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Surviving the Storm: The Role of Social Support and Religious Coping in Sexual Assault Recovery of African American Women

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Abstract

African American women are at high risk for sexual assault. In addition, many African American women endorse use of social support and religiosity to cope with life stressors. The current study investigates the relationship between these two coping strategies and post-trauma symptoms (depression and PTSD) in a sample of 413 African American female sexual assault survivors using confirmatory factor analysis and structural equation modeling. Findings indicated that African American assault survivors who have greater social support were less likely to endorse symptoms of depression and PTSD. Conversely, increased use of religious coping was related to greater endorsement of depression and PTSD symptoms. Counseling and research implications are explored.

Surviving the Storm: The Role of Social Support and Religious Coping in Sexual Assault Recovery of African American Women

Sexual assault is a pervasive crime that has devastating effects on survivors' mental and physical health (Bryant-Davis, Chung, Tillman, 2009). These effects include but are not limited to depression and posttraumatic stress disorder (PTSD) (Messman-Moore & Long, 2000; Callahan, Price, & Hilsenroth, 2003; Ullman, Townsend, Filipas, & Starzynski, 2007). The experience of sexual assault can increase vulnerability to a range of mental health conditions (e.g., Banyard, Williams, & Siegel, 2001; Coker et al., 2000). An immense literature has accumulated identifying the variation of cognitive, psychological, and social problems that may result from sexual violations (e.g., Messman-Moore & Long, 2000; Callahan, Price, & Hilsenroth, 2003). Several researchers have found feelings of shame, guilt, risky sexual behavior, substance abuse, post-traumatic stress symptoms, depression, anxiety, alexithymia, suicidal tendencies, and low self-esteem to be common short and long-term effects of sexual victimization (see Banyard, Williams, & Siegel, 2001; DiLillo, 2001; Noll, Trickett, & Putnam, 2003; Wilsnack, Wilsnack, Kristjanson, Vogeltanz-Holm, & Harris, 2004). While the damaging effects of sexual assault are seen across ethnic lines, researchers have called for more attention to the cultural context of sexual assault recovery (Bryant-Davis, Chung, & Tillman, in press; Long, Ullman, Starzynski, Long, & Mason,

2007). Along with attending to the cultural influences on the risk factors and post trauma effects of sexual assault, investigation of culturally sensitive recovery pathways and coping strategies is also warranted.

Trauma Recovery and Resilience

Studies focusing on the development of psychopathology and behavioral problems in survivors of sexual assault are informative in that they highlight the multifaceted long-term negative impact of sexual assault (Banyard, Williams, & Siegel, 2001); however, they tell us nothing about the adaptive coping strategies and resources that may be used by survivors to produce higher levels of adjustment, self-acceptance, and hope (Gall et al., 2007). Examining such variables will allow researchers to gain valuable insights into protective factors that counteract the psychosocial “vulnerabilities” associated with sexual violence from being activated (Gall et al., 2007). Furthermore, exploring aspects of resiliency that are more likely to be endured by African American survivors will provide valuable information to inform interventions with this population, assist mental health providers in identifying resources that promote resiliency, and build on strengths of African American survivors of sexual assault in their journey to recovery.

Religiosity and Spirituality

While examination of protective and resiliency factors among survivors of sexual assault has been understudied, a growing body of literature exists that addresses such constructs. Studies of resilience have focused on a broad range of characteristics that contribute to overall well-being among survivors of sexual assault (McClure, Chavez, Agars, Peacock, & Matosian, 2007). One characteristic that has been found to play an important role in one’s ability to exhibit healthy functioning despite adverse life experiences (Bonnano, 2004) is a sense of connectedness to a higher being. This is especially so for African American survivors of trauma. An adherence to religious traditions and values is a core aspect of African American culture (Adebimpe, 2004).

Spirituality and religiosity are two terms that have been used to refer to the experience of a transcendent relationship, however, distinctions have been made between these two constructs (Gilbert, 2000). Spirituality refers to one’s belief in the existence of a higher being or a life-force that transcends space and time or divine order (Bryant-Davis, 2005; Yick, 2008). Such faith is used to make meaning of life experiences and achieve a greater sense of self-awareness. Religiosity may be conceptualized as the outward expression of spiritual beliefs through engagement in organized religion (e.g., service attendance, adherence to doctrinal teachings, prayer) (Yick, 2008). Given the interconnectedness of spirituality and religion, results from research studies operationalizing both terms will be presented in this brief literature review.

Several authors have documented the benefits of religiosity and spirituality in trauma recovery (e.g., Bryant-Davis, 2005; Kim, 2008). Benefits of a relationship with a higher being that survivors have noted as key to trauma survival and recovery include spirituality acting as a source of refuge and emotional comfort, assisting in the process of meaning making, enhancing self-acceptance, building inner-strength, establishing a life purpose, and creating a sense of hope (see Gall et al., 2007; Yick, 2008; Schneider & Feltey, 2009). In a study of resiliency among African American trauma survivors, Alim et al., (2008) found a sense of purpose in life promoted resilient outcomes and contributed significantly to the recovery process. The researchers suggested this characteristic may play a vital role in the implementation of adaptive coping strategies while enduring adversity.

Recently, scholars have become interested in exploring how spirituality and religiosity facilitate resilience. Gall, Basque, Damasceno-Scott, & Vardy (2007) investigated the role of spirituality in the psychological adjustment of a sample of Canadian adult survivors of child sexual abuse. Participants who both reported more frequent religious service attendance and ranked spirituality as highly important felt their abuse was at a higher stage of resolution. Moreover, participants who ascribed greater importance to spirituality in their lives reported lower levels of depression and higher levels of personal growth. The importance of religion in a survivor's life did not appear to impact current levels of adjustment. Elsewhere, researchers noted active involvement in religious communities (e.g., frequent church service attendance) to be predictive of resiliency whereas identification of oneself as religious or spiritual, alone, did not contribute substantially to one's ability to recover following the experience of a traumatic event (Alim et al., 2008). The researchers suggested religious service attendance may serve as a means of social support for African American trauma survivors. This explanation is supported by evidence that social support received from church members mediates the positive relationship of church attendance on various aspects of health for African American women generally (Olphen et al., 2003).

Social Support

Social support is another factor that has been found to contribute substantially to positive adaptation among survivors of sexual assault and intimate partner violence (Coker et al., 2002; Ullman, 1999). As with spirituality and religiosity, African American survivors of trauma have demonstrated reliance on relationships with others as a primary resource in the face of adversity (see Bryant-Davis, 2005).

Glass and colleagues (2007) demonstrated the protective role of tangible social support against increased posttraumatic stress symptomatology among a sample of urban adult female survivors of sexual and/or physical assault seeking assistance from a trauma service. Their findings revealed tangible social support moderated the relationship between number of lifetime traumas and posttraumatic stress symptoms. When there was an absence of tangible social support, increased trauma exposure was related to greater posttraumatic stress symptoms. Access to tangible support acted as a barrier against the negative impact of trauma exposure. The presence of eight tangible social support resources eliminated the impact of trauma exposure, such that additional trauma exposure was no longer related to increased posttraumatic stress symptoms. Similarly, in an examination of the cumulative impact of sexual trauma on depression and post-traumatic stress symptomatology, Schumm, Briggs-Phillips, and Hobfoll (2006) found high levels of perceived social support buffered the effects of cumulative trauma on PTSD symptom severity. Together, these findings support Charuvasta and Cloitre's (2008) social ecological conceptual framework of posttraumatic stress disorder, which posits that risk for the development of posttraumatic stress disorder following exposure to a traumatic event and capacity to recover from posttraumatic symptoms are contingent upon the survivor's perceptions of social support as well as actual tangible forms of social support received. These findings have important societal and mental health implications as responses to disclosures of sexual trauma play a pivotal role in the trajectory of recovery for African American survivors of sexual assault.

The current study builds on this body of research by exploring the role of religious coping and social support in the recovery of African American sexual assault survivors. We hypothesized that both of these factors would be protective against depression and posttraumatic stress disorder symptoms. We also expected that social support and religious coping would be positively related to each other, based on research findings that reveal the relationship between religious involvement and adjustment is mediated in part through social support (and optimism) (Salsman, Brown, Brechting, Carlson, 2005). While prior studies have documented the protective roles of these coping strategies in trauma survivors

in general or in survivors of intimate partner abuse specifically, the present investigation is a quantitative analysis of these factors in the lives of African American sexual assault survivors specifically, a understudied subgroup. Given both the high risk of sexual assault for African American women and their greater endorsement of these two strategies, examination of these relationships in this subgroup of survivors is particularly timely (Kilpatrick, Resnick, Ruggiero, Conoscenti, McCauley 2007; Maston & Klaus, 2008; Tjaden & Thoennes, 2000).

Method

Design and Procedure

Data were collected from a convenience sample of women in Chicago and the surrounding metropolitan area. Flyers describing the study were posted at a large urban university, at bookstores in the area, at academic buildings, at dormitories, and at other places where women from the university and the community congregate. Flyers were also posted at mental health agencies and rape crisis centers. Advertisements were run in Chicago area newspapers. Women 18 years and older with unwanted sexual experiences since the age of 14 were recruited for a 45-minute, confidential, mail survey. Participants were sent a packet containing a cover letter, a referral list of community resources, and information explaining the purpose of the study, in addition to the survey. Women were sent \$20 upon completion of the survey. Of the survey mailed out, 1084 women returned completed surveys, for a 90% response rate. All participants were treated in accordance with the ethical guidelines of the American Psychological Association.

For this study, only African American women were included in the analyses ($N = 495$). In addition, it only included African American women who 1) answered affirmatively to at least one of the SES adult assault items, and 2) responded affirmatively to the additional questions regarding physical violence and coercive tactics. This resulted in a final sample of 413 African American women who are categorized as experiencing more severe sexual assaults.

The data was analyzed using confirmatory factor analysis and structural equation modeling, which allowed us to test a model with adequate statistical power and to examine the interrelations of social support, religious coping, and psychological symptoms (i.e., depression and PTSD).

Participants

Four hundred and thirteen African American adult women between the age of 18 and 71 ($M = 35.31$, $SD = 11.25$) with unwanted sexual experiences since the age of 14 participated in this study. A little more than half of the participants had at least some college education ($N = 236$, 58.1%), were currently single ($N = 252$, 61.3%), had children ($N = 267$, 66.1%), and most identified as heterosexual ($N = 335$, 81.5%). Table 1 summarizes the demographic characteristics of the sample.

Seventy-four percent (74%) of the women reported having given into unwanted sex act (fondling, kissing or petting, but no intercourse) due to continual arguments and pressure, 35.8% due to a man using his position of authority, and 64.2% due to threat or physical force. Almost 71 % (70.9%) of the women reported experiencing attempted sexual intercourse with threat or force, and 42 % with being given alcohol or drugs. For those women who reported having unwanted sexual intercourse, 76.8% were due to man's continual arguments and pressure, 29% were due to a man using his position of authority, 43.4% were due to being given alcohol or drugs, and 75.4% were due to threat or force.

Lastly, 36% of women reported having sex acts (anal or oral intercourse or penetration by objects other than the penis) due to threat or physical force.

Instruments

Sexual assault—A modified version of the Sexual Experiences Survey (SES; Koss, Gidycz, & Wisniewski, 1987) was used to identify completed rape and attempted rape victims, as well as women who experienced unwanted sexual contact and sexual coercion. The questions assessed adult sexual victimization since age 14. The SES has reported internal consistency reliability of .69 and test-retest reliability at one week apart of 93% (Koss & Gidycz, 1985). In this study, the internal consistency reliability (*Cronbach's α*) was .81. Respondents were also asked for details about their assault experiences using questions developed from past studies (Ullman, 1996, 2000). If respondents had multiple assaults, they were asked for details about the experience they considered to be the most serious. Participants were asked whether they experienced specific types of physical injuries from the assault (ranging from soreness and bruises to knife/gunshot wounds) and specific types of coercive tactics used by the perpetrator (ranging from insistence to use of a weapon). Those who responded affirmatively to physical violence and coercive tactics were categorized as experiencing more severe sexual assaults and were included in this study.

Social support—Social support was assessed as the frequency of participants' social contact in the last year with persons in their current social support network, including friends, relatives, and attendance at religious services, by using 5 Likert-style items from the Social Activities Questionnaire of the RAND Health Insurance Experiment (Donald & Ware, 1984). Women's level of social contact ranged from 1 (everyday) to 7 (less than 5 times per year). The mean scores of these items were used as an indicator of the social support latent variable. These measures have been widely used in studies assessing social network characteristics and health in large community studies, although they are not multi-item validated measures of all aspects of perceived or received social support.

Religious coping—Two items were selected from the Brief COPE (Carver, 1997), a shortened version of the original COPE (Carver, Scheier, & Weintraub, 1989), to assess participants' use of religion in coping (e.g. I tried to find comfort in my religion or spiritual beliefs; I prayed or meditated) and were used as indicators for the religious coping latent variable. The Brief COPE is a 28-item self-report scale that assess a variety of coping strategies. Each 4-point Likert scale is computed as an unweighted sum of responses to the two items that make up each subscale. The COPE has been widely used in studies of stressed populations and has adequate internal consistency reliability (all subscale alphas $\geq .60$ except one) and test-retest reliability (*r*s of .46 to .86). The two religion items had responses made on a Likert scale, ranging from 1 (I didn't do this at all) to 4 (I do this a lot). The Religious Coping subscale has an internal consistency reliability (*Cronbach's α*) of .78, and .90 for the Brief COPE (Carver).

Depression—The Center For Epidemiologic Studies Depression Scale (CES-D, Radloff, 1977) was used to assess participants' level of depression. There were 7 Likert scale items (e.g. I felt I could not shake off the blues; I had trouble getting to sleep or staying asleep) and the scores ranged from 0 (rarely or none of the time) to 4 (mostly or all of the time). *Cronbach's α* of the CES-D was found to be .85 in the general population and .90 for patients. The content, concurrent, and discriminant validity have been supported. Correlations with the Hamilton rating scale for depression and the Raskin rating scale were good after 4 weeks of treatment (*r* = .69 and .75, Radloff, 1977; Weissman et al., 1977). CES-D also was found to be more discriminating in determining symptom severity in

depressed outpatient sample (Santor, Zuroff, Ramsay, Cervantes, & Palacios, 1995). The CESD-10 correlated highly with the 20-item scale ($r = .97$; Andresen et al., 1994). In this study, the CES-D has internal consistency reliability (Cronbach's α) of .84, and the 7 items were used as indicators for the depression latent variable.

PTSD symptoms—The Posttraumatic Stress Diagnostic Scale (PDS; Foa, 1995), a standardized 17-item self-report instrument, was used to assess the total number of PTSD symptoms women reported experiencing. This scale was selected because it has been validated with sexual assault survivors (Foa, Cashman, Jaycox, & Perry, 1997). Women rated how often each symptom (i.e., re-experiencing/intrusion, avoidance/numbing, hyperarousal) in relation to the ASA had bothered them during the past 30 days on a scale ranging from 0 (*not at all*) to 3 (*almost always*). The PDS has been shown to have acceptable test-retest reliability ($\alpha = .74$) for a PTSD diagnosis over a two-week interval, 87% agreement, and a Pearson r of .83 between two administrations. The PDS has also demonstrated good internal consistency ($\alpha = .92$) and convergent validity ($\alpha = .59$) with the Structured Clinical Interview for the DSM-IV Axis I Disorders (SCID-I) PTSD module, indicating 79% agreement between the two measures (Foa et al., 1997). In this study, the PDS's internal consistency reliability (Cronbach's α) was .93. Almost three-fourths ($N = 300$, 73.7%) of the participants met the criteria for a diagnosis of PTSD, reporting a range of 0 to 51 symptoms ($M = 20.12$, $SD = 12.26$). Overall symptom severity scores for the participants were: none (4.4%), mild (20.8%), moderate (26.6%), moderate to severe (35.6%), and severe (11.6%). In addition, the number of symptoms was calculated for each of three types of PTSD symptoms, which were also internally consistent in this sample (avoidance/numbing $\alpha = .85$, physiological arousal $\alpha = .92$, and re-experiencing/intrusion $\alpha = .86$). These three symptom count variables constituted the PTSD latent variable.

Data Preparation

For all significance tests, alpha was set at .05. All measures and indicators were univariate normal with skew less than 1.5 and kurtosis less than 1.6, satisfying the recommendations of skew less than 3 and kurtosis less than 4 (Kline, 1998). Z scores were computed to screen for univariate outliers (those greater than 3.29) and no cases were excluded in this step (Tabachnick & Fidell, 2001). Further, data was screened for multivariate outliers by computing Mahalanobis distance, resulting in the elimination of 6 cases ($D^2 < .001$), leaving 407 cases in the final analysis. Lastly, the data was also checked for multicollinearity across latent variables. First-order correlations, as well as the means and standard deviations, are presented in Table 2. Only indicators that were part of the same latent constructs showed high intercorrelations (e.g., .60 or higher); no other first-order correlations were above .60, indicating that multicollinearity was not a problem among the measured variables (Kline, 1998).

Overview of Models Tested

Analyses were conducted with structural equation modeling using Analysis of Moment Structures (AMOS) module Version 17.0 and Maximum-Likelihood estimation.

First, confirmatory factor analyses were conducted to test the measurement model before the full model was estimated. Researchers recommend this approach (Anderson & Gerbing, 1988; Kline, 2005) so that reasonable and necessary changes can be made to the measurement model. Second, SEM models were tested by estimating hypothesized relationships among latent variables.

Evaluation criteria—In determining the criterion for evaluating models in CFA and SEM and to obtain a relatively good fit between the hypothesized models and observed data,

Bentler Comparative Fit Index (CFI) should be greater than .90 (Hu & Bentler, 1995), the Root Mean Squared Error of Approximation (RMSEA) should be close to or less than .10 with an upper bound of the 90% CI of .10 (Browne & Cudek, 1993). The 90% confidence interval (CI) is interpreted in the same way as one would interpret a one-sample t-test.

The traditional nonsignificant *p* value of Chi-square is not used as a fit index because Chi-square statistics is very sensitive to sample size, and its values are often not interpretable in a standardized way (Kline, 1998). To reduce the sensitivity of the chi-square statistic to sample size, the decision was made in this study to divide the chi-square value by the degrees of freedom (X^2/df). If this ratio is less than 3, the model is also considered to have a relatively good fit.

Results

Confirmatory Factor Analysis

A confirmatory factor analysis was conducted using AMOS 17.0 to test the fit of a four factor model: 1) Religious Coping, Social Support, and Depression and PTSD. There were 17 indicators loading on the three factors as follows: 1) Religious Coping: COPE22 (find comfort in religion), COPE27 (pray or meditate); 2) Social Support: SS1 (be with friends or relative), SS2 (have friends over to home), SS3 (visit friends at home), SS4 (call friends or relatives), SS5 (attending religious services); 3) Depression: CESD1 (could not shake off the blues), CESD2 (trouble concentrating), CESD3 (everything was an effort), CESD4 (Trouble getting to sleep or staying asleep), CESD5 (felt lonely), CESD6 (Felt sad), CESD7 (could not “get going”), and 4) PTSD: Reexperiencing, Avoidance/Numbing, and Hyperarousal. The resulting model is shown in Figure 1 with standardized beta coefficients. As seen in the figure, all path loadings associated with indicators were significant, except the path between Religious Coping factor and Indicator “pray or meditate.” The path loading between latent variables Depression and Religious Coping were also not significant. Fit of the model was adequate, $X^2/df = 314.662/113 = 2.785$; CFI = .927; RMSEA = .066 with CI (90) = .058, .075, based on the aforementioned criteria established for the analyses. Table 2 includes information of means, standard deviations, and Pearson Product correlation of all measured variables.

Structural Equation Model

Based on the results of the CFA measurement models, a structural model was tested amongst the relationship between social support, religious coping, depression, and PTSD symptoms. Social support and religious coping were not correlated, but depression and PTSD symptoms were associated (via disturbance terms), because they are typically highly comorbid. The model hypothesized that both Social Support and Religious Coping will predict African American female sexual assault survivors' PTSD symptoms. The model and paths are presented in Figure 2. Fit of the model was adequate, $X^2/df = 315.11/114 = 2.76$; CFI = .93; RMSEA = .066 with CI (90) = .057 .074, based on the criteria established prior to the analyses. The results suggest that less social support predicted both higher level of PTSD and depressive symptoms, and while more frequent use of religious coping predicted a higher level of PTSD symptoms, it did not predict depression symptoms.

Discussion

Given African American women's risk for sexual assault (Maston & Klaus, 2008; Rennison, 2002) and decreased likelihood of initiating or continuing with traditional psychotherapy, it is imperative that researchers and clinicians explore the recovery strategies that are attractive to and effective for this population. Based on the previously reviewed literature, it was

hypothesized that social support and religious coping would play a significant role in the recovery of African American, female sexual assault survivors. As it relates to social support, the findings of this study build on prior research that establishes the protective role of social support for trauma survivors (Coker et al., 2002; Fowler & Hill, 2004; Schumm, Briggs-Phillips, and Hobfoll, 2006). Specifically, these analyses revealed that African American women who indicate having more access to and utilization of a social support network report less depression and PTSD than women with less support.

The socio-cultural significance of social networks for African American women can be understood within the framework of collectivistic cultural principles which are articulated by the Africentric notions of identity being rooted, shaped, and reflected by connection to others (Nasim, Corona, Belgrave, Utsey, & Fallah, 2007). The authors theorize that as sexual assault is a violation based on a social or interpersonal exchange, likewise social connection is integral to the redress of that violation. Social support may help to diminish shame and to affirm the worth and value of the survivor, as well as to play a role in establishing a sense of safety. While the pathways by which social support serves a protective function, still need to be explored, this study suggests that social support protects both the mood and cognitions of the survivor as exemplified by depressive and posttraumatic stress symptomatology.

The study also reveals a relationship between post trauma symptoms and religious coping that is contrary to some prior research showing that religiosity in general among female veteran sexual assault survivors was related to lower levels of depression (Chang, Skinner, & Boehmer, 2007). In the current study, African American sexual assault survivors who endorsed greater use of religious coping also reported higher depressive and PTSD symptoms. It is important to note that the religiosity generally refers to a measure of engagement in religious activities without attention given to motive, while religious coping, assessed in this study, addresses the engagement of religious activities as a way of managing routine or traumatic stressors. Thus, different constructs and measures may explain the differing results of these studies.

Two distinct possible interpretations of the current finding are important to consider. The first is that the engagement in religious coping is exacerbating women's distress. The women in our sample may have utilized negative religious coping which entails adoption of beliefs that God is punishing them, that one should passively wait for God to change the situation, that the individual has failed in their faith, and that prayer is a tool for avoidance (Harris, Erbes, Engdahl, Olson, et. al, 2008). If the participants were using negative religious coping these findings are consistent with prior research, which has established a connection between negative religious coping and higher levels of distress and PTSD (Bjork & Thurman, 2007; Pargament et al., 2002). Positive aspects of religious involvement, which are associated with better adjustment, include social support, improved meaning, purpose, direction in life (Ano & Vasconcelles, 2005) and religious service attendance. It is likely that the women in our sample were utilizing negative religious coping instead of positive religious coping, but future research is needed to evaluate the distinct forms of religious coping on adjustment of rape victims.

Additionally, regarding the possibility that religious coping exacerbate distress, it is important to consider mainstream religion's traditional approach to sexuality in general and gendered violence in particular. Many religious leaders have never spoken directly against gendered violence; silence can be seen as support of perpetrators who also demand silence of their victims (Herman, 1997). On the other hand, some religious leaders have spoken about gendered violence with messages that are not affirming of women in general or victims specifically (Burn & Busso, 2005; Kroeger & Beck, 1996). Building on the earlier

findings that relate negative social responses to increased psychological distress in sexual assault survivors (Ullman, Townsend, Filipas, & Starzynski, 2007), one could theorize that religious teachings that are victim blaming would result in increased distress for rape survivors.

The second possibility is that women who are experiencing greater distress are more likely to engage in religious coping. In this vein, it is important to consider the protective role that religious coping may have for those experiencing the greatest distress (Kim, 2008). African American rape survivors who indicate high levels of depressive and post-traumatic stress symptoms may increase their religious coping as a way to manage distress. African American women may gain new insights about their experience through religious reflection (Galloway, 2003). They may also experience emotional release by being in a context (during expressive services or in private) where it is acceptable for one to cry, shout, or in some cases dance. Spiritually, trauma survivors have indicated the helpfulness of knowing there is someone (e.g., their higher power) who believes them and with whom they can talk about experiences that seem unspeakable to another human being (Harris, Erbes, Engdahl, Olson, et al, & 2008).

Limitations of this study include the cross-sectional nature of the data and the nonrepresentative sampling strategy used to collect the data. Future longitudinal studies and representative samples are needed to test these models in African American survivors of sexual assault in order to replicate and extend these findings. This study had a limited measure of religious coping that was specific to coping with sexual assault, so future studies are needed using more comprehensive measures that include both cognitive appraisal and behavioral forms of religious coping. In addition, this study did not assess additional factors that may be important for understanding African American sexual assault survivors' recovery, including ethnic identity and culturally-specific factors such as attributions (Neville, Heppner, Oh, Spanierman, & Clark, 2005). Despite these limitations, the models tested here go beyond past studies in examining how social support and religious coping relate to two of the most common mental health outcomes (e.g., PTSD and depression) outcomes of sexual assault in a large, socioeconomically diverse sample of African American victims.

The counseling implications of these findings highlight the importance of standardized training of counselors and therapists in the general area of cultural competence. More specifically, while growing attention is given to the need to attend to racial and ethnic identity in counseling, there is still a need for greater attention to the religious and spiritual lives of clients and how to actively demonstrate respect and even integration of this recovery strategy into the work of traditional therapy (Brown, 2008; Hodge & Bushfield, 2007). Counselors working with African American rape survivors need to assess social support and religiosity and explore the salience and meaning of these factors for their clients. Additionally, Galloway (2003) and Serrano (2003) note the important work that can be accomplished when mental health professionals partner with faith communities to address sexual assault; these partnerships include psychoeducation for religious leaders and making services available within the communities where African American women primarily live.

The significant findings of this study build on prior examination of social support and religiosity in the lives of trauma survivors and in the lives of African Americans. To continue this line of study, researchers need to examine the pathways by which social support and religiosity influence post-trauma symptoms, using longitudinal datasets, more refined measures, and representative sampling strategies. It is also critical for investigators to empirically examine the various methods for integrating sensitivity to social support and religiosity into treatment approaches for African American rape survivors. More research is

needed on sexual assault recovery in African American women, additionally further study could explore a comparative analysis of women of diverse ethnicities. The current study demonstrated the significant role of social support and assault-related religious coping in the depressive and post-traumatic stress symptoms of African American rape survivors. Attending to these factors in trauma practice and research is needed to improve the quality of mental health care to African American women.

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Figure 1.

Confirmatory Factor Analysis for the Measurement Model for social support, religious coping, depression and PTSD symptoms. All paths were significant except where noted. *NS* = not significant.

Note: RC1 = find comfort in religion; RC2 = pray or meditate; SS1 = be with friends or relative; SS2 = have friends over to home; SS3 = visit friends at home; SS4 = call friends or relatives; SS5 = attending religious services; CESD1 = could not shake off the blues; CESD2 = trouble concentrating; CESD3 = everything was an effort; CESD4 = trouble getting to sleep or staying asleep; CESD5 = felt lonely; CESD6 = felt sad; CESD7 = could not 'get going'

Figure 2.

Hypothesized structural model of relationships of social support, religious coping, depression, and PTSD symptoms. This model includes correlated disturbance terms for depression and PTSD symptoms ($r = .57$, $p < .05$), not shown in the model. All paths were significant except where noted (*NS* = not significant).

Note: RC1 = find comfort in religion; RC2 = pray or meditate; SS1 = be with friends or relative; SS2 = have friends over to home; SS3 = visit friends at home; SS4 = call friends or relatives; SS5 = attending religious services; CESD1 = could not shake off the blues; CESD2 = trouble concentrating; CESD3 = everything was an effort; CESD4 = trouble getting to sleep or staying asleep; CESD5 = felt lonely; CESD6 = felt sad; CESD7 = could not 'get going'.

Table 1**Demographic Characteristics**

Variable	Frequency	Percentage
Education (<i>N</i> = 406)		
Less than 12 th grade	88	21.7%
HS graduate	82	20.2%
Some college	169	41.6%
College graduate and beyond	67	16.5%
Currently in School (<i>N</i> = 411)		
No	318	77.4%
Yes	93	22.6%
Current Employment Status(<i>N</i> = 404)		
No	223	55.2%
Yes	181	44.8%
Sexual Orientation (<i>N</i> = 411)		
Heterosexual	335	81.5%
Gay/Lesbian	36	8.8%
Bisexual	25	6.1%
Unsure	15	3.6%
Marital Status (<i>N</i> = 411)		
Single	252	61.3%
Cohabiting/Living with Someone	49	11.9%
Married	37	9.0%
Divorced/Separated	66	16.1%
Widowed	7	1.7%
Children (<i>N</i> = 404)		
No	137	33.9
Yes	267	66.1
Total Household Income (<i>N</i> = 405)		
\$10,000 or less	199	49.1%
\$10,001 – \$20,000	82	20.2%
\$20,001 – \$30,000	63	15.6%
\$30,001 – \$40,000	35	8.6%
\$40,001 – \$50,000	11	2.7%
Over \$50,000	15	3.7%

Table 2

Means, Standard Deviations, and Pearson Correlation for Measured Variables

Variables	2	3	4	5	6	7	8	9	10
Social Support									
1. SS1	.56**	.56**	.50**	.16**	-.01	.06	.08	.11*	.13**
2. SS2	-	.72**	.44**	.13**	.04	.07	.06	.13*	.10*
3. SS3		-	.46**	.16**	-.01	.00	.09	.11*	.09
4. SS4			-	.14**	.03	.02	.14**	.21**	.18**
5. SS5				-	-.29**	-.19**	-.03	.06	-.01
Religious Coping									
6. Cope22					-	.64**	.12*	.16**	.14**
7. Cope27						-	.19**	.15**	.19**
PTSD									
8. Reexp							-	.64**	.68**
9. Avoid								-	.72**

Variables	M	SD	11	12	13	14	15	16	17
Social Support									
1. SS1	3.85	1.83	.21**	.16**	.05	.15**	.24**	.19**	.22**
2. SS2	4.28	1.92	.21**	.13**	.04	.14**	.19**	.18**	.15**
3. SS3	4.23	1.81	.22**	.13*	-.00	.12*	.18**	.12*	.14**
4. SS4	2.43	1.63	.24**	.19**	.11*	.16**	.20**	.24**	.27**
5. SS5	5.03	1.78	.13**	.12*	.18**	.09	.07	.12**	.14**
Religious Coping									
6. Cope22	2.58	1.22	.05	.09	-.01	.06	.01	.04	.07
7. Cope27	2.76	1.19	.06	.08	.02	.10*	.12*	.09	.54
PTSD									
8. Reexp	4.99	3.86	.26**	.34**	.09	.19**	.30**	.33**	.35**
9. Avoid	8.49	5.62	.29**	.32**	.21**	.26**	.33**	.40**	.42**

Variables	M	SD	11	12	13	14	15	16	17
10. Arousal	6.65	4.33	.24**	.41**	.17**	.37**	.42**	.44**	.41**
Depression									
11. CESD1	1.53	.97	-	.51**	.25**	.31**	.43**	.43**	.51**
12. CESD2	1.47	.92		-	.25**	.47**	.52**	.48**	.60**
13. CESD3	1.66	.99			-	.27**	.21**	.26**	.30**
14. CESD4	1.71	1.08				-	.48**	.44**	.45**
15. CESD5	1.81	1.04					-	.79**	.56**
16. CESD6	1.84	.98						-	.63**
17. CESD7	1.55	1.01							-

Note. All scores are scaled scores.

*
 $p < .05$;

**
 $p < .01$