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Healing Pathways: Longitudinal Effects of Religious Coping and Social Support on PTSD symptoms in African American Sexual Assault Survivors

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Abstract

African American women are at slightly increased risk for sexual assault (Abbey, Jacques-Tiaura, & Parkhill, 2010). However, due to stigma, experiences of racism, and historical oppression, African American women are less likely to seek help from formal agencies when compared to White women (Ullman & Filipas, 2001; Lewis, Resnick, Smith, Best, & Saunders, 2005) and/or women of other ethnic backgrounds (Ahrens, Abeling, Ahmad, & Himman, 2010). Therefore, the provision of culturally appropriate services, such as the inclusion of religion and spiritual coping,

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may be necessary when working with African American women survivors of sexual assault. The current study, controlling for age and education, explores the impact of religious coping and social support over one year for 252 African American adult female sexual assault survivors recruited from the Chicago metropolitan area. Results from hierarchical linear regression analyses revealed high endorsement of religious coping and social support at Time 1 does not predict a reduction of PTSD symptoms at Time 2. However, high social support at Time 2 does predict lower PTSD at Time 2. Also it is significant to note, survivors with high PTSD at Time 1 and Time 2 endorse greater use of social support and religious coping. Clinical and research implications are explored.

Keywords

sexual assault; religious coping; social support; African American; PTSD

Introduction

An estimated 18–36% of African American women are sexually assaulted in their lifetime (U.S. Department of Justice, 2005; Black, Basile, Breiding, Smith, Walters, Merrick, Chen, & Stevens, 2011). The devastating effects of a sexual assault can lead to subsequent distress including depression, PTSD, and substance use (Campbell, Dworkin, & Cabral, 2009; Temple, Weston, Rodriguez, & Marshall, 2007; Wilsnack, Vogeltanz, Klassen, & Harris, 1997; Kaukinen & DeMaris, 2005). Nevertheless, African American women are less likely to report the assault and get help (Ullman & Filipas, 2001; Lewis, Resnick, Smith, Best, & Saunders, 2005; Wyatt, 1992). In a review of the literature, Tillman, Bryant-Davis, Smith, and Marks (2010) surveyed some of the intrapsychic, systemic, and culture-specific barriers African American female sexual assault survivors may encounter. Given the socio-cultural realities of African American women's lives, there is often a distrust of health professionals. Thus, it is important for psychologists to recognize culturally congruent coping strategies, such as spiritual and collective coping, that are utilized by African American sexual assault survivors (Bryant-Davis, Ullman, Tsong, & Gobin, 2011; Utsey, Bolden, Lanier, & Williams, 2007).

Related to the idea of survivor characteristics of the previous studies is the concept of ethnic stereotypes of African American women. In a study of 97 participants, 45 of whom were African American, African American women engaged in similar levels of rape related coping compared to White women and identified similar general variables as important in the recovery process (Neville, Heppner, Oh, Spanierman, & Clark, 2004). There were differences found on the relevance of cultural variables with African American women, as they identified cultural attributions as more important in understanding why they were sexually assaulted than their White counterparts. The cultural attributions assessed were designed to evaluate the influence of the "Jezebel image" on perceptions of sexual assault. It was also found that greater validation of cultural blame attributions among Black women was related to increased use of victim blame attributions, which eventually was related to lower levels of self-esteem.

West's review (2013) found that African American survivors reported fear, anger, anxiety, depression, post-traumatic stress disorder, suicidal feelings, low self-esteem, and preoccupation with the rape, many of the same immediate and long-term psychological responses to sexual victimization as their White counterparts (Neville & Heppner, 1999). However, greater endorsement of such beliefs as the "Jezebel" stereotype among African American rape survivors intensified mental health problems.

Contemporary research has recognized a number of demographic variables associated with the onset of PTSD. We control for age and education because past research shows that they are related to PTSD in sexual assault survivors (McCutcheon, Sartor, Pommer, Bucholz, Nelson, Madden, & Heath, 2010). Trauma experienced earlier in life has been associated with increased risk for psychiatric symptomatology, particularly PTSD (McCutcheon, Heath, Nelson, Bucholz, Madden, & Martin, 2009; McCutcheon, Sartor, Pommer, Bucholz, Nelson, Madden, & Heath, 2010; Perkonig, Kessler, Storz, & Wittchen, 2000). Researchers have also found higher educational level is associated with less severity of PTSD symptoms in sexual assault survivors (Ullman & Brecklin, 2002; Ullman & Filipas, 2001).

Social support has been identified as a critical factor affecting sexual assault survivors' recovery process. Social support is defined as the "availability of components of support from interpersonal relationships," which is then divided into formal and informal sources (Fowler & Hill, 2004, p. 1273). Formal sources include law enforcement officers, medical professionals, and mental health providers whereas informal support providers are sources such as family, friends, neighbors, or romantic partners (Ullman, 1996). Filipas and Ullman (2001) have identified various positive and negative reactions from social support sources following the survivor's disclosure of sexual assault. Positive reactions include emotional support, validation, informational support, and tangible aid. Research has also shown that survivors are more likely to disclose their assault to friends and family than to formal support sources (Filipas & Ullman, 2001; Starzynski, Ullman, Filipas, & Townsend, 2005) and that informal sources tend to be appraised more positively than formal ones (Golding et al., 1989). However Long and Ullman (2013) have identified barriers to both formal and informal social support for African American female sexual assault survivors. These include but are not limited to cultural, financial, and institutional challenges.

Very few studies have examined sexual assault survivors' use of religious coping, that is, the way sexual assault survivors rely on their spiritual beliefs, turn to their religious community, or think about their faith as a way of coping with the aftermath of an assault. Results of two studies suggested that African American survivors were more likely to use spiritually based and good deeds forms of religious coping than survivors of other ethnicities (Ahrens et al., 2010; El-Khoury, Dutton, Goodman, Engle, Belamaric, & Murphy, 2004). Spiritually based coping involves turning to religion to find meaning, solace, and support (Pargament, 1997). The good deeds form of religious coping involves active involvement in church and efforts to help others. In general, regardless of ethnic differences, the literature has suggested that higher levels of psychological well-being are experienced by sexual assault survivors who use greater amounts of positive religious coping; that is, a variety of methods that help individuals feel close to God, see meaning in life, and feel spiritually connected to others (Ahrens et al., 2010).

Knapik, Marsolf, & Draucker (2008) sampled 27 females and 23 males to determine how survivors of sexual assault use spirituality to recover. 46% percent of the sample was African American. Researchers found that the survivors' perception of being rescued, saved, or set free from the effects of a sexual assault by a spiritual being or power assisted with their healing. Additionally, Adofoli and Ullman (2014) found that among highly religious sexual assault survivors, religious coping was related to less engagement in heavy drinking. This is consistent with the results of a systematic review (Shaw et al., 2005), which found that religion and spirituality are generally beneficial to recovery.

Present Study

A previous cross-sectional study (Bryant-Davis et al., 2011) with data collected from the initial survey only (i.e., Time 1, $N = 413$) showed that African American assault survivors with greater social support were less likely to endorse symptoms of PTSD, whereas, increased use of religious coping was related to greater endorsement of PTSD symptoms. Due to the limited nature of cross-sectional analysis, the present study builds on the analysis of Bryant-Davis et al. (2011) to examine a subset of those African American survivors who completed a follow up survey 1 year later ($N = 252$) to examine how religious/spiritual coping and support relate to PTSD symptoms over the 1 year follow up. In the current study, the investigators examined the longitudinal relationships between social support and religion/spirituality and female African American sexual assault survivors' PTSD symptoms over the period of one year. It is hypothesized that for female African American sexual trauma survivors, PTSD symptoms will decrease over time for those who utilize religious coping strategies more frequently and those who have greater social support.

Method

Participants and Procedure

After obtaining University institutional review board approval, advertisements in newspapers and fliers distributed throughout the Chicago area invited women aged 18 or older who experienced unwanted sexual encounters at age 14 or older to participate in a confidential mail survey (Ullman, 2010; 2011). Women who were interested in participating in the survey were mailed the first survey (Time 1) with a cover letter, informed consent form, and a list of community resources for survivors of violence, and a postcard to return if they were interested in participating in the follow-up survey (Time 2). One thousand and eighty-four women completed the initial survey (Time 1, a 90% response rate), and 909 expressed interest in completing the follow-up survey (Time 2). Approximately 1 year later, those women who expressed interest were mailed the second survey (Time 2) with an updated list of community resources. Women received \$20 for each completed survey. Six hundred twenty-five women (69% response rate) completed the survey at Time 2. All participants were treated in accordance with the ethical guidelines of the University of Illinois at Chicago.

For the purpose of this study, the sample subset included only African American women who reported experiences with sexual assault at Time 1 ($N = 412$) and completed both waves of data collection ($N = 252$, a 61% response rate). Participants reported their demographic

information at Time 1, including their age ($M = 36.66$, $SD = 10.94$), highest level of education (56% had at least some college, 23.6% were high school graduate, and approximately 20% had less than 12th grade education), school status (21.9% were students), employment status (44% were employed), marital status (62% were single, 20% were married/cohabiting, 16% were divorced/separated, and 1% were widowed), parental status (67% had children), and household income (49% earned \$10,000 or less, 49% earned between \$10,001 and \$50,000, and 2% earned more than \$50,000).

Participants' use of religious coping and levels of social support reported at Time 1 and Time 2 were used as predictors to examine if they contributed to PTSD symptoms one year later at Time 2, when controlling for PTSD symptoms at Time 1. Participants' age and levels of education were controlled in the analyses because past research has indicated that these demographic variables may be related to PTSD (McCutcheon, Sartor, Pommer, Bucholz, Nelson, Madden, & Heath, 2010).

Measures

Sexual assault—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 dichotomously (Yes/No). The SES has reported internal consistency reliability of .69 and test-retest reliability at one week apart of 93% (Koss & Gidycz, 1985). 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 women who responded affirmatively to physical violence and coercive tactics at Time 1 were included in this study.

Religious coping—Participants' use of religious coping was assessed at Time 1 and Time 2 using the Religious Coping subscale of the Brief COPE, a 28-item self-report scale of coping strategies (Carver et al., 1997) used in the past 30 days to deal with the assault. The item responses are based on Likert-type scales ranging from 1 (*I didn't do this at all*) to 4 (*I did this a lot*). The COPE has been widely used in studies of stressed populations and has adequate internal consistency reliability (all subscale α .60 except one) and test-retest reliability ($r = .46 - .86$). In the present study, the Cronbach's α reliability coefficient was .81 for the Religious Coping subscale of 2 items ("I tried to find comfort in my religion or spiritual beliefs" and "I prayed or meditated") with an average rating of 2.60 ($SD = 1.14$) at Time 1 and 2.73 ($SD = 1.06$) at Time 2, which corresponds to participants using from "little bit" to "a medium amount" of religious coping strategies in the past 30 days.

Social support—Participants' level of social support was assessed at Time 1 and Time 2 and operationalized 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 7 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 7 (every day) to 1 (less than 5 times per year). The measure was reliable in our sample ($\alpha = .72$), with an average rating of 4.07 ($SD = 1.41$) at Time 1 and 4.17 ($SD = 1.44$), which corresponds to participants socializing about 2 or 3 times per month within their social network.

PTSD symptom severity—Participants completed the Posttraumatic Stress Diagnostic Scale (PDS; Foa, 1995) at both Time 1 and Time 2. The PDS is a standardized 17-item self-report instrument used to provide a measure of PTSD symptom severity using Diagnostic and Statistical Manual of Mental Disorders, 4th ed. (American Psychiatric Association, 1994) criteria. On a scale ranging from 0 (*not at all*) to 3 (*almost always*), women rated how often they had been bothered during the past 30 days by the following types of symptoms in relation to the assault: (a) re-experiencing/ intrusion symptoms related to having upsetting thoughts, images, and nightmares, feeling as if the assault was happening again, and experiencing emotional and/or physical reactions when reminded of the assault; (b) avoidance/numbing symptoms related to trying not to think about the assault, not being able to remember part of the assault, having less interest in important activities, feeling distant from people, and/or feeling emotionally numb; and (c) hyperarousal symptoms related to having trouble falling or staying asleep, feeling irritable or angry, having trouble concentrating, and/or being overly alert or easily startled. The PDS has acceptable test-retest reliability ($\kappa = .74$) for a PTSD diagnosis in assault victims over a 2-week interval (Foa, Cashman, Jaycox, & Perry, 1997). The measure was reliable in our sample ($\alpha = .91$ at Time 1, $\alpha = .93$ at Time 2), with women on average reporting moderate symptoms severity ($M = 19.78$, $SD = 12.12$ at Time 1; $M = 18.79$, $SD = 11.75$ at Time 2, range = 0 – 51, Foa, 1995).

Results

Correlational analyses were conducted to examine the relationships among the primary measured variables in this study. At Time 1, more frequent use of religious coping was related to a higher number of PTSD symptoms ($r = .24$, $p < .001$), while more utilization of social support was related to a fewer PTSD symptoms ($r = -.15$, $p = .012$). The same pattern was seen at Time 2, where participants who reported more frequent use of religious coping also reported more PTSD symptoms ($r = .14$, $p = .020$), while those reporting having more social support reported less PTSD symptoms ($r = -.25$, $p < .001$).

To understand the longitudinal effects of religious coping and social support, a hierarchical linear regression analysis was conducted with PTSD symptoms at Time 2 as the criterion variable, and PTSD symptoms entered in Step 1 to examine the predictors' effects in changes in PTSD symptoms between Time 1 and Time 2. Age and educational level were entered in Step 2 as control variables. Participants' use of religious coping and social support at Time 1 were entered in Step 3 to examine if Time 1 use of religious coping and social support contributed to changes in PTSD symptoms a year later. Finally, participants' use of religious coping and social support at Time 2 were entered in Step 4 to examine whether Time 2 use of religious coping and social support contributed to changes in PTSD symptoms over time, above and beyond the effects of Time 1 use of religious coping and social support.

Results of the analysis indicated that, while age was not related to PTSD symptoms or symptom changes over time, participants' levels of education was significantly related to PTSD symptoms changes over time. More specifically, when controlling for PTSD symptoms at Time 1, participants with less formal education reported significantly greater PTSD symptoms a year later ($\beta = -.13$, $p = .035$, $R^2 \text{ change} = .027$, $F \text{ change} (2, 214) = 3.86$, $p = .023$).

Participants' use of religious coping was not a significant predictor of changes in PTSD symptoms at Time 2 when controlling for age and education. However, social support at Time 2 did have significant effects on participants' PTSD symptoms at Time 2 ($\beta = -.24$, $p < .001$, $R^2 \text{ change} = .054$, $F \text{ change} (2, 210) = 8.19$, $p < .001$), when all the control variables were taken into consideration. More specifically, when controlling for participants' PTSD symptoms at Time 1, their age and education, and use of religious coping and social support at Time 1, those participants who utilized more social support at Time 2 reported significantly fewer PTSD symptoms at Time 2. In other words, when age, education, PTSD symptoms the prior year, and use of religious coping and social support reported in the prior year were also considered to be equal, those who utilized more social support a year later reported fewer PTSD symptoms a year later.

Discussion

While researchers have examined the role of religious coping and social support among sexual assault survivors in general and among African American sexual assault survivors in particular, this is the first study to examine these variables over time in relation to PTSD among African American female sexual assault survivors. This longitudinal analysis builds on a previous cross-sectional study (Bryant-Davis, Ullman, Tsong, & Gobin, 2011), which found that survivors with greater social support were less likely to endorse the symptoms of depression and PTSD; and, conversely, increased use of religious coping was related to greater endorsement of depression and PTSD symptoms. This study goes beyond our prior analysis and illuminates the relationships of religious coping and social support constructs over time. Sexual assault survivors with higher rates of PTSD reported greater reliance on both religious coping and social support. It is likely that persons who are experiencing more severe levels of intrusive thoughts, hyper-vigilance, and avoidance behaviors will seek out more support and use more coping strategies to regulate their distress. African American women generally report higher rates of religious coping and according to Ahrens and colleagues (2010), African American female sexual assault survivors also endorsed higher rates of religious coping than survivors of other ethnic backgrounds. Spiritual or religious practices may be both culturally congruent and easily accessible for African American women who experience distress (Mattis, 2002). For African American women, prayer, spiritual beliefs, and their relationship with God are central coping strategies (Mattis, 2002; McLeod, Hays, & Chang, 2010), as they may be perceived as safer than direct or public forms of coping (e.g. seeking help from mental health agencies). For example, in studies exploring the coping styles of low-income women in abusive relationships, religion and spirituality were found to be important sources of strength and support, both of which were linked to positive healing and enhanced psychological well-being (Gillum, Sullivan & Bybee, 2006; Davis, et al, 2009).

Similar to these studies, findings of the present research among African American survivors of sexual assault support are important as they underscore the need for longitudinal studies. The earlier cross-sectional findings of reduction in PTSD for those using social support did not manifest over a 1-year follow-up period. This is critical for clinicians and researchers to understand and explore further, as it points to the potential devastating effects of sexual assault that coping alone may not address. It is important to consider additional factors such as revictimization and other contextual factors in understanding and addressing the mental health outcomes of survivors. The use of religion to ameliorate distress and post-traumatic symptoms can be attributed to historical and/or present experiences of racism and discrimination, which may make African American women less likely to seek help from organized institutions and mental health providers, and more likely to turn to religious and spiritual supports for healing. The use of religion may also be reflective of greater stigma in the African American community towards mental health services (Farris, 2007), in which case efforts, such as public mental health campaigns with culturally respected spokespersons, should be made to reduce the stigma of such services and to provide culturally appropriate services that incorporate spiritual and/or religious coping. Additionally the development of spiritual/religious cultural competence is important for clinicians, as they should not overlook the presence of faith traditions of numerous African American clients. Instead, it is important for clinicians to assess for and recognize the presence of spiritual/religious beliefs and practices among clients.

Although social support at Time 1 did not predict a change in PTSD symptoms at Time 2, African American sexual assault survivors who utilize more social support at Time 2 report less PTSD symptoms at Time 2. These findings suggest that social support developed at a later point in time may still be associated with psychological benefits. The clinical significance of this finding highlights the need to address barriers to social support such as stigma and trust and to assist survivors in building reciprocal social support networks even when treatment is occurring years after the sexual assault. The reciprocal nature of the relationship is the opposite of social relationships in which Black women are the caretaker or support for others who do not actually provide support in return. This is significant, as prior research has determined the benefits of positive, supportive responses to sexual assault disclosures (Neville & Pugh, 1997; Ullman, 2010). While sexual assault survivors from marginalized communities may turn to their informal networks more often than to formal service agencies, the response they receive is not always supportive (Tillman, Bryant-Davis, Smith, & Marks, 2010). These findings suggest that reaching out to support networks may be important in the long term for African American women recovering from sexual assault. For example, if a survivor reaches out once and does not receive support, clinically, it may be important to foster in African American survivors the skills and emotional resilience to seek out positive social support, and to build support networks for those women do not currently have social support. This will help the survivors experience less PTSD symptoms even when time has elapsed after the assault. Additionally, given that the current social support measure was a simple measure of frequency of contact, the quality of support and actual interactions and social reactions are important to explore in future research. This needs to be studied over time as the supportiveness of one's contacts may erode or strengthen over time.

It should be noted that this study purposefully focused on African American survivors as a way of addressing the experiences and needs of this often under-studied population (Bryant-Davis, Chung, Tillman, Bellcourt, 2009). However, findings may not be generalizable to all sexual assault survivors, regardless of their race and ethnicity, due to the self-selected nature of the participants who were recruited only from the Chicago area. In addition, while the study is longitudinal and examined the effects of initial use of religious coping and social support on PTSD symptoms changes over time, it is limited by having only 2 waves of data collection and only 1 year apart. Future studies can build on this literature by examining the long-term effects of religious coping and social support 2, 3, or additional years later. Another variable that can be assessed in future studies is the re-victimization status of women at follow-up. Possibly, re-victimization may explain changes in PTSD symptoms. Survivors who receive less social support may be more susceptible to subsequent assaults (Mason et al., 2009) and thus at-risk to have more PTSD symptoms.

The measures used in this study were limited in their ability to fully capture the construct of religious coping. The associations a survivor attributes to their religion or higher power could be positive or negative. The measures used within the current study used religious coping as a general construct, making no distinction between the potential positive and negative forms of religious coping (Hill & Pargament, 2008). Additionally, this study's measures of religious coping did not distinguish between the dual purposes of religious coping: a tool to process the experience versus avoidance or distraction. If the latter (i.e. avoidance or distraction) was the guiding force of utilization for some participants, the trauma would remain unprocessed and measures would not detect a decrease in symptoms. Also, there is a possibility that religious coping and social support may offer survivors relief in ways that were not detected by the study's current assessment measures (e.g. spiritual well-being and a sense of connection). Though religious coping and social support were not identified as predictors of PTSD in this longitudinal study, greater insight into the variables' relationships to PTSD could be illuminated in follow up studies by developing more comprehensive assessment measures.

The study also shows that high endorsement of religious coping and social support are both associated with higher PTSD. There are two potential pathways for these findings. The first is that those who experience more distress may feel motivated to do more to find relief, including greater use of their coping strategies. Another possibility is that something inherent in the coping strategies is actually exacerbating the survivors' symptoms. For religious coping, this may be the person internalizing religious beliefs that are victim-blaming, such as negative religious coping in which the survivor is judged harshly for any negative experiences she has including sexual victimization. For social support, the survivor may consistently seek out emotional support but the persons they rely on are unreliable, condemning, or rejecting. This is supported by the literature on the consequences of negative responses to disclosures of sexual assault (see Ullman, 2010 for a review).

This study contributes to the literature by uncovering the use of religious coping and social support in African American female survivors over time. It is crucial for researchers and clinicians to pay attention to the culturally-congruent interventions that may be more appropriate in understanding African American female survivors' experiences and, in terms

of social support, effective in reducing PTSD symptoms. In addition, for those women who do not have an established social support network, it is critical to connect them to such support as part of the clinical intervention. Positive relationships with God/a Higher Power, as well as other people encountered through psychotherapy, support groups, family, friends, and communities of faith can be important in the recovery process of African American sexual assault survivors as they are culturally congruent while the stigma of seeking psychotherapy can still be a barrier.

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Table 1

Hierarchical Linear Regression Statistics of Longitudinal Effects of Social Support and Religious Coping on PTSD symptoms

	B	SE	β	<i>p</i>
Step 1				
PTSD Time 1 ***	.45	.06	.47	.000
Step 2				
Age	.104	.06	.10	.102
Education *	-1.53	.72	-.13	.035
Step 3				
Social Support Time 1	-.73	.51	-.09	.152
Religious Coping Time 1	-.23	.65	-.02	.723
Step 4				
Social Support Time 2 ***	-1.95	.51	-.24	.000
Religious Coping Time 2	1.15	.74	.10	.120

Note.

*
 $p < .05$,

**
 $p < .01$,

 $p < .001$