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AVOIDANT COPING BEHAVIOR AS A MEDIATOR OF THE EFFECTS OF VARIOUS FORMS OF INTIMATE PARTNER ABUSE AND POSTTRAUMATIC STRESS DISORDER IN WOMEN WHO ARE SURVIVORS OF INTIMATE PARTNER VIOLENCE

by

Náthali Blackwell

A Thesis

Submitted in Partial Fulfillment of the

Requirements for the Degree of

Master of Social Work

The University of Memphis

March 2013

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I would like to express my deepest appreciation to my committee chair, Dr. Catherine A. Simmons, Department of Social Work, who always encouraged me to love research and not shy away from it. She was the starting point for me to embark on this journey and I am thankful for her enthusiasm in teaching and being my mentor. Most importantly, I would like to thank her for always being honest and for her valuable help with feedback. Without her guidance and encouragement I would have not embarked on this wonderful learning experience

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ABSTRACT

Blackwell, Náthali. MSW. The University of Memphis. March 2013. Avoidant coping behavior as a mediator of the effects of various forms of intimate partner abuse and posttraumatic stress disorder in women who are survivors of intimate partner violence. Major Professor: Catherine A. Simmons, Ph.D., L.C.S.W.

This study explored whether avoidant coping served a meditational role in the association between three forms of intimate partner abuse (sexual coercion, physical aggression, and psychological aggression) and posttraumatic stress disorder (PTSD) among women who had experienced intimate partner violence (IPV). Eighty-nine female IPV survivors were involved in the current study. Results indicated that in the case of sexual coercion and PTSD, avoidant coping was a mediator. Avoidant coping was not found to have a mediating effect between the remaining types of abuse (physical and psychological aggression) and PTSD. However, it was found that physical aggression had a relationship with PTSD severity. These findings support the conceptualization that in women who have experienced IPV, different forms of abuse have different processes associated with PTSD symptomatology. Further, the findings may help mental health professionals advance their understanding on how forms of abuse may impact coping mechanisms and adverse psychological outcomes.

Keywords: intimate partner violence, sexual coercion, physical aggression, psychological aggression, posttraumatic stress disorder, coping, avoidant coping

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Preface

According to a report by the U.S.Violence Policy Center (2012), the state of Tennessee ranks third nationwide when it comes to women in an abusive intimate partner relationship being murdered by men. Moreover, the Tennessee Bureau of Investigation (2012) reported that in 2011, 52.1% of all crimes against persons committed in Tennessee were domestic violence offenses. This means that in the year 2011 alone 84,517 domestic violence offenses were reported. Another way to observe the prevalence of domestic abuse in Tennessee is that nationally, one in every four women in the United States will experience domestic violence in her lifetime (National Coalition Against Domestic Violence, 2009), while in Tennessee one in three women will experience domestic violence in her lifetime (Center for Disease Control and Prevention, 2006). Another chilling truth is that domestic violence often goes unreported because the person that is going through it is too afraid or too intimidated to report it, feels like law enforcement officials will not be able to help, or sees the violence as a norm (Roberts, Lawrence, Williams, & Raphael, 2008).

When I started my internship at the Athena Project in the Department of Psychology, I became interested in revicitimization and the effects it might have on a person. The Athena Project only deals with intimate partner violence so this helped me gear my original research question to intimate partner violence relationships only. I started to examine literature that examined childhood sexual abuse and experiencing domestic violence in later life and found a commonality in the literature where childhood sexual abuse contributed to more severe adverse psychological outcomes in later life; especially after experiencing another type of trauma such as intimate partner violence.

The original thesis question examined avoidant coping behavior as a possible mediator of the effects of adverse childhood experiences and adult mental health outcomes in women who are survivors of intimate partner violence. The original study question examined two subgroups of adult women who have experienced interpersonal trauma: 1) women who have experienced Childhood Sexual Abuse (CSA) followed by Intimate Partner Violence (IPV) and 2) women who have only experienced IPV without CSA. Due to recommendations made in the literature, Major Depressive Disorder, Generalized Anxiety Disorder, and Posttraumatic Stress Disorder were examined. A wide body of literature indicates that IPV can have lifelong effects on the person who experienced the event. For example, in women who were battered, depressive symptoms were much higher than in women who did not experience IPV (Campbell & Lewandowski, 1997). In seeking to understand IPV, numerous studies have noted that women who experienced physical and/or sexual abuse as a child are more likely to get involved in a violent relationship as an adult (Arata, 2002; DiLillo, Giuffre, Tremblay & Peterson, 2001). Studies have also found that women who have a history of abuse in childhood are more likely to engage in a romantic relationship in which the romantic partner engages in hitting, kicking, and beating the victim (DiLillo et al., 2001; Hattery, 2009).

Numerous studies found a relationship between sexual abuse as a child and adverse mental health outcomes (Astin, Ogland-Hand, Coleman, & Foy, 1995; Campbell & Soeken, 1999). Although childhood abuse can take many forms, the literature indicates that childhood sexual abuse exerts a notable effect on functioning in adulthood, having a stronger correlation with IPV than any other form of childhood abuse (Astin et al., 1995).

In the original study, childhood sexual abuse was defined as any non-consensual sexual acts performed before the age of 18. This included but was not limited to penetration, fondling, sexual kissing, being forced to watch or participate in pornography, and being forced to touch or perform sexual acts on somebody else.

Evidence of a relationship between Major Depressive Disorder (MDD) and interpersonal trauma both in childhood and adulthood were noted. For example, a study by Campbell and Lewandowski (1997) found that women who experienced IPV were more likely to have a higher level of current depressive symptoms (74% compared to 32.2% of nonabused women). Moreover, many studies on MDD have found that women with a history of CSA were more likely to have a diagnosis of MDD than any other diagnosis. Depression was found to be the most common diagnosis given to women who reported CSA (Molnar, Buka, & Kessler, 2001).

Generalized Anxiety Disorder (GAD) was also noted to have a relationship with IPV and CSA. A study by Tolman and Rosen (2001) found that 9.2% to 13.4% of women who received welfare and experienced IPV were likely to be diagnosed with GAD, with increased rates in more recent IPV. Robins and Regier (1991) also found that in women who were survivors of CSA, the most frequently recorded diagnostic category was GAD (Spataro, Mullen, Burgess, Wells, & Moss, 2004).

The most common diagnosis by mental health professionals for battered women is Posttraumatic Stress Disorder (PTSD; Crowell & Burgess, 1996). This is due to the perception of life threat, threat of physical violence, physical injury, extreme fear or terror, and a sense of helplessness (Browne, 1993). Golding (1999) found that the

prevalence of PTSD diagnosis in women who experienced IPV was 64%. PTSD is a common diagnosis in victims of both CSA and IPV (Browne, 1993).

Avoidant coping was examined as a possible mediator in a relationship between interpersonal trauma and adverse psychological outcomes. According to Penley, Tomaka, and Wiebe (2002), avoidant coping involves cognitive and behavioral efforts oriented toward denying, minimizing, or otherwise avoiding stressful demands. Avoidance appears to be an adaptive method of coping in the short term because it prevents the person from the overwhelming emotions associated with trauma (Merrill, Thomsen, Sinclair, Gold, & Milner, 2001).

Following the literature suggestions, the original study was designed to examine if avoidant coping intermediated the association between interpersonal trauma exposure and adverse psychological outcomes. In particular, it was hypothesized that the presence of interpersonal trauma in both childhood and adulthood (IPV+CSA) would be associated with higher levels of mental health symptoms (MDD, GAD, and PTSD). Additionally, it was hypothesized that avoidant coping would mediate this relationship for MDD, GAD, and PTSD. Two predictor variables were analyzed (IPV only and IPV+CSA).

Data analysis was run and contrary to what the literature suggested, no significant results were found. There was no statistical difference between the predictor variables. Moreover, no relationship was found between the predictable variables and the outcome variables (MDD, GAD, and PTSD). I decided it would be best to not explore the original study any further and decided to pursue other options. I became interested in a wide body of literature that talks about different forms of abuse and psychological outcomes. This is how the new research question was formulated: will avoidant coping act as a mediator

between different forms of abuse and PTSD as an outcome? The current paper presented in the second chapter of this document will be submitted for publication to the journal Violence Against Women. The journal has an impact factor of 1.328 and is ranked 6 out of 38 in women's study.

Avoidant Coping Behavior as a Mediator of the Effects of Various Forms of Intimate Partner Abuse and Posttraumatic Stress Disorder in Women who are Survivors of Intimate Partner Violence

Introduction

One of the most common forms of violence against women is intimate partner violence (IPV; Krug, Dahlberg, Mercy, Zwi, & Lozano, 2002). The United States Department of Justice (2012) defines intimate partner violence as a pattern of abusive behavior that is used by a romantic partner to gain or maintain power and control over an intimate partner. According to the National Coalition Against Domestic Violence (2009), one in every four women in the United States will experience domestic violence in her lifetime. Intimate partner violence is a complex issue that is associated with a wide range of physical, psychological, and social problems. For example, IPV has been associated with increased risk of current poor health, psychiatric symptoms, substance use, chronic disease and injury (Coker et al., 2003).

In an effort to explore factors that impact functioning in women who have experienced IPV, the current study will focus on the role of avoidant coping as a potential intermediary variable that may influence the development of Posttraumatic Stress Disorder in women who experienced IPV. This objective will be explored by examining three separate forms of abuse, specifically sexual coercion, physical aggression, and psychological aggression. Although there is a range of adverse psychological effects that develop following trauma exposure (Campbell & Lewandowski, 1997), due to the direction of the study, only Posttraumatic Stress Disorder will be examined in this study.

The emotional effects of experiencing IPV are evident throughout various studies in the literature. Coker et al. (2003) found that IPV increased the chances of a person developing mental health problems. Moreover, a wide body of literature indicates that IPV can have lifelong effects on the person who experienced the event. For example, in the case of Posttraumatic Stress Disorder (PTSD), higher rates of PTSD have been documented among battered women in shelters more than in women who did not have a history of IPV (Campbell & Lewandowski, 1997).

In considering mental health conditions that are associated with interpersonal abuse in adulthood, Posttraumatic Stress Disorder (PTSD) is one of the most common diagnoses made by mental health professionals for battered women (PTSD; Crowell & Burgess, 1996). This is illustrated in an article by Golding (1999) in which it was found that the prevalence of PTSD diagnosis in women who experienced IPV averaged 64%. It is believed that PTSD is a common diagnosis in women with a history of IPV because of the perception of life threat, threat of physical violence, physical injury, extreme fear or terror, and a sense of helplessness that comes along with IPV (Browne, 1993). In the DSM-IV-TR, PTSD is defined by three characteristic symptom clusters, including re-experiencing the trauma, avoidance and emotional numbing symptoms, and physiological hyperarousal (American Psychiatric Association, 2000).

There are three main forms of IPV, specifically sexual, physical, and psychological abuse. The prevalence of each form of abuse varies across studies. For example, according to Saltzman, Green, Marks, and Thacker (2000) and Watts and Zimmerman (2002), physical abuse is the most common form of intimate partner abuse, accounting for 10% to 69% of abuse within romantic relationships. This is followed by

psychological abuse and sexual abuse, which accounts for about one sixteenth percent of IPV relationships (Krug et al., 2002). Hamby and Sugarman (1999) reported that psychological abuse is the most prevalent, especially when yelling and sulking are included in the definition. Observing the contradiction in the above stated studies shows that it is difficult to report the prevalence of each form of abuse in a way that is uniform throughout. This is partially due to different definitions that researchers use in their studies and due to different beliefs that participants possess when it comes to what each form of abuse means to them.

Many studies explore the effects of each form of abuse and how it may affect someone who experiences it firsthand. For example, a study by Babcock, Roseman, Green, and Ross (2008) explored the different forms of abuse and how they influence PTSD symptomatology among women victims of IPV. These authors found that physical and psychological abuse were related to PTSD symptoms. Moreover, another study by Pico-Alfonso et al. (2006) examined different forms of abuse and their associations with PTSD, depression, and anxiety and reported that women who were exposed to physical and psychological abuse in an intimate relationship had higher incidences of PTSD symptoms. It is important to study all forms of abuse since most women who are victims of IPV have experienced more than one form of partner abuse (Vitanza, Vogel, & Marshall, 1995). Each form of abuse will be defined and discussed next.

Sexual coercion is defined as the aggressive behavior of an abusive partner in which combinations of behavioral and physical actions are combined in order to manipulate a partner to perform unwanted sexual acts (Smuts & Smuts, 1993). Sexual abuse is defined as knowingly causing a person to engage in unwanted sexual act by

force or act (Princeton Dictionary, 2012). Research on sexual violence is somewhat scarce in the IPV literature, compared to research on other forms of abuse (Mechanic, Weaver, & Resick, 2008). However, the majority of the literature that focuses on sexual abuse has found that sexual abuse may have a relationship with severity of PTSD in battered women. For example, Bennice, Resick, Mechanic, and Astin (2003) found that after accounting for physical abuse, sexual abuse was a significant predictor of development of PTSD in IPV survivors. In studies comparing sexual abuse and physical abuse, it was found that battered women who experienced sexual abuse only are more likely to have more severe PTSD symptoms than those who experienced physical abuse only (Bennice et al., 2003; Frieze, 1983).

When considering physical abuse, Golding (1999) defines this form of abuse as any violent act involving physical force or deliberately designed to cause physical pain. Most research has focused on physical violence and its effect on battered women (Mechanic et al., 2008). Literature supports the association between the experience of physical abuse and PTSD severity. For example, Stith, Smith, Penn, Ward, and Tritt (2004) found that being a victim of physical abuse in an intimate partner relationship was a risk factor for developing PTSD in later life. Another study by Bennice et al. (2003) found that after accounting for other forms of abuse, physical abuse and PTSD were correlated at $r = .23$.

Psychological aggression is often defined as "verbal and nonverbal acts which symbolically hurt the other person or the use of threats to hurt the other person" (Straus, Gelles, & Smith, 1995). Bennice et al. (2003) found that those who had experienced psychological abuse in an intimate relationship had more severe symptoms of PTSD than

those who did not experience psychological abuse. Street and Arias (2001) also found that when all other forms of abuse were statistically controlled, psychological abuse was a significant predictor of PTSD. Similarly, Pico-Alfonso (2005) found that after controlling for all forms of abuse and childhood trauma, psychological abuse was the strongest predictor of PTSD. Taft, Murphy, King, DeDeyn, and Musser (2005) found that psychological abuse was a better predictor of the development of PTSD than physical abuse.

One aspect of post-trauma functioning that could help to expand our understanding of PTSD involves coping. As described by Folkman and Lazarus (1980), coping refers to a wide range of cognitions and behaviors that individuals use to regulate internal and external demands associated with being exposed to threats or stressors. Coping strategies are very important and can have a very strong influence on the psychological adjustment of a person who is trying to deal with their thoughts and feelings about a traumatic event. For example, Wilson and Scarpa (2012) found that coping strategies accounted for 72.1% of the variance in psychological adjustment in a sample of women who experienced intimate partner violence. Although individuals may experience the same kind of trauma, their approach to coping will vary (Wilson & Scarpa, 2012). There is an extensive body of literature that examines negative coping and how it relates to trauma exposure (e.g., Janoff-Bulman, 1995). Negative coping has been described following a range of traumatic situations such as combat, motor vehicle accidents, and sexual and non sexual assault (Krause, Kalman, Goodman, & Dutton, 2008). A person who has suffered multiple traumatic experiences at the hands of a romantic partner could engage more frequently in negative coping strategies (e.g.,

avoidance and denial) than positive coping strategies (e.g., positive appraisal and approach coping).

One negative method of coping that trauma survivors may engage in is avoidance. According to Penley et al. (2002), avoidant coping involves cognitive and behavioral efforts oriented toward denying, minimizing, or otherwise avoiding stressful demands. Avoidance appears to be an adaptive method of coping in the short term because it prevents the person from being overwhelmed by emotions associated with trauma (Merrill et al., 2001). Although avoidant coping may seem to help in the short term, using this form of coping may be harmful to the trauma survivor in the long run. As discussed by Resick and Schnicke (1993), avoidance keeps the trauma survivor from emotionally processing the extreme event and often contributes to the survivor's ongoing sense of danger in the world and damage to the self. In order to process the traumatic event, one must acknowledge and work through thoughts and feelings related to the traumatic event and not suppress them.

The current study was designed to examine if avoidant coping intermediated in the association between different forms of IPV and PTSD. A mediator variable describes how outcomes will occur by accounting for the relationship between the independent and the dependent variable. Due to suggestions from the literature, the hypotheses are the same for all three forms of abuse.

H1: Psychological aggression will be associated with PTSD outcomes

H2: Physical aggression will be associated with PTSD outcomes

H3: Sexual Coercion will be associated with PTSD outcomes

H4: Avoidant coping will have a mediating effect between psychological aggression and PTSD

H5: Avoidant coping will have a mediating effect between physical aggression and PTSD

H6: Avoidant coping will have a mediating effect between sexual coercion and PTSD

Method

Participants

The sample included women who had experienced intimate partner violence and were seeking mental health assessment and possible treatment at a university-based research clinic. Participants were recruited from churches, advocacy centers, health fairs, community centers, and colleges. Women qualified for assessment if they met Criterion A for PTSD as defined by the DSM-IV (American Psychiatric Association, 2000), specifically if they experienced, witnessed, or been confronted with an event that imposed threat of death, serious injury, or threat to physical integrity to self or others. This is followed by intense fear, helplessness, or horror. In order to determine if the participant met Criterion A, an IPV interview was administered where their emotional responses (e.g., fear for their life) during the abuse were examined.

Data from 238 female participants were made available for the study. However, after excluding those that were rated high in psychosis, had unreliable reporting, scored

low in cognitive functioning and those that did not complete the assessment, the final sample was 89 participants. The average age was 37.11 (*SD* = 12.61). The majority of the participants were Caucasian (50.6%) and African American (38.2%). Their educational levels were some college education (43.9%), 4 year college (13.5%), and high school education (12.4%). In the final sample it was found that 48.3% of participants had experienced all three forms of abuse (physical, sexual, and psychological), while 44.9% of participants experienced physical and psychological abuse. Only 6.7% of participants experienced one form of abuse only. Details are provided in Table 1.

Measures

Intimate partner violence. Intimate partner violence was measured by a semi-structured interview developed by the author of the original study. The IPV interview consists of a series of questions about physical, sexual, and emotional abuse that may have been experienced from romantic partners. The interview also asked the participant to rate their emotional response during the IPV on a Likert scale ranging from 0 *(not at all)* to 100 *(extreme)*. Some of the questions included, "*how fearful or afraid were you?*", "*how certain were you that you were going to die?*" and "*how helpless did you feel?.*" These questions are used to determine if the IPV experience satisfied Criterion A2 of the diagnostic criteria for PTSD (which is necessary in order to diagnose PTSD). Previous research (Beck et al., 2004) has suggested that ratings of 50 or above are adequate to determine that an experience was "traumatic." The interview was administered by a trained interviewer and was used to determine if the participant's IPV qualified for inclusion in the current sample.

Different forms of abuse. Sexual coercion, physical aggression, and psychological aggression were measured using the Revised Conflict Tactic Scales (CTS2; Straus et al., 1995). The CTS2 is a 78-item self-report questionnaire that asks participants if they have experienced various situations in a relationship such as *"my partner showed care for me even though we disagreed"* and *"I had a sprain, bruse, or small cut because of a fight with my partner."* Participants are asked to rate each situation on a Likert-type scale ranging from 1(*once in the past year*) to 6 (*more than 20 times in the past year*). Participants also have a choice of giving the statement the rating of a 0 (*this has never happened*) or a 7 (*not in the past year, but it did happen before*). The CTS2 quantifies different forms of abuse that the participant has experienced in an IPV situation in the past year. The scale also examines the type of abuse that the participant engaged in (inflicting different forms of abuse on their partner) if any. For the purposes of the current study, only types of abuse that were inflicted on the participant by her abusive partner were examined. Scoring of the CTS2 is done by adding midpoints for the response categories chosen by the participant (Straus, Hamby, Boney-McCoy, & Sugarman, 1996). Straus et al. (1996) stated that the preliminary internal consistencies of the CTS2 range from .79 to .95.

Coping. Coping styles were measured using the Social Problem-Solving Inventory-Revised (SPSI-R; D'Zurilla, Nezu, & Maydeu-Olivares, 2002). This measure is a 52-item self-report questionnaire that assesses five different dimensions of social problem-solving (*Positive Problem Orientation, Negative Problem Orientation, Rational Problem Solving, Impulsivity-Carelessness Style, and Avoidance Style*). For the purposes of the current study, avoidance style was examined, with a subscale that contains 7

statements such as ”*I want to see if a problem will resolve itself first, before trying to solve it myself*“ and “*I spend more time avoiding my problems than solving them*.” The questionnaire’s rating is based on a Likert scale ranging from 0 (*not at all true of me)* to 4 (*extremely true of me)*. Higher scores on the SPSI-R reflects better problem-solving skills. The SPSI-R has a high reliability of .68 to .91 (D’Zurilla et al., 2002).

Clinician-rated psychopathology. The Clinician Administered PTSD Scale (CAPS; Blake et al., 1990) was administered to assess PTSD related to IPV. The CAPS is a semi-structured clinical interview assessing each of the 17 symptoms of PTSD. Interviewers rate both the frequency of symptoms from 0 (*the symptom does not occur*) to 4 (*the symptom occurs nearly every day*) and the intensity of symptoms from 0 (*not distressing*) to 4 (*extremely distressing*). The total of the CAPS is computed by adding ratings of 1 (for frequency) and 2 (for distress) as one symptom. Symptoms are then counted in each section and counted for a grand total. The final scoring reflects the overall severity of PTSD where possible scores for the CAPS total score range from 0 to 136. The interviewer administered the CAPS to the participant for IPV-related incidents In the CAPS, internal consistency for the three PTSD symptom clusters is high, ranging from .92 to .99 (Weathers, Keane, & Davidson, 2001).

In addition to being administered by a trained interviewer, all interviews were videotaped and 20-30% of the interviews were randomly selected to be reviewed by a second trained interviewer to assess diagnostic reliability. Inter-rated agreement was assessed using intra class correlations and was excellent (ICC = .95).

Procedure

Following provision of informed consent, participants were interviewed with the IPV interview and the CAPS. Participants then completed a packet of questionnaires which included the SPSI-R and CTS2. Once the assessment was complete, participants were given feedback on the results of their assessment, debriefed, and if needed, they were provided with referrals to mental health services in the community. All procedures were reviewed by the Institutional Review Board.

Data Analytic Procedures

Following the guidelines provided by Tabachnick and Fidell (2001), data were examined for skew, kurtosis, and outliers. Basic descriptive information was then calculated. Then, mediation analyses were performed, examining the intermediary role of avoidant coping for the association between each form of IPV (assessed using the CTS2) and PTSD (assessed using the CAPS Total score). According to Baron and Kenny (1986), four conditions must be met in order to evaluate if avoidant coping is a mediator of the association between different forms IPV of abuse and PTSD. First, IPV abuse (sexual coercion, physical aggression, and psychological aggression) must be significantly associated with PTSD (Path C). Second, IPV abuse must be significantly associated with avoidant coping (Path A). Third, avoidant coping must be significantly associated with PTSD (Path B). Fourth, the association between IPV abuse and PTSD should be significantly less after controlling for avoidant coping (Path B). Following the guidelines by Baron and Kenny (1986) and Tabachnick and Fidell (2001), data were examined using a regression model to assess these four steps (IPV abuse and PTSD, IPV abuse and avoidant coping, and PTSD and avoidant coping as predictors with PTSD

effects as a dependent variable). In order to test for partial or full mediation, Sobel (1982) offers a method for testing significance. In this test, one compares the difference between the total effect and direct effect. The mediating effects of avoidant coping are tested as the difference between the relationship between different forms of IPV abuse alone and PTSD with and without consideration of avoidant coping. If the relationship between different forms of IPV abuse (physical, sexual, or psychological) and PTSD is not reduced by adding avoidant coping to the equation, avoidant coping is not a mediator of the relationship. Separate analyses will be conducted for PTSD.

Results

Psychological Aggression

To establish a relationship between exposure to psychological aggression in an intimate partner violence (IPV) relationship and posttraumatic stress disorder, a regression analysis was run and a significant model was not found, ($R^2 = 0.03$, $F_{1, 87} = 2.94$, $p = 0.09$). Examination of individual coefficients indicated that there was not a significant association between psychological aggression and PTSD ($\beta = 0.18$, $p < 0.09$). Since there needs to be a relationship between the predictor and outcome variables in order to explore mediation, only physical aggression and sexual coercion were explored further.

Physical Aggression

To establish a relationship between exposure to physical aggression in an intimate partner violence (IPV) relationship and posttraumatic stress disorder, a regression analysis was run and a significant model was found, ($R^2 = 0.07$, $F_{1, 87} = 6.81$, $p = 0.01$). Examination of individual coefficients indicated a significant association between

physical aggression and PTSD (β = 0.27, $p < .05$). This indicates that the more the participant was exposed to physical aggression the more severe their PTSD symptoms became. The second step of the regression analysis explored the relationship between physical aggression and engagement in avoidant coping. A regression analysis was run and the model was found to not be significant, ($R^2 = 0.01$, $F_{1, 87} = 1.05$, $p = 0.31$). Examination of individual coefficients indicated that there was not a significant association between physical aggression and avoidant coping (β = .11, $p = .31$). Because physical aggression failed to meet requirements of the second step by Baron and Kenny, it was not included in further analyses.

Sexual Coercion

To establish a relationship between exposure to sexual coercion in an IPV relationship and posttraumatic stress disorder, a regression analysis was run and a significant model was found ($R^2 = 0.05$, $F_{1, 86} = 4.28$, $p = 0.04$). Examination of individual coefficients indicated a significant association between sexual coercion and PTSD (β = 0.22, $p < 0.05$). This indicates that the more sexual coercive acts the participant was exposed to, the more severe PTSD outcomes were.

The second step of the regression analysis examined the relationship between sexual coercion and engagement in avoidant coping. A regression analysis was run for sexual coercion and a significant model was found ($R^2 = 0.05$, $F_{1, 86} = 4.11$, $p = 0.05$). Examination of individual coefficients indicated a significant association between sexual coercion and avoidant coping (β = 0.21, $p < 0.05$) meaning that the more sexual coercive acts a participant was exposed to, the more likely it was that she would engage in avoidant coping.

In order to test for step 3, a regression analysis was run to determine the relationship between avoidant coping and PTSD. A significant model was found (R^2 = 0.07, $F_{1, 87}$ = 6.70, $p = 0.01$). Examination of individual coefficients indicated a significant association between avoidant coping and PTSD (β = .27, $p < .05$). This finding suggests that the more participants engaged in avoidant coping, the more severe their PTSD symptoms became.

In order to examine if avoidant coping was indeed a mediator, the association between sexual coercion and PTSD was examined with avoidant coping being accounted for. After avoidant coping was accounted for, the model remained significant (R^2 = 0.10, $F_{1, 86}$ = 4.68, $p = 0.01$). Examination of individual coefficients indicated that once avoidant coping was accounted for in the regression analysis, the association between sexual coercion and PTSD was no longer significant (β = 0.17, p = 0.11). Because this step demonstrated mediation, Sobel's test was run. It was found that the indirect effect of sexual coercion on PTSD through avoidant coping was significant (z = .38, $p < .05$; see Figure 1). A full mediation between sexual coercion, avoidant coping, and PTSD was found. This finding suggests that greater exposure to sexual coercion is associated with increased levels of avoidant coping which in turn are associated with more severe PTSD symptoms.

Discussion

The goal of the current study was to investigate if avoidant coping serves as a mediator between various forms of intimate partner abuse and PTSD. A series of regression analyses were run to determine if avoidant coping mediated the relationship between three forms of intimate partner abuse (sexual coercion, physical aggression, and

psychological aggression) and posttraumatic stress disorder. Contrary to past literature (Pico-Alfonso, 2005; Street & Arias, 2001), no association was noted between psychological aggression and PTSD. Similar findings to the studies of Bennice et al. (2003), and Stith et al. (2004) were found. PTSD was significantly associated with both sexual coercion and physical aggression. Psychological aggression and physical aggression were not associated with avoidant coping whereas it was found that sexual coercion associated with avoidant coping. Avoidant coping was a full mediator between sexual coercion and PTSD. This finding indicates that once avoidant coping is present with sexual coercion symptoms of PTSD become more severe.

The present findings offer support to the findings of Resick and Schnicke (1993), who state that those who engage in avoidant coping may keep themselves from fully processing the trauma they experienced. By engaging in avoidant behavior, the survivor may never view the world in a non-threatening way. Avoidance is often associated with a view of on-going danger to the survivor. Also, Ullman and Filipas (2001) state that sexual coercion is more likely to result in PTSD because it is more personally intrusive than any other form of trauma. By observing the above stated findings, it becomes clearer why avoidant coping served as a mediator between sexual coercion and PTSD.

Contrary to the findings in past literature (Bennice et al., 2003; Pico-Alfonso, 2005; Straus et al., 1995) psychological aggression was not found to have a relationship with PTSD. This was a surprising finding since almost half of the participants experienced psychological aggression, thus making the sample strong enough for analysis.

Implications for Practice and Policy

The current study has implications on how psychological symptoms are viewed when it comes to IPV survivors and what best interventions should be used. The results of the current study show that different forms of abuse have different outcomes and need to be looked at differently when conceptualizing PTSD and what it may mean to the survivor. Some survivors may use negative coping (avoidant coping) skills more than others depending on the form of abuse they encountered. Therapists and caseworkers need to be aware of what forms of abuse their client encountered so monitoring of engagement in negative coping can become clearer and targeted for intervention. Especially if avoidance it is present, when the client has experienced sexual coercion. An implication in a clinical setting is that if the therapist finds that the client experienced sexual coercion, she is more likely to engage in avoidance. In order for therapy to be effective with this population, the therapist should take into consideration therapeutic approaches that prevent the client from engaging in avoidance (e.g., exposure therapy). The findings of this study could also be used to educate clients, since, the severity of their PTSD symptoms may be related to what form of trauma they have experienced and how they coped after the traumatic event. Better educating these individuals can be extremely beneficial, especially to members of the military or African Americans where mental health conditions, especially PTSD, is stigmatized (Britt, Greene-Shortridge, & Castro, 2007).

Limitations

One limitation of the current study is that majority of the participants suffered more than one type of abuse (i.e., 40 participants experienced physical and psychological

abuse), and some even suffered all three types of abuse that were studied. Thus examining the differences between sexual coercion only, physical aggression only, and psychological aggression only was not possible. By not being able to separate forms of abuse, it is difficult to examine if certain combinations of forms of abuse (e.g. those that experienced both physical and psychological abuse) have different outcomes for the person. Another limitation is that the number of participants that suffered one form of abuse only or a combination of types of interpersonal abuse were significantly different. This may have played a factor in failing to replicate previous findings of physical and sexual abuse and PTSD as the outcome. Also, the CTS-2 psychological scale is not very statistically strong when it comes to it associating with the other measures that were used in the current study.

Directions for Future Research

Further research needs to be done on how different types of abuse may influence the psychological outcome of a survivor. Moreover, future research should investigate the relationship between survivors who have experienced only one type of abuse and survivors who have experienced multiple forms of abuse and violence from their romantic partner(s). Suffering from multiple forms of trauma may affect the survivor in a different way than suffering one form of abuse only. This may be difficult to execute since the majority of survivors have experienced more than just one form of abuse (Krug et al., 2002). Another factor that needs to be further researched is the combination of forms of abuse and their possible effects on mental health (i.e. sexual + physical abuse, physical + emotional abuse, emotional + sexual abuse). Other forms of coping should

also be studied as possible mediators. Moreover, different psychological outcomes should be examined along with possible new mediators.

Other suggestions for future research would be to look at forms of abuse separately with various forms of coping in order to examine which form of coping is more harmful according to each traumatic situation. Also, it would be interesting to look at time elapsed since the abuse and the engagement in avoidant coping to examine whether the mediation effect becomes weaker or drops once the client has been away from the situation for a very long time or if the client is currently in an abusive relationship.

Conclusion

In closing, domestic violence is an important issue that needs to be examined not only nationally but locally. As stated previously, Tennessee ranks third nationwide when it comes to murders stemming from domestic violence (U.S. Violence Policy Center, 2012). The number of murders is just a small percentage of women that have felt that their life was in danger in an abusive relationship.

The current study was designed to examine avoidant coping and how it might mediate the relationship between three different forms of abuse and PTSD. It was hypothesized that avoidant coping would serve as a mediator between all three forms of abuse and PTSD separately. Results of the current study show that only three hypotheses was supported, one being that sexual coercion was associated with PTSD, Physical aggression was associated with PTSD, and that avoidant coping served as a mediator between sexual coercion and PTSD only.

Contrary to findings in past studies, psychological aggression was not found to have a relationship with PTSD. This is could be possible due to the fact that the psychological aggression subscale of the CTS-2 is the weakest of the three and does not associate well with other measures that were used in the current study.

Understanding the findings can help clinicians and therapists better serve clients who have experienced this form of violence. It is important to note that although the client might have gone through a traumatic experience, different ways of coping may influence the psychological outcome of the person.

Findings in this study also paint a picture of what intimate partner violence looks like in Memphis, Tennessee and how it compares with state-wide statistic reporting. Understanding the statistics within the local population may also aid in future program development to prevent symptoms from getting worse, educate client in what is happening with their mental health, and implement appropriate evidence-based therapy approaches that will help the client alleviate some PTSD symptoms she may have or prevent PTSD from developing in the first place.

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Appendices

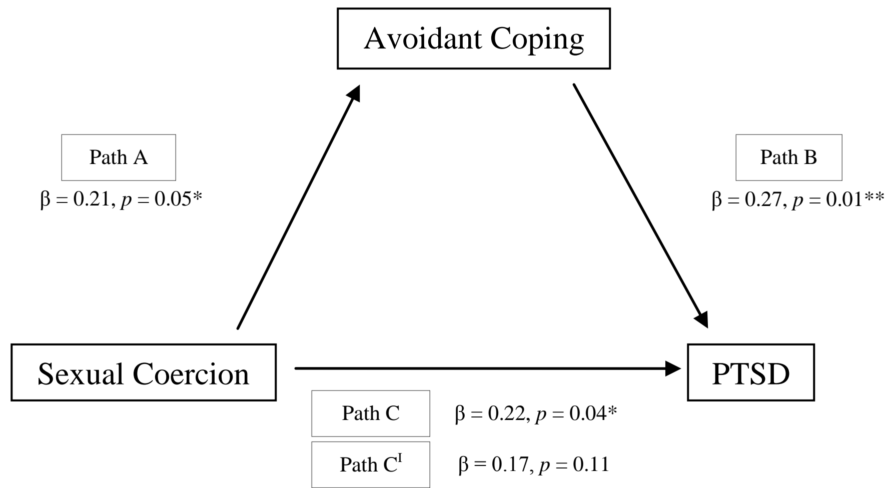

Figure 1. Sexual Coercion
Notes. Sexual Coercion = CTS2, Avoidant Coping = SPSI-R, PTSD = CAPS clinician ratings, $*p < 0.05$. $**p < 0.01$.

Table 1

Description of the Sample

	N	%
Type of abuse experienced (provoked by partner)		
Physical abuse only	1	1.1
Physical and psychological abuse	40	44.9
Physical, sexual, and psychological abuse	43	48.3
Sexual and psychological abuse	1	1.1
Emotional abuse only	4	4.5
Race		
Caucasian	45	50.6
African American	34	38.2
Hispanic	2	2.2
Asian	2	2.2
Other or no answer	6	6.7
Educational background		
Some college	39	43.8
4-year college	12	13.5
High school	11	12.4
Graduate school	8	9.0
Some graduate	7	7.9
2-year degree	6	6.7

(table continues)

Table 1 (Continued)

Description of the Sample

	N	%
Reported annual household income		
Below $10,000	16	18.0
$10,000 to $20,000	21	23.6
$20,000 to $30,000	10	11.2
$30,000 to $50,000	13	14.6
Over $50,000	16	17.9
Declined to respond	6	6.7

Table 2

Descriptive Statistics and Correlations

	1.	2.	3.	4.	*M*	*SD*
1. CAPS					2.6	1.9
2. CTS-2 Psychological	.18				70.3	59.0
3. CTS-2 Physical	.27*	.75**			53.1	80.0
4. CTS-2 Sexual	.22*	.67**	.68**		23.0	35.9
5. SPSI-R Avoidance	.27*	.02	.11	.21*	10.1	6.7

Note. CAPS = Clinician Administered PTSD Scale; CTS-2 = Conflict Tactic Scale 2; SPSI-R = Social Problem-Solving Inventory Revised; * $p < 0.05$ level. ** $p < 0.01$.

THE UNIVERSITY OF MEMPHIS

Institutional Review Board

To: Nathali Blackwell, J. Gayle Beck and Catherine Simmons
Social Work

From: Chair or Designee, Institutional Review Board
For the Protection of Human Subjects
irb@memphis.edu

Subject: Avodant Coping Behavior as a Mediator of the Effects of Adverse Childhood Experiences and Adult Mental Health Outcomes in Women who are Survivors of Intimate Partner Violence (#2342)

Approval Date: September 11, 2012

This is to notify you that the Institutional Review Board has designated the above referenced protocol as exempt from the full federal regulations under category 2. This project was reviewed in accordance with all applicable statuses and regulations as well as ethical principles.

When the project is finished or terminated, please submit a Human Subjects Research Completion Form (COMP) to the Board via e-mail at irbforms@memphis.edu. This form can be obtained on our website at http://www.memphis.edu/irb/forms.php.

Approval for this protocol does not expire. However, any change to the protocol must be reviewed and approved by the board prior to implementing the change.

Chair or Designee, Institutional Review Board
The University of Memphis

Cc: Dr. Catherine Simmons