CDC, 2011; NCADV, 2007). Although physical violence is fairly well-defined in the literature and easily recognized by survivors, researchers purport that psychological abuse is less clearly delineated. Indeed, it has been suggested that those who have been the target of psychological abuse may not perceive it as such (Follingstad & DeHart, 2000).

Studies have indicated that psychological abuse may have a more severe impact on a person than physical abuse (Follingstad, Rutledge, Berg, Hause, & Polek, 1990; Sackett & Saunders, 1999). Follingstad et al. (1990) suggested this greater impact is due to this type of abuse directly attacking a woman's self-esteem. With ongoing abuse, her self-esteem is continually being assaulted, thereby reinforcing negative beliefs. Sackett and Saunders (1999) identified four major forms of psychological abuse including criticizing, ignoring, ridiculing and

jealous control, suggesting that it is the fear that these methods create which makes them so potent.

The effects of IPV are potentially severe, constituting a national health issue as medical treatment is sought for physical injuries ranging from cuts and bruises to internal bleeding and head trauma, and mental health treatment is sought for difficulties in emotional functioning and serious mental health disorders. Research suggests that monetary costs of IPV total around $5.8 billion annually, including medical care, mental health care, and lost work productivity (Mechanic, 2004). Consequently, there is an increased risk of job loss, which in turn increases poverty among IPV survivors. Two of the most frequently reported mental health problems associated with IPV are depression and posttraumatic stress disorder, or PTSD (Golding, 1999; Mechanic, Weaver, & Resick, 2008; Sharhabani-Arzy, Amir, Kotler, & Liran, 2003).

Mental Health and IPV

A meta-analysis (Golding, 1999) indicated that mental health disorders occur at a much higher rate among survivors of IPV when compared to the general population. Depression is shown to be highly correlated with IPV and the various types of abuse although the strongest correlations are found with physical and psychological abuse (Dienemann et al., 2000; Dutton, Goodman, & Bennett, 1999; Gleason, 1993; Humphreys, Cooper, & Miaskowski, 2010; Mechanic et al., 2008; Sutherland, Bybee, & Sullivan, 2002). Survivors of IPV tend to score higher on depression scales than the general population (Kemp, Rawlings, & Green, 1991) and depression was found twice as often in samples of survivors of IPV than samples with no previous abuse (Cascardi, O'Leary, Lawrence, & Schlee, 1995). Further, one study found that the frequency and severity of abuse had a stronger correlation with depression severity than did prior history of mental illness (Campbell, Kub, Belknap, & Templin, 1997). Suicide also has

been shown to be a potential deleterious effect of IPV, with approximately 25% of victims of domestic violence attempting suicide (Abbott, Johnson, Kozol-McLain, & Lowenstein, 1995; Bergman & Brismar, 1991; Fergusson, Horwood, & Ridder, 2005; Kaslow et al., 1998; Suicide.org, 2011). Victims of IPV frequently suffer from more than one psychological disorder, not just depression (Kessler, Sonnega, Bromet, Hughes & Nelson, 1995; Stein & Kennedy, 2001). Research has supported these findings among survivors of IPV showing high rates of comorbidity of depression and PTSD (Cascardi, O'Leary, & Schlee, 1999; Mechanic et al., 2008; Stein & Kennedy, 2001).

Similar to the depression literature, research (Pico-Alfonso, 2005) has suggested that IPV is frequently associated with PTSD. IPV survivors demonstrate higher rates of PTSD as well as greater severity of symptoms than the general population (DeMaris & Kaukinen, 2008; Dutton, Kaltman, Goodman, Weinfurt, & Vankos, 2005; Gleason, 1993; Kemp, Green, Hovanitz, & Rawlings, 1995; Kemp et al., 1991). Characteristic features of PTSD include re-experiencing the traumatic event, avoiding reminders of the traumatic event or emotional numbness, and increased arousal (American Psychiatric Association [APA], 2000). These symptoms can be debilitating in their severest forms, impacting social and occupational functioning. Walker (1984) suggested that Battered Woman Syndrome should be considered a subtype of PTSD, although this notion has not evolved further in the literature. Symptoms of PTSD may last long after the abuse has ended, emphasizing the potentially chronic nature of PTSD if left untreated (Woods, 2000).

Given the high correlation of mental health disorders such as depression and PTSD with IPV, much research has been devoted to identifying factors that may buffer the psychological effects of this type of trauma. Research suggests some characteristics that may explain the differences in severity of these disorders and may give some indication of treatment modalities

that could alleviate PTSD and depression in survivors of IPV. Some of the potential factors that may influence the severity of these conditions include forgiveness, meaning in life, and spirituality. Each of these constructs is detailed in the following sections and will be examined in the proposed study.

Forgiveness

Forgiveness is thought to ameliorate some of the effects of trauma, but finding a consensus on the definition of the construct has been challenging (Witvliet, Phipps, Feldman, & Beckham, 2004). McCullough, Pargament, and Thoresen (2000) purported that all of the definitions have in common that in the process of forgiving; the responses toward those who have injured an individual become more positive and less negative. McCullough and colleagues (2000) also posited that forgiveness is not reconciliation and few have disputed this notion. Similarly, Witvliet and colleagues (2004) described forgiveness as an increase in prosocial emotions toward an offender who essentially does not deserve it.

Seagull and Seagull (1991) described forgiveness as "accusatory suffering," in which one holds on to their resentment and victim status based on the assumption that not doing so would alleviate any responsibility for the abuser. They posited that although maintaining accusatory suffering, and thus being unable to forgive, may help the victim adapt to the traumatic experience of IPV, it also hinders recovery. Other research (Witvliet, Ludwig, & VanderLaan, 2001) supports this finding, indicating that people who are unforgiving are more likely to be negatively aroused, angrier, and less in control.

For the current study, forgiveness will be defined as a combination of decreases in desires for both revenge and maintaining distance from an offender, accompanied by an increase in wanting to pursue reconciliation (McCullough, Worthington, & Rachal, 1997). McCullough and

colleagues (1997) purport that empathy is an important component of forgiving because it serves to inhibit aggression and decreases motivation for revenge on the offender. Forgiveness also is believed to be motivated by the closeness of the offender's relationship with the victim, with the closer the relationship, the higher the motivation to forgive (McCullough et al., 1998).

In a study by Reed and Enright (2006) forgiveness therapy was shown to decrease severity of depression in survivors of IPV to levels found among non-abused samples. Other studies have supported the finding that interventions that focus on forgiveness result in depression levels comparable to non-depressed samples (Lin, Mack, Enright, Krahn, & Baskin, 2004; Rye, Pargament, Pan, Yingling, Shogren, & Ito, 2005; Solomon, Dekel, & Zerach, 2009). Freedman and Enright (1996) found both short- and long-term effects of forgiveness interventions with maintenance of decreases in depression symptoms occurring up to one year after the completion of the intervention.

Studies also have shown a negative association between a forgiving style of coping and PTSD severity, with higher use of forgiving coping correlated with lower PTSD severity (Orcutt, Pickett, & Pope, 2005; Solomon et al., 2009). Other research has demonstrated that after engaging in forgiveness therapy, PTSD symptom severity for IPV survivors was similar to levels among non-abused samples (Reed & Enright, 2006). Forgiveness also was found to mediate the relationship between PTSD and hostility in a sample of adult survivors of childhood abuse, with higher levels of forgiveness lessening the associations between PTSD and hostility (Snyder & Heinze, 2005). However, the findings in forgiveness research have been mixed. In a study of residents of New York City after the attacks on September 11, 2001 (Friedberg, Adonis, Von Bergen, & Suchday, 2005), no significant relationship was found between forgiveness and PTSD

severity. Karremans et al. (2003) hypothesized that perhaps forgiveness has more of an impact if there is a relationship between the perpetrator and the victim, such as in IPV.

Meaning in Life

Having a sense of meaning in life also may serve as a protective factor against PTSD or depression severity. Meaning in life previously has been defined as "the sense made of and significance felt regarding the nature of one's being and existence" (Steger, Frazier, Oishi, & Kaler, 2006, p. 81). Meaning in life is considered a component of meaning-making. Meaning-making involves processing an upsetting or traumatic event, allowing an individual to adapt some of their interpretations of the trauma to accommodate this new information into their belief system (Park, 2005). Research has demonstrated that individuals who were able to use cognitive restructuring, or meaning making, reported less distress and better adjustment to the event, experienced lower levels of stress, and improved well-being (Lepore, Ragan, & Jones, 2000; McIntosh, Silver, & Wortman, 1993). For some individuals, making meaning from a trauma may lead them to report positive outcomes from a traumatic event, often termed posttraumatic growth or benefit-finding (Calhoun, Cann, Tedeschi, & McMillan, 2000; Park & Fenster, 2004; Tedeschi & Calhoun, 2004).

Debats, van der Lubbe, and Wezeman (1993) concluded that having a meaningful life was essential to an individual's psychological health and overall life satisfaction. In their study, meaning in life was negatively associated with depression severity and positively associated with happiness. Other research has supported these results, showing a negative correlation between meaning in life and depression symptoms (Krause, 2007; Scannell, Allen, & Burton, 2002; Zika & Chamberlain, 1992). Furthermore, research with military veterans has suggested that individuals who had higher levels of meaning in life tended to have lower levels of PTSD

severity (Owens, Steger, Whitesell, & Herrera, 2009). A significant interaction between depressive symptoms and sense of meaning also was found, suggesting that meaning in life was particularly beneficial in terms of lower PTSD severity when depression severity was at low or moderate levels. Thus, given the potential relationships between meaning in life, PTSD, and depression, the impact of meaning in life on PTSD and depression severity will be examined in the current study.

Spirituality

A third factor that may impact PTSD and depression severity among IPV survivors is spirituality. The literature often uses the terms spirituality, intrinsic religiosity, and religious coping interchangeably. However, there seems to be agreement that spirituality is different from religion. Religion is synonymous with extrinsic religiosity, which can be described as accepting a codified set of beliefs that are a part of a particular form of religion of which one is a member (Lee, Connor, & Davidson, 2008). Allport and Ross (1967) described extrinsically religious people as being interested in status and sociability, using it as a form of security and self-justification.

Spirituality, on the other hand, has proven more elusive to define than religion. Allport and Ross (1967) purported that intrinsically religious people internalized beliefs and sought to remain true to them regardless of external forces. Kaye and Raghavan (2002) viewed spirituality similarly, describing it as a central philosophy of an individual's life which guides their behavior in everyday activities. McSherry and Cash (2004) argued that spirituality should not be scripted but should be personal for each individual. The current study will focus on spirituality as defined by Hill et al. (2000) that spirituality must involve some notion of the sacred that can be, "a person, an object, a principle, or a concept that transcends the self" and "that may invoke

feelings of respect, reverence, devotion, and ideally, serve an integrative function in human personality." (p. 64).

Some research has explored relationships between spirituality and mental health. In a meta-analysis by Ano and Vasconcelles (2005) spirituality was significantly, positively related to psychological adjustment to stress, including depression. Bergin, Masters, and Richards (1987) found similar results demonstrating a positive association between spirituality and happiness and a negative correlation with worry and self-doubt. Research conducted with individuals having serious mental illnesses, including depression, found similar results (Corrigan, McCorkle, Schell, & Kidder, 2003). While these previously mentioned studies were not conducted with trauma samples, one study (Watlington & Murphy, 2006) has been conducted with African American survivors of IPV. The authors found a significant, negative relationship between spirituality and depression, with more spiritual experiences associated with lower levels of depression symptoms. This finding also has been supported in a sample of adult survivors of childhood sexual abuse (Gall, 2006).

Limited research has explored relationships between spirituality and PTSD symptoms. In a study of IPV survivors, individuals who reported having higher levels of spirituality were found to have lower levels of PTSD severity (Astin, Lawrence, & Foy, 1993). Research with other trauma samples has supported these findings, showing higher levels of spirituality were associated with lower PTSD symptom severity (Harris et al., 2011; Krejci et al., 2004).

Purpose of the Present Study

Many studies have examined resilience and coping in the context of trauma populations. Common variables identified include external resources such as social support (Anderson, Renner, & Foy, 2012; Todd & Worrell, 2000; Valentine & Feinauer, 1993) and internal

resources such as flexibility, self-esteem, optimism, (Foa, Cascardi, Zoellner, & Feeny, 2000), hope, spirituality, and sense of humor (Davis, 2002). Though spirituality has also been cited as an internal resource often relating it to meaning in life (Lu & Chen, 1996) forgiveness has not, particularly with IPV populations. Prior research has not examined the impact of forgiveness, meaning in life, and spirituality together on levels of depression and PTSD symptomatology, the purpose of the present study. Given that PTSD and depression are commonly found in samples of IPV survivors, the hypotheses for this study are formed around what might alleviate symptom severity for these disorders. Based on the literature outlined above, the following hypotheses were examined in the current study:

Hypothesis 1: Forgiveness, meaning in life, and spirituality will be negatively associated with depression and PTSD severity in survivors of IPV. Individuals having higher levels of forgiveness, meaning in life, and spirituality will report lower levels of depression and PTSD severity.

Hypothesis 2: In the regression predicting PTSD severity, meaning in life will moderate the effects of depression on PTSD symptom severity. Two potential interactions, presence of meaning in life x depression and search for meaning in life x depression, will be investigated as they relate to PTSD severity.

Intimate partner violence is prevalent in our society and survivors of IPV are in need of help on many levels, including mental health. The effects of IPV are extensive and costly to an individual, but also are a burden on a societal level. Since PTSD and depression can significantly impact an individual's functioning, focusing on factors that may help reduce these symptoms is critical.

Chapter 2

Method

Participants

The initial sample included 147 participants (sample size calculated using G*Power; Faul, Erdfelder, Buchner, & Lang, 2009) self-identified survivors of domestic violence who were at least 18 years old. Due to the amount of missing data in the survey responses, multiple imputation was performed to impute the missing values for every item comprising these scales. This procedure resulted in a final sample of 129 individuals.

The sample was largely female (93.8%), low income (74% below $20,000 per year, which is near or below the poverty level), and educated at the median level of "some college." Only 12% of the sample had a bachelor's or higher degree. Although predominantly white, the sample was 27.9% African-American, slightly over two times the percentage in the general population. There was negligible representation of any other racial/ethnic groups. Over half of the participants (56.9%) were unemployed or students, and only 22.8% held full time jobs. The mean age of the participants was approximately 33 years of age (SD = 9.62). Participants reported that their most recent abusive relationship lasted an average of 5.3 years, and that an average of 2.25 years had passed since that relationship ended.

Assessment Measures

Center for Epidemiologic Scales-Depression (CES-D; Radloff, 1977). The CES-D is a 20-item measure designed to evaluate depressive symptomatology in nonpsychiatric populations. Respondents rate how often they have experienced a variety of symptoms associated with depression in the past week using a 4-point scale, ranging from 0 (*Rarely or none of the time*) to 3 (*Most or all of the time*). Total scores range from 0 to 60, with higher scores indicating higher

levels of depression. Scores totaling 16 and above suggest possible depression when used as a screening measure (Radloff, 1977; 1991). Sample items include: "I thought my life had been a failure" and "I felt that I could not shake off the blues even with help from my family or friends." Internal consistency of the CES-D was reported at .85-.90 (Cronbach's alpha) and test-retest reliability was .53 (Radloff, 1977). Convergent validity of the CES-D has been shown by a positive association with the depression subscale of the SCL-90 (Derogatis, Lipman, & Covi, 1973). The CES-D has been used previously with IPV samples (e.g., Gonzalez-Guarda, Peragallo, Vasquez, Urrutia, & Mitrani, 2009; Vaeth, Ramisetty-Mikler, & Caetano, 2010). Internal consistency in the current study was .90.

PTSD Checklist-Stressor Specific Version (PCL-S; Weathers, Litz, Herman, Huska, & Keane, 1993). The PCL-S is a 17-item self-report inventory designed to assess PTSD symptom severity among various trauma samples. Instructions were modified so that participants were asked to consider the abusive relationship from which they fled when responding to the items. Responses about how much participants have been bothered by a particular symptom in the past month are rated on a 5-point scale, ranging from 1 (*Not at all*) to 5 (*Extremely*). The total score on the PCL-S ranges from 17 to 85, with higher scores indicating greater PTSD symptom severity. Sample items include, "Repeated, disturbing memories, thoughts, or images, of the stressful experience" and "Avoiding thinking about or talking about the stressful experience or avoiding having feelings related to it." A cut-off of 44 or higher on the PCL indicates a probable PTSD diagnosis (Blanchard, Jones-Alexander, Buckely, & Forneris, 1996) and has previously been used in research with IPV survivors (Kocot & Goodman, 2003). Internal consistency and test-retest reliability with various trauma samples were .94 and .96 respectively (Blanchard et al., 1996; Weathers et al., 1993). Convergent and divergent validity of the PCL-S have been

supported by correlations in expected directions with other measures of PTSD, depression, and anxiety (Adkins, Weathers, McDevitt-Murphy, & Daniels, 2008). Internal consistency of the PCL-S in the current study was .93.

Transgression-Related Interpersonal Motivations Inventory (TRIM; McCullough, Rachal, Sandage, Worthington, Brown, & Hight, 1998). The TRIM is a 12-item self-report inventory designed to assess interpersonal forgiving in a close relationship. The TRIM consists of two subscales, avoidance motivation and revenge motivation. Items are rated from 1 (*Strongly disagree*) to 5 (*Strongly agree*). Total scores range from 12 to 60 with higher scores indicating less forgiveness. Sample items include: "I want him/her to get what he/she deserves" and "I keep as much distance between us as possible." The TRIM has shown acceptable internal consistency (revenge *rs* = .90; avoidance *rs* = .86-.93) and test-retest reliability (revenge *rs* = .53-.79; avoidance *rs* = .44-96 for 3-9 week intervals) (McCullough et al., 1998). Convergent validity of the TRIM subscales was supported by positive correlations with other measures of empathy for the offender, closeness, commitment, and a single-item measure of forgiveness (McCullough et al., 1998). Internal consistency in the current study for both the TRIM-R and TRIM-A subscales was .85.

The Meaning in Life Questionnaire (MLQ; Steger, Frazier, Oishi, & Kaler, 2006). The MLQ consists of two, 5-item subscales, Presence of Meaning and Search for Meaning. The Presence of Meaning subscale assesses the presence of meaning and purpose in a person's life. The Search for Meaning subscale measures a person's tendency to seek out meaning and purpose. Items are rated from 1 (*Absolutely untrue*) to 7 (*Absolutely true*). Scores on each subscale range from 5 to 35. Higher scores on the Presence of Meaning subscale indicate a higher presence of meaning in one's life, and higher scores on the Search for Meaning subscale

indicate actively searching for meaning in one's life. Sample items include: "I understand my life's meaning" and "I am seeking a purpose or mission for my life." The MLQ has shown acceptable internal consistency (*rs* = .81 to .92) and test-retest reliability (*rs* = .70) (Steger et al., 2006). Convergent validity of the MLQ on the Presence of Meaning subscale has been shown by positive correlations with similar measures of meaning such as the Life Regard Index (Battista & Almond, 1973) and The Purpose in Life Test (Crumbaugh & Maholik, 1964). Internal consistency reliability coefficients in the current study were .87 and .81 for the Search and Presence subscales respectively.

Spiritual Involvement and Beliefs Scale (SIBS; Hatch, Burg, Naberhaus, & Hellmich, 1998). The SIBS is a 26-item inventory designed to assess an individual's spirituality regardless of religious background. Responses about spiritual beliefs are rated on a 5-point scale, ranging from 1 (*Strongly agree*) to 5 (*Strongly disagree*). The total scores on the SIBS range from 26 to 130, with higher scores indicating a greater level of spiritual involvement. Sample items include, "A spiritual force influences the events in my life" and "I believe there is a power greater than myself." Internal consistency and test-retest reliability were both reported at .92 (Hatch et al., 1998). Convergent validity of the SIBS was supported by a positive association with the Spiritual Well-Being Scale (Paloutzian & Ellison, 1982). Internal consistency for current study was .86.

Procedure

Participants were recruited via announcements (see Appendix B) distributed at a local organization that provides services to women who are survivors of intimate partner violence. The research announcement explained that the researchers were conducting a study of mental health symptoms such as depression and PTSD in survivors of intimate partner violence as well

as spirituality, forgiveness, and meaning in life. Interested individuals were given a survey in the waiting room while waiting for their advocate. Data was collected using a paper-and-pencil survey format. Participants were provided with informed consent information which further explained the purpose of the study (see Appendix C) and were informed that their surveys would only be identified by a number, not their name. Individuals also were informed that participation was completely voluntary and would not affect their services or treatment. Participants indicated their consent by signing the form, and were then given the survey items, including all measures described previously. The researcher or one of the staff at the center was available to answer questions that arose. Participants were asked if they had difficulty reading before the survey was administered. No participants requested this assistance. All procedures were in full compliance with the university Institutional Review Board. Participants were each given a gift card worth $5.00 upon completion of the survey as a token of appreciation.

Data Analysis

Due to the amount of missing data among the surveys received, multiple imputation was conducted using the Markov Chain Multiple Imputation procedure which is a function in SPSS version 21. This procedure specified 500 parameters and 100 iterations per draw, and produced 5 alternative imputed data sets from which pooled estimates of all analyses of the data sets were derived.

The results of all subsequent analyses involving the study's independent and dependent variables were based on the pooled results for the five imputed data sets. To avoid biasing the scales in the survey, imputation was limited to a maximum of 20% of the items in any scale. Markov Chain Multiple Imputation works with large amounts of missing data, but two situations are problematic for it or any other imputation method. One is when the missing data is

nonrandom, such as when there is a systematic tendency for some questions not to be answered because they are particularly invasive or uncomfortable. This is called Not Missing at Random (NMAR) data, and can lead to serious biases when imputation is used, a concern with the current study. Second, each of the items was part of a multi-item scale. There is limited research on the effect of Markov Chain Multiple Imputation on scale score parameters and their reliability, and it seemed risky to allow too much imputation per scale. For these reasons a conservative limit on the number of missing values per scale was imposed, and any cases which had one or more scales on which they did not answer more than 20% of the questions were excluded (Schlomer, Bauman, & Card, 2010). This method resulted in the exclusion of 18 participants. Thus, the final sample consisted of 129 participants.

Statistics were computed using SPSS software (version 21.0, SPSS Inc.). Means, standard deviations, internal consistency reliability estimates, and inter-correlations among all continuous variables were conducted. To investigate hypothesis 1, a Pearson *r* correlational analysis was conducted to determine significant associations between depression, PTSD severity, forgiveness, meaning in life subscales, and spirituality. To investigate hypothesis 2, hierarchical multiple regressions were performed with all variables having significant correlations to assess predictors of depression and PTSD. In the PTSD model, a second step tested the possible moderating role of depression in the relationships between meaning in life and PTSD. Depression, presence of meaning in life, and search for meaning in life were mean-centered and the centered values multiplied to obtain two interaction terms (presence of meaning in life x depression and search for meaning in life x depression) (Aiken &West, 1991). Main effects were entered simultaneously in Step 1 of the model and interactions at Step 2.

Chapter 3

Results

Symptoms of Psychological Health

The first hypothesis stated that negative associations would be found among the subscales of forgiveness on revenge (TRIM-R), avoidance (TRIM-A), search for meaning (MLQ-S), presence of meaning (MLQ-P), and spirituality (SIBS) with both depression (CES-D) and PTSD (PCL-S) symptom severity. The correlations among these variables are presented in Table 1. The mean for PTSD severity on the PCL-S was 56.93 with 76% of the sample at or above the recommended cut-off of 44 suggesting a probable PTSD diagnosis (Weathers et al., 1993). The mean for depression severity on the CES-D was 28.77 with 93% of the sample at or above 16, the cutoff for probable depression (Radloff, 1977).

Variables that were used to test the hypotheses in this study were evaluated for their conformance to the normal distribution. The averaged Shapiro-Wilk statistics and their p-values for the five imputed data sets are reported in Table 2. As sample size increases beyond 50 cases, the power of the Shapiro-Wilk statistic becomes increasingly excessive, resulting in progressively more trivial departures from normality being identified as significant. In larger samples such as the present one, it is better to use a direct interpretation of the Shapiro-Wilk statistic in judging departures from normality, and to combine that with a consideration of the q-q plots. Since the Shapiro-Wilk statistic will always range from 0 to 1, a cutoff of .90 is often used as the threshold for judging whether a distribution's departure from normality is sufficient to be problematic in deriving p-values from the theoretical normal or t distribution. In the present case only one variable's Shapiro-Wilk statistic fell below .90 (Razali & Wah, 2011; SAS Institute, 2010): MLQ – Search for Meaning. In addition, the q-q plots for CES-D and TRIM-

Avoidance exhibited appreciable departures from linearity. Accordingly, the *p*-values for analyses involving these variables were checked by repeating the analyses using either a nonparametric equivalent method or by a bootstrapping analysis.

To test hypothesis 1, a Pearson *r* correlational matrix was created to examine the relationships of forgiveness, meaning in life and spirituality with both depression and PTSD. Search for Meaning was the only correlation with depression severity that reached significance and this was not in the hypothesized negative direction. PTSD severity was correlated significantly with two variables: Presence of Meaning and Search for Meaning. However, its correlation with MLQ-Search for Meaning was not in the predicted negative direction. Thus, hypothesis 1 was only partially supported. Use of the nonparametric Spearman rho did not change the conclusion about the direction or significance of any of the bivariate relationships that were evaluated.

PTSD Moderated by Depression

To test hypothesis 2, two hierarchical multiple regressions were performed to assess whether depression would moderate the relationship between the two subscales of meaning in life and PTSD. This hypothesis was tested by evaluating the change in R^2 resulting from adding the CES-D x MLQ subscale interactions as the second step of a hierarchical regression in which all potential individual predictors were entered at step one. The variables entered at step one were the centered versions of the CES-D and the two MLQ subscales. The interaction terms entered at step two consisted of the products of the centered versions of the CES-D and each of the MLQ subscales. Step 1 of this model was significant ($F(3, 125) = 30.00$, $p<.001$, adjusted $R^2 = .41$. In the final model, depression ($\beta = .721$, $p<.001$), search for meaning ($\beta = .065$, $p<.001$), and presence of meaning ($\beta = -.012$, $p<.001$) were significant predictors of PTSD severity.

However, Step 2 examining the depression x search for meaning (β =-.030, p<.001) and depression x presence of meaning (β =-.027, p<.001) interactions was not significant.

Given that the distribution of one or both of the components of each interaction term had been previously determined to depart from normality, a final check on the p-values of their regression coefficients was made by repeating the regression in each imputed data set using bootstrapping to estimate the empirical 95% confidence interval around each regression coefficient. Each bootstrapped data set consisted of 1000 samples. Results were similar to the original analyses. Therefore, hypothesis 2 was not supported.

Chapter 4

Discussion

The current study examined relationships among forgiveness, meaning in life, and spirituality as they related to the symptom severity of PTSD and depression in a sample of IPV survivors. The results showed support for three significant correlations.

Psychological Health

The first hypothesis proposed that a negative association would be found between the scales of forgiveness (TRIM-Revenge and TRIM-Avoidance), meaning in life (MLQ-Presence of Meaning and MLQ-Search for Meaning), and spirituality (SIBS) and severity of levels of both depression and PTSD. Of these, only presence of meaning was significantly negatively correlated with PTSD symptom severity. Search for Meaning was significantly positively associated with both depression and PTSD severity.

The results from the current study suggest that this sample of IPV survivors had a sense that their life was meaningful and that they were not actively continuing to search for meaning. This sense of meaning, in turn, was associated with lower levels of distress in the form of PTSD, but was not significantly related to decreases in depression severity. This lack of significance related to depression symptom severity may be explained by the differences in the populations appearing in previous studies examining presence of meaning in life and depression, most of which were conducted with undergraduates without any significant trauma history. One exception was a study conducted with veterans (Owens et al., 2009) which did find a significant negative association between presence of meaning in life and depression.

Although the current study hypothesized a negative relationship between searching for meaning and PTSD severity, our results did not confirm this. Instead the results showed a

positive relationship between MLQ-S and both depression and PTSD, suggesting that the less resolution participants had around the abusive situation, the higher their distress levels in the form of depression and PTSD symptoms. Our results for both presence of and search for meaning in life are supported by prior research with individuals who had experienced a traumatic loss (Davis, Wortman, Lehman, and Silver, 2000). Participants who were searching for meaning about the traumatic loss experienced less psychological adjustment than those who reported having found meaning in the loss. The authors proposed that unresolved meaning could leave individuals feeling troubled (Davis et al., 2000).

Other predicted associations between depression, PTSD, forgiveness, and spirituality showed no significance. The lack of significance was surprising given Seagull and Seagull's (1991) hypotheses derived from clinical experience with survivors of incest and domestic violence suggesting relationships between forgiveness and both PTSD and depression. Seagull and Seagull proposed that holding onto resentment and not forgiving the abuser might impede recovery and thus, maintain symptoms of depression and PTSD. Similarly, Orcutt, Pickett, and Pope (2005) found significant relationships between forgiveness response style and PTSD as well as avoidance and PTSD with a sample of undergraduates. One potential explanation for the lack of significance in the current study may be the different types of samples and sample sizes. The sample size for the Orcutt et al. (2005) study was much larger (N=1,014) and were undergraduates participating in an ongoing trauma study, not a treatment-seeking sample as was the current study.

Likewise, contrary to our hypothesis, spirituality was not significantly associated with depression severity. Previous research found significant negative associations between spirituality and depression (Gall, 2006; Watlington & Murphy, 2006) among samples of IPV

survivors and adult survivors of child sexual abuse. Prior research with IPV survivors (Astin, Lawrence, & Foy, 1993) and veterans (Harris et al., 2011) found a significant, negative association between spirituality and PTSD severity. Though the correlations between the SIBS and both CES-D and PCL-S were not significant, the SIBS has not held up well under factor analysis and has had varied results depending on the type of sample (Robert Hatch, personal communication, February 13, 2013). This could be an important factor in the non-significant results obtained in this study.

The second hypothesis predicted that depression would moderate the relationship between the two subscales of meaning in life, search for meaning and presence of meaning, and PTSD. There is no evidence with the current sample that depression moderates the effects of the presence of or search for meaning in life in the prediction of PTSD severity. Although Owens et al. (2009) found that depression moderated the relationship between meaning in life and PTSD, this difference in results may be because the Owens et al. (2009) study was conducted with a largely all male sample of veterans.

Limitations

There were several limitations in the current study. Although 147 participants were recruited for the study, many of the participants did not completely answer the entire questionnaire. Therefore, data imputation was necessary, but resulted in useable data for only 129 of the participants. According to G-Power (Faul, Erdfelder, Buchner, & Lang, 2009) the requisite number of participants should have been at least 147 participants, reducing the number of participants to 87% of all participants recruited.

The measure for spirituality (SIBS) is questionable, as the measure has not provided consistent results with different factor structures depending on the sample used. It is possible

that using a more reliable and valid measure of spirituality would have produced different results. Thus, the results related to the SIBS should be interpreted with caution.

Another limitation of the current study is self-selection bias. It is possible that those who self-selected to participate may reflect some inherent bias in the characteristics of the participants that differ from those who did participate. As an example, the final sample is not representative of all racial/ethnic groups. The center provides services to Hispanic/Latino women, many of whom do not speak English, and did not participate in this study. This sampling bias could affect the generalizability of the current findings.

Conclusions

The current study set out to examine the impact of forgiveness, meaning in life, and spirituality together on levels of depression and PTSD symptomatology. Although significant associations were found between PTSD and presence of meaning as well as depression and both presence of and search for meaning, these associations failed to reach significance in the regression model.

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APPENDIX

Table 1

Means, standard deviations, and correlations between independent and dependent variables

	Range	Mean	*SD*	1	2	3	4	5	6
1. PTSD (PCL-S)	18-85	56.93	7.68	--	--	--	--	--	--
2. Depression (CES-D)	-10-51	28.77	5.48	.749	--	--	--	--	--
3. Forgive/Revenge (TRIM-R)	5-25	11.68	3.32	.135	.05	--	--	--	--
4. Forgive/Avoidance (TRIM-A)	7-35	30.12	5.57	-.105	-.099	.168	--	--	--
5. Meaning/Searching (MLQ-S)	5-35	24.57	5.10	.325*	.227*	.165	-.166	--	--
6. Meaning/Presence (MLQ-P)	9-35	25.54	5.10	.278*	-.035	-.105	.179*	-.246**	--
7. Spirituality (SIBS)	49-116	87.29	9.38	.009	-.012	-.166	-.003	-.072	.321**

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

Table 2

Multiple regression analyses predicting PTSD severity

	PTSD[a]		
Predictors	*B*	SE	β
Step 1			
CES-D[b]	1.005	.092	.721*
MLQ-S[b]	.132	.130	.065
MLQ-P[b]	-.030	.159	-.012
Step 2			
CES-D[b]	1.007	.101	.723
MLQ-S[b]	.132	.132	.065
MLQ-P[b]	-.006	.171	-.002
CES-D[b] x MLQ-S[b]	-.005	.010	-.030
CES-D[b] x MLQ-P[b]	-.006	.014	-.027

Note. * $p<.001$

[a]Adj. $R^2 = .554$, ΔR^2 Step 1 = .565, ΔR^2 Step 2 = .001

[b]Centered values

Appendix A

Survey Items

[1. Demographic Information]

Please answer the following questions.

1. What is your age (in years)? _____

2. What is your sex?
   Female
   Male

3. What is your highest level of education completed?
   _____ Some high school
   _____ High school graduate
   _____ Some college
   _____ College degree
   _____ Graduate/professional degree

4. What is your Race/Ethnicity? (Check all that apply.)
   _____ Caucasian/White/European-American
   _____ African-American
   _____ Asian-American/Pacific Islander
   _____ Hispanic-American/Latino
   _____ Native American/First Nations/Native Alaskan
   _____ Multiracial/Other (please specify)

5. What is your employment status?
   _____ Not employed
   _____ Student
   _____ Employed part-time
   _____ Employed full-time

6. What is your approximate annual household income?
   _____ Under $10,000
   _____ $10,000 - $19,999
   _____ $20,000 - $29,999
   _____ $30,000 - $39,999
   _____ $40,000 - $49,999
   _____ $50,000 - $59,999
   _____ $60,000 – $69,999
   _____ $70,000 - $79,999
   _____ $80,000 - $89,999
   _____ $90,000 – $99,999
   _____ $100,000 - $110,999
   _____ $111,000 - $119,999

_____ $120,000 - $129,999
_____ $130,000 or more

7. How long was your last abusive relationship?

8. How long has it been since that relationship ended?

9. Was there physical abuse in that relationship?
_____ Yes
_____ No

10. Was there emotional/psychological abuse in that relationship? (such as name calling, threats, ridicule)
_____ Yes
_____ No

[2. Center for Epidemiologic Studies Depression (CES-D)]

Below is a list of some ways you may have felt or behaved. Please indicate how often you have felt this way during the last week by circling the appropriate number.

	Rarely or none of the time (Less than 1 day)	Some or a little of the time (1-2 days)	Occasionally or a moderate amount of the time (3-4 days)	Most or all of the time (5-7days)
1. I was bothered by things that usually don't bother me.	0	1	2	3
2. I did not feel like eating; my appetite was poor.	0	1	2	3
3. I felt that I could not shake off the blues even with help from my family or friends.	0	1	2	3
4. I felt that I was just as good as other people.	0	1	2	3
5. I had trouble keeping my mind on what I was doing.	0	1	2	3
6. I felt depressed.	0	1	2	3
7. I felt that everything I did was an effort.	0	1	2	3
8. I felt hopeful about the future.	0	1	2	3
9. I thought my life had been a failure.	0	1	2	3
10. I felt fearful.	0	1	2	3
11. My sleep was restless.	0	1	2	3
12. I was happy.	0	1	2	3
13. I talked less than usual.	0	1	2	3
14. I felt lonely.	0	1	2	3
15. People were unfriendly.	0	1	2	3
16. I enjoyed life.	0	1	2	3
17. I had crying spells.	0	1	2	3

18. I felt sad.	0	1	2	3
19. I felt that people disliked me.	0	1	2	3
20. I could not get "going."	0	1	2	3

[2. <u>PTSD Checklist – Stressor Specific</u>]

Here is a list of problems and complaints that people sometimes have in response to stressful life experiences. As you respond to the following questions, please consider the most abusive instances in the last abusive relationship you were in. Please read each one carefully, and then indicate, using the numbers to the right, how much you have been bothered by that problem **IN THE PAST MONTH.**	**NOT AT ALL**	**A LITTLE BIT**	**MODERATELY**	**QUITE A BIT**	**EXTREMELY**
1. Repeated, disturbing memories, thoughts, or images, of the stressful experience…	1	2	3	4	5
2. Repeated, disturbing dreams of the stressful experience……	1	2	3	4	5
3. Suddenly acting or feeling as if the stressful experience was happening again (as if you were reliving it)?…….	1	2	3	4	5
4. Feeling very upset when something reminded you of the stressful experience?...	1	2	3	4	5
5. Having physical reactions (e.g., heart pounding, trouble breathing, sweating) when something reminded you of the stressful experience?	1	2	3	4	5
6. Avoiding thinking about or talking about the stressful experience or avoiding having feelings related to it?……	1	2	3	4	5
7. Avoiding activities or situations because they reminded you of the stressful experience?…….	1	2	3	4	5
8. Trouble remembering important parts of the stressful experience?	1	2	3	4	5
9. Loss of interest in activities that you used to enjoy?……..	1	2	3	4	5
10. Feeling distant or cut off from other people?…….	1	2	3	4	5
11. Feeling emotionally numb or being unable to have loving feelings for those close to you?……....	1	2	3	4	5
12. Feeling as if your future will somehow be cut short?…….	1	2	3	4	5
13. Trouble falling or staying asleep?…….……	1	2	3	4	5
14. Feeling irritable or having angry outbursts?……..	1	2	3	4	5
15. Having difficulty concentrating?……	1	2	3	4	5
16. Being "super-alert" or watchful or on guard?…….	1	2	3	4	5
17. Feeling jumpy or easily startled?……	1	2	3	4	5

[3. Transgression-Related Interpersonal Motivations Inventory]

For the questions on this page, please indicate your current thoughts and feelings about the person who recently hurt you. Use the following scale to indicate your agreement with each of the questions.

1 = Strongly disagree
2 = Disagree
3= Neutral
4 = Agree
5 = Strongly Agree

1. _____ I'll make him/her pay.
2. _____ I wish that something bad would happen to him/her.
3. _____ I want him/her to get what he/she deserves.
4. _____ I'm going to get even.
5. _____ I want to see him/her hurt and miserable.
6. _____ I keep as much distance between us as possible.
7. _____ I live as if he/she didn't exist, isn't around.
8. _____ I don't trust him/her.
9. _____ I find it difficult to act warmly toward him/her.
10. _____ I avoid him/her.
11. _____ I cut off the relationship with him/her.
12. _____ I withdraw from him/her.

[4. The Meaning in Life Questionnaire]

Please take a moment to think about what makes your life feel important to you. Please respond to the following statements as truthfully and accurately as you can, and also please remember that these are very subjective questions and that there are no right or wrong answers. Please answer according to the scale below.

Absolutely Untrue	Mostly Untrue	Somewhat Untrue	Can't Say True or False	Somewhat True	Mostly True	Absolutely True
1	2	3	4	5	6	7

1. _____ I understand my life's meaning.
2. _____ I am looking for something that makes my life feel meaningful.
3. _____ I am always looking to find my life's purpose.
4. _____ My life has a clear sense of purpose.
5. _____ I have a good sense of what makes me life meaningful.
6. _____ I have discovered a satisfying life purpose.
7. _____ I am always searching for something that makes my life feel significant.
8. _____ I am seeking a purpose or mission for my life.
9. _____ My lfie has no clear purpose.
10. _____ I am searching for meaning in my life.

[5. Spiritual Involvement and Beliefs Scale]

Please answer the following questions by checking your response.

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1. In the future, science will be able to explain everything.	_____	_____	_____	_____	_____
2. I can find meaning in times of hardship.	_____	_____	_____	_____	_____
3. A persona can be fulfilled without pursuing an active spiritual life.	_____	_____	_____	_____	_____
4. I am thankful for all that has happened to me.	_____	_____	_____	_____	_____
5. Spiritual activities have not helped me become closer to other people.	_____	_____	_____	_____	_____
6. Some experiences can be understood only through one's spiritual beliefs.	_____	_____	_____	_____	_____
7. A spiritual force influences the events in my life.	_____	_____	_____	_____	_____
8. My life has a purpose.	_____	_____	_____	_____	_____
9. Prayers do not really change what happens.	_____	_____	_____	_____	_____
10. Participating in spiritual activities helps me forgive other people.	_____	_____	_____	_____	_____
11. My spiritual beliefs continue to evolve.	_____	_____	_____	_____	_____
12. I believe there is a power greater than myself.	_____	_____	_____	_____	_____
13. I probably will not reexamine my spiritual beliefs.	_____	_____	_____	_____	_____
14. My spiritual life fulfills me in ways that material possessions do not.	_____	_____	_____	_____	_____
15. Spiritual activities have not helped me develop my identity.	_____	_____	_____	_____	_____
16. Meditation does not help me feel more in touch with my inner spirit.	_____	_____	_____	_____	_____
17. I have a personal relationship with a power greater than myself.	_____	_____	_____	_____	_____
18. I have felt pressured to accept spiritual beliefs that I do not agree with.	_____	_____	_____	_____	_____
19. Spiritual activities help me draw closer to a power greater than myself.	_____	_____	_____	_____	_____

Please indicate how often you do the following:

	Strongly	Agree	Neutral	Disagree	Strongly
20. When I wrong someone, I make an effort to apologize.	_____	_____	_____	_____	_____
21. When I am ashamed of something I have done, I tell.	_____	_____	_____	_____	_____
22. I solve my problems without using spiritual resources.	_____	_____	_____	_____	_____
23. I examine my actions to see if they reflect my values.	_____	_____	_____	_____	_____

24. During the last WEEK, I prayed… (check one)
    _____ 10 or more times.
    _____ 7-9 times
    _____4-6 times
    _____ 1-3 times
    _____ 0 times

25. During the last WEEK, I meditated… (check one)

_____ 10 or more times.
_____ 7-9 times.
_____4-6 times.
_____ 1-3 times.
_____ 0 times.

26. Last MONTH, I participated in spiritual activities with at least one other person… (check one)
_____ more than 15 times.
_____ 11-15 times.
_____ 6-10 times.
_____ 1-5 times.
_____ 0 times.

Appendix B

Research Announcement

Attention Survivors of Domestic Violence

A research study examining effects of intimate partner violence on survivors is being conducted by Shannon M. Rogers, M.A., doctoral student at University of Tennessee-Knoxville. The survey assesses qualities of spirituality, forgiveness, and meaning in life and how they might affect symptoms of depression and posttraumatic stress disorder (PTSD). If you are an adult survivor of domestic violence who is 18 years or older, you are eligible to participate. **After you have completed and submitted your survey, you will receive a $5 gift certificate from Walmart.**

The survey takes approximately 20 minutes to complete and your participation will remain anonymous. If you would like to participate in this research study

This research protocol has been reviewed and approved by the Institutional Review Board for protection of human subjects at the University of Tennessee. Please feel free to forward this announcement to eligible friends/colleagues you know who may wish to participate. Thank you in advance for your help with this project!

Sincerely,
Shannon M. Rogers, M.A., Doctoral Student
Department of Psychology
University of Tennessee
Phone: 865-974-2204
E-mail: sroger29@utk.edu

Faculty Advisor:
Gina P. Owens, Ph.D.
Department of Psychology
University of Tennessee
Phone: 865-974-2204
E-mail: gowens4@utk.edu

Appendix C

Informed Consent Page

Factors Influencing Psychological Health of Domestic Violence Survivors

Dear Participant:

You are invited to participate in a research study being conducted by Shannon M. Rogers, M.A., a doctoral student in Counseling Psychology at the University of Tennessee. The purpose of the study is to gather information about mental health symptoms such as posttraumatic stress disorder (PTSD) and depression that you may be experiencing following your involvement in an abusive relationship and factors that might affect these symptoms.

To be eligible for this study you must be at least 18 years old. If you are currently in an abusive relationship you may participate if you feel that doing so will not put you in danger. Your participation in this study is strictly voluntary. You may choose not to participate or to discontinue participation at any time. If you do not complete the survey your data will not be used. If you choose to participate, you will be asked to mark your responses to a questionnaire that takes approximately 20-30 minutes to complete. Any information obtained in connection with this study will remain confidential. The data will be summarized and reported in group form.

Some individuals may experience discomfort when answering survey questions if they consider the information to be sensitive. Thus, you may choose not to answer any question that you do not want to answer. If you do experience distress or discomfort as a result of participating in this survey, we encourage you to contact your local mental health professional or one of the following organizations:

Family Justice Center	865-215-6800
Family Crisis Center	865-637-8000
National Domestic Violence Hotline	800-799-2733
Cherokee Health System	865-544-0406
Helen Ross McNabb	865-637-9711
Catholic Charities	865-524-9896
Sexual Assault Center of Eastern TN	865-222-7273

The information you provide may be helpful in increasing our understanding of how to improve mental health care for survivors of domestic violence, although the information collected may not benefit you directly. Please keep this copy of the informed consent for your records in case you would like to refer back to this information. **After you have completed and submitted your survey, you will receive a $5 gift certificate from Walmart.**

If you have any questions or comments about this research project, please contact Shannon Rogers at sroger29@utk.edu (Ph: 865-974-2204). If you would like to receive a brief written summary of the results when the study is complete, please send a request to Shannon Rogers via e-mail at sroger29@utk.edu (please write "Domestic Violence Study" in the subject line). This research has been reviewed and approved by the Institutional Review Board for protection of human subjects at the University of Tennessee-Knoxville. If you have questions about your rights as a participant, please contact the University of Tennessee Office of Research Compliance Officer at (865) 974-3466.

Sincerely,

Shannon M. Rogers, M.A.
Doctoral Student
Department of Psychology
University of Tennessee-Knoxville

Gina P. Owens, Ph.D., Faculty Advisor
Assistant Professor
Department of Psychology
University of Tennessee-Knoxville

CONSENT

I have read the above information and received a copy of this form. I agree to participate in this study.

Participant's Signature _____ Date _____

Investigator's or FJC staff signature _____ Date _____

Vita

Shannon M. Rogers was born in Lansing, Michigan. At 10 years of age she moved with her family to Athens, Ohio and later attended Athens High School. She earned her Bachelor of Specialized Studies at Ohio University. In 2001 she earned her Masters in Social Work from the University of Michigan then worked as a social worker in community mental health in Charleston, South Carolina. In 2004 she entered Western Carolina University where she earned her Master of Arts in Clinical Psychology. From there she began her doctoral program in counseling psychology at the University of Tennessee Knoxville with a focus on women's issues and trauma. She completed her dissertation in April 2013 before beginning a pre-doctoral internship at the Medical College of Georgia/Charlie Norwood VAMC Clinical Psychology Residency Consortium.