

Posttraumatic Stress Disorder Symptoms Among Low-Income, African American Women With a History of Intimate Partner Violence and Suicidal Behaviors: Self-Esteem, Social Support, and Religious Coping

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There is a dearth of research on risk/protective factors for posttraumatic stress disorder (PTSD) among low-income African American women with a history of intimate partner violence (IPV), presenting for suicidal behavior or routine medical care in a large, urban hospital. We examined self-esteem, social support, and religious coping as mediators between experiences of child maltreatment (CM) and IPV and symptoms of PTSD in a sample ($N = 134$) of low-income African American women. Instruments used included the Index of Spouse Abuse, the Childhood Trauma Questionnaire, the Taylor Self-Esteem Inventory, the Multidimensional Profile of Social Support, the Brief Religious Coping Activities Scale, and the Davidson Trauma Scale. Both CM and IPV related positively to PTSD symptoms. Risk and resilience individual difference factors accounted for 18% of the variance in PTSD symptoms over and above IPV and CM, with self-esteem and negative religious coping making unique contributions. Both variables mediated the abuse–PTSD symptom link. In addition, we tested an alternate model in which PTSD symptoms mediated the relationship between abuse and both self-esteem and negative religious coping.

It is well-known that intimate partner violence (IPV) and child maltreatment (CM)³ occur at alarmingly high rates in the general population (for a review, see Kilpatrick & Acierno, 2003). On the other hand, reliable data on the experiences and consequences of CM and IPV among low-income and African American women are sparse (Crowell & Burgess, 1996; Tjaden & Thoennes, 2000). Among the many potential sequelae of IPV and CM, posttraumatic stress disorder (PTSD) is common to

both (see Kaysen, Resick, & Wise, 2003). Two recent meta-analytic reviews (Brewin, Andrews, & Valentine, 2000; Ozer, Best, Lipsey, & Weiss, 2003) identified multiple potential predictors of PTSD; however, both studies cautioned against identifying one model of risk and resilience across types of individuals and traumatic experiences. This caveat is particularly applicable for understanding PTSD among low-income African American women, who are underrepresented both in research and treatment literature (Bent-Goodley, 2001; Hogue, Liddle, Becker, & Johnson-Leckrone, 2002; Saris & Johnston-Robledo, 2000).

This article addresses a specific subpopulation of women with a history of IPV, presenting for care in a large, urban hospital, and aims to fill a gap in the research literature in two ways. First, we present data from an ongoing study of low-income African American women

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³We use the term *child maltreatment* rather than child abuse because, as measured in this study, it encompasses both three types of abuse (sexual, physical, and emotional) and two types of neglect (emotional and physical).

who report a history of IPV and suicidal behavior within the last year (e.g., Kaslow et al., 2002; Thompson, Kaslow, Short, & Wyckoff, 2002). Second, we focus on three variables likely to be salient risk/resiliency factors in African American and low-income populations: self-esteem, social support, and religious coping.

Self-Esteem

Research suggests that one potential negative outcome of both IPV and CM is lowered self-esteem (Cascardi & O'Leary, 1992; Orava, McLeod, & Sharpe, 1996); however, viewed from another perspective, self-esteem and related constructs (e.g., self-efficacy) may serve as resilience factors and protect women with a history of IPV or CM from negative sequelae such as PTSD or depressed mood (e.g., Stein, Burden Leslie, & Nyamathi, 2002; Thompson et al., 2002). One area of research on self-esteem with varying and inconsistent outcomes posits potential differences in self-esteem across both race and socioeconomic status. This research is best summarized in a recent meta-analytic review (Gray-Little & Hafdahl, 2000), which found that low-income African American people had relatively higher levels of self-esteem as compared to low-income Caucasian people. Thus, self-esteem may be an even more salient risk/resiliency factor for the women in this study.

Social Support

Social support is a risk/resiliency factor for developing PTSD (Brewin et al., 2000; Ozer et al., 2003) and other adverse outcomes among women with a history of IPV and CM (Bender, Cook, & Kaslow, 2003). As with self-esteem, social support may be particularly relevant to low-income African American women. First, African American men and women are less likely to seek traditional mental health services and are more likely to rely on naturally existing support systems than Caucasian men and women (e.g., Heron, Twomey, Jacobs, & Kaslow, 1997; Kanuha, 1994). Second, African American communities may place greater value on interdependence, collective responsibility, and kinship networks than middle- and upper income Caucasian communities (Greene, 1994; Taylor, Chatters, Tucker, & Lewis, 1990).

Religion and Spirituality

The use of religion is a common coping strategy (e.g., Pargament et al., 1990). Although some stud-

ies find that traumatic experiences may reinforce current religious belief following traumatic events (e.g., increase reliance on faith following a traumatic event), other research suggests trauma may disrupt previously held religious beliefs (Falsetti, Resick, & Davis, 2003; Rossetti, 1995; Valentine & Feinauer, 1993). Among African American men and women, spirituality appears to serve as source of strength and resilience (Newlin, Knafel, & Melkus, 2002). African American women, relative to Caucasian women, demonstrate a higher reliance on prayer and religious thoughts when coping with a chronic illness (Bourjolly, 1998; Conway, 1985). In addition, religious involvement among African American men and women positively influences health and life satisfaction, and buffers the negative impact of chronic illness on both self-esteem and self-efficacy (Ellison, 1993; Ellison & Gay, 1990; Levin, Chatters, & Taylor, 1995). In our research on children of low-income African American women in a violent relationship, we found that religious/spiritual well-being among the mothers and the children related to fewer psychological symptoms in the children (Kaslow et al., 2003).

Global indicators of religiosity (i.e., frequency of congregational attendance) are often used to assess religious beliefs and spirituality. However, this method may not address how an individual uses religion to understand and manage stressors. Thus, some researchers in this area utilize a more specific construct, religious coping. Religious coping is defined as the use of religious beliefs or behaviors (e.g., prayer, seeking strength from God) to facilitate problem solving and prevent or alleviate the negative emotional consequences of stressful life circumstances (Koenig, Pargament, & Nielsen, 1998). A small, but expanding, literature demonstrates positive mental health outcomes related to use of religious coping activities in the face of stressful events. For example, individuals using positive religious coping strategies to manage stress related to the Oklahoma City bombing showed higher levels of stress-related growth (Pargament, Smith, Koenig, & Perez, 1998).

Using this framework, religious coping methods are divided into two groups: positive (i.e., those seen as more effective) and negative (i.e., those seen as less effective). Examples of religious coping behaviors labeled positive include appraisal of God as benevolent, collaboration with God, seeking a connection with God, seeking support from church members, and giving religious help to others. Examples of negative religious coping include appraisals of God as punishing, appraisals involving demonic forces, and expression of spiritual discontent (e.g., questioning God's love, wondering if God has abandoned you). Research indicates that positive religious coping strategies

relate to better mental health whereas negative religious coping methods relate to poorer physical health, worse quality of life, and greater depression (Pargament et al., 1998). In addition, a recent meta-analytic review of the research on religiosity and depression (Smith, McCullough, & Poll, 2003) showed that negative religious coping (as well as extrinsic religious orientation, a related construct) related positively to depressive symptoms, in contrast to other studies which demonstrated a negative relationship between religiosity and depression.

Hypotheses

Based on the reviewed literature as well as the potential salience of these variables to a low-income African American population, we proposed the following hypotheses.

1. We predicted that the women assessed for this study would report high levels of PTSD symptoms. Further, IPV and CM would significantly and positively correlate with severity of PTSD symptoms.

2. We predicted that social support, self-esteem, and positive religious coping styles would negatively correlate with IPV, CM, and severity of PTSD symptoms.

3. We predicted that negative religious coping styles would positively correlate with IPV, CM, and severity of PTSD symptoms.

4. We predicted that self-esteem, social support, and religious coping would mediate the relationship between IPV/CM and PTSD severity.

Method

Participants

Participants included African American women, ages 18 to 64 years recruited from a large public, university-affiliated hospital serving a primarily indigent and urban population (92% African American). The data from this study were gathered as part of a larger study focusing on IPV and suicidal behavior in low-income African American women. Thus, the screening methods and inclusion criteria allowed for the selection of only a subset of women in this setting likely to have significant PTSD symptoms. We received referrals for this study from hospital staff who treated women presenting because of a suicide attempt. In addition, we screened women presenting for routine medical care in hospital clinics (primary care women's care clinic). Women meeting criteria were invited to participate in the study. To be eligible for the

study, women needed to report IPV and a suicide attempt within the prior year. We excluded women unable to complete the protocol (e.g., cognitive impairment, acute psychosis, delirium). Of the 146 women referred by hospital staff, 2 were excluded (One was acutely psychotic and could not complete the interview, and 1 had a low combined score on the mental status screening instruments.), and 10 were discharged before they could be interviewed and/or did not attend the scheduled interview.

Once eligibility was verified, a research team member conducted a 3-hr, face-to-face interview. The comprehensive battery of measures was administered orally because of lower literacy levels in this population (Williams et al., 1995). Most of the measures administered in this study have not been validated using oral administration; however, data gathered from our previous research have suggested that similar instruments show comparable levels of internal reliability when completed orally as when completed via pen-and-paper self-report (e.g., Kaslow et al., 2002). We also found that the relationships among these measures were consistent with those that were theoretically expected as well as those found in other research (e.g., Bender et al., 2003; Cook, Conrad, Bender, & Kaslow, 2003; Thompson et al., 2002). Only a subset of the measures administered was included in this study. Remuneration for study participation was \$20.00. The research for this study was conducted in accordance with the ethical principles of the American Psychological Association and was approved by the University's Institutional Review Board.

Measures

The Demographic Data Form obtained key sociodemographic data, including education, marital/relationship status, number of children, and sources of income and employment.

Screening Questionnaires

We used a five-item measure (developed for this study) to assess suicidal behavior. Questions addressed presence/absence of suicide attempts, number of attempts, methods used, medical attention sought, and intention to die. Second, we administered a modified version of the Universal Violence Prevention Screening Protocol (Dutton, Mitchell, & Haywood, 1996), which asks about five categories of abuse (i.e., slapped, kicked, pushed, choked, or punched; forced sex; threatened with a knife or gun; fear of physical harm; verbal abuse) occurring in

the past 6 months. Recent research has provided construct validity for the use of this measure among low-income African American women (Heron, Thompson, Jackson, & Kaslow, 2003).

Childhood Trauma Questionnaire (CTQ; Bernstein & Fink, 1998)

The CTQ is a 28-item self-report inventory assessing five types of maltreatment: sexual, physical and emotional abuse, and emotional and physical neglect. Multiple studies have established the internal consistency, stability over time, and criterion validity of both the original 70-item CTQ and the current brief version (e.g., Bernstein et al., 2003). The CTQ yields a total score, scores for each of the five types of CM. Bernstein and Fink (1998) established scores for mild, moderate, and severe for each type of abuse. Abuse was evaluated as present or absent. To minimize false positives, we only included abuse as present when abuse scores were in the moderate or severe range. In this study, the total CTQ scale (not including the validity scales) demonstrated good internal consistency reliability ($\alpha = .80$) for the current sample, as did the subscales with α s ranging from .79 to .95.

Index of Spouse Abuse (ISA, Hudson & McIntosh, 1981)

The ISA is a 30-item inventory assessing severity of physical violence (e.g., my partner beats me so badly that I must seek medical help) and nonphysical violence (e.g., my partner is jealous and suspicious of my friends). Participants rate the degree of abuse on each item using a 5-point Likert scale (1 = *never*, 5 = *very frequently*). Items reflecting more serious forms of abuse are given higher weights (for more information on how weights were determined, see Hudson & McIntosh, 1981). Other research (Hudson & McIntosh, 1981) has indicated good validity for the subscales in both differentiating abused from nonabused women and in predicting criterion measures. A prior study (Campbell, Campbell, King, Parker, & Ryan, 1994) in a similar setting showed good levels of internal consistency reliability for the ISA. In this study, both the physical abuse and the nonphysical abuse subscales demonstrated good internal consistency reliabilities for the current total sample ($\alpha = .91$ for both subscales).

Davidson Trauma Scale (DTS; Davidson et al., 1997)

The DTS is a 17-item self-report measure rating the frequency and the severity of all the posttraumatic stress

symptoms listed in the *Diagnostic and Statistical Manual of Mental Disorders*, fourth edition (*DSM-IV*, American Psychiatric Association, 1994). It uses a scale of 0 (*not at all*) to 4 (*everyday*) for frequency and a scale of 0 (*not at all distressing*) to 4 (*extremely distressing*) for severity. The DTS has proven to be a reliable and valid measure of PTSD symptoms among survivors of childhood sexual abuse (Zlotnick, Davidson, Shea, & Pearlstein, 1996) and rape, combat, and natural-disaster survivors (Davidson et al., 1997). The severity and frequency scales of the DTS as well as the total scale demonstrated strong internal consistency reliability in this sample (α s = .79, .89, and .90, respectively).

Taylor Self-Esteem Inventory (TSEI)

The TSEI was developed using a sample of low-income African American women and is validated for use in this population. The 16-item scale demonstrates good internal and test-retest reliability as well as validity based on positive and strong associations with other established inventories of self-esteem (Jones, 1996). The TSEI demonstrated good internal consistency reliability in this sample ($\alpha = .79$).

Multidimensional Profile of Social Support (MSPSS; Zimet, Dahlem, Zimet, & Farley, 1988)

The MPSS is a 12-item scale assessing social support received from family, friends, and a significant other. The reliability, validity, and factor structure of the MSPSS have been demonstrated with a number of populations (Cecil, Stanley, Carrion, & Swann, 1995; Dahlem, Zimet, & Walker, 1991; Zimet, Powell, Farley, Werkman, Berkoff, 1990). The MPSS Total scale demonstrated good internal consistency reliabilities for the current sample with $\alpha = .89$, as did the subscales with α s ranging from .86 to .94.

Brief Religious Coping Activities Scale (Brief RCOPE; Pargament et al., 1998)

The Brief RCOPE is a 14-item questionnaire assessing two styles of religious coping: positive and negative. Positive coping items include items such as "I looked for a stronger connection with God" and "focused on religion to stop worrying about my problems." Negative religious coping methods include items such as "I wondered whether God had abandoned me" and "I questioned the power of God." These scales have good

internal-consistency reliabilities (Pargament, Koenig, & Perez, 2000; Pargament et al., 1998). Both the negative ($\alpha = .80$) and the positive ($\alpha = .92$) religious coping scales demonstrated good internal-consistency reliabilities for the current total sample.

Results

Sample Descriptives

This study included 134 African American women ranging in age from 18 to 55 years, with an average age of 34.6 ($SD = 9.37$). Twenty-eight percent of the participants identified as married or cohabitating with a partner, 20% reported being currently employed, 32% had completed a high-school level of education or equivalent (GED), and 27% reported some education beyond high school. Sixty-four percent of the sample reported receiving food stamps, and 31.4% reported receiving support from either Temporary Aid to Needy Families or some version of welfare-to-work support. Forty-eight percent reported a monthly household income of less than \$500, and 21% between \$500 and \$1000. When asked to describe their current living situations, 52% of the women reported that they were currently homeless (This included women who lived in shelters and those who were living temporarily with family or friends.)

History of Abuse in Childhood

CTQ scale scores indicated high levels of CM among the women in our study. Using the cutoff scores for assessing the five types of maltreatment, 66% of the women met criteria for sexual abuse, 57% for physical abuse, 58% for emotional abuse, 50% for emotional neglect, and 40% for physical neglect. Furthermore, only 17% of the sample did not meet criteria for at least one of these types of abuse, with 13% meeting criteria for one type of abuse, 30% for two or three types of abuse, and 39% reporting four or five types of childhood abuse. Looking at the subscale scores (rather than using the cutoff criteria), the CTQ had strong scale-total correlations ranging from .77 to .88. Given this, as well as the high internal consistency of the full CTQ scale, we decided to use only full CTQ scale scores in further analyses.

Abuse by a Spouse or Intimate Partner as an Adult

As defined by inclusion criteria (using the five screening questions), all of the women reported being

in an abusive relationship in the prior 6 months. We found high scores, well above clinical cutoff scores, on both the physical ($M = 43.9$, $SD = 29.3$) and nonphysical ($M = 55.5$, $SD = 26.9$) abuse scales of the ISA. As with the CTQ, the two ISA scores were highly correlated with a total scale score (.96 for physical abuse and .95 for nonphysical abuse). Thus, we again decided to use the full-scale scores in further analyses.

PTSD Symptoms

Overall, the women in the study reported high levels of PTSD symptoms as measured by the DTS ($M = 81.71$, $SD = 32.46$). Although the DTS is not meant as a diagnostic scale, in several recent studies using the DTS to assess patients with *DSM* diagnoses of PTSD, the mean scores ranged from 67.1 ($SD = 29.7$) to 74.8 ($SD = 36.5$) (Davidson, Rothbaum, van der Kolk, Sikes, & Farfel, 2001; Davidson, Tharwani, & Connor, 2002; Davidson et al., 2003), suggesting that our sample had an average score that met criteria for PTSD. This finding is consistent with the high level of past interpersonal violence in this sample of women.

Relationship of IPV and CM With and Severity of PTSD Symptoms

Overall, the data yielded significant positive correlations between history of both CM and IPV in adulthood and level of PTSD symptoms. One finding of note is that the relationship between total child abuse and total adult abuse was nonsignificant. A closer examination of the data showed that although child sexual, $r(134) = .21$, $p < .05$, and physical, $r(134) = .21$, $p < .05$, abuse related significantly to abuse in adulthood, the other forms of CM did not.

Self-Esteem, Social Support, and Positive and Negative Religious Coping

As indicated in Table 1, self-esteem correlated negatively with total PTSD symptom score and with both child and adult abuse, with the same pattern for social support. Although positive religious coping did not relate to total PTSD symptom score, negative religious coping had a significant positive relationship with total PTSD symptom score. Neither negative nor positive religious coping related to IPV. Positive religious coping related negatively only to childhood physical neglect. Negative

Table 1. Means, Standard Deviations, and Intercorrelations of PTSD, Abuse, Self-Esteem, Social Support, and Religious Coping Variables

Variable	1	2	3	4	5	8	9
1. PTSD Total Score	—						
2. Total Index of Spouse Abuse	.28***	—					
3. Total Childhood Trauma	.30***	.16	—				
4. Self-Esteem	-.45***	-.18*	-.27**	—			
5. Social Support	-.18*	-.20*	-.39***	.36***	—		
6. Positive Religious Coping	-.05	.07	-.07	.21*	.12	—	
7. Negative Religious Coping	.34***	.07	.25**	-.37***	-.33***	-.01	—
<i>M</i>	81.71	99.43	64.61	45.43	34.71	6.52	8.90
<i>SD</i>	32.46	53.87	25.31	17.34	12.13	5.32	5.64
<i>N</i> ^a	129.00	134.00	134.00	134.00	129.00	133.00	133.00

^aMissing data excluded pairwise.

* $p < .05$. ** $p < .01$. *** $p < .001$.

religious coping related positively to all forms of CM other than emotional neglect.

Next, we conducted hierarchical regression analyses to determine the degree to which self-esteem, social support, and negative religious coping contributed to the prediction of PTSD symptoms over and above measures of CM and IPV. Included in the analyses were variables that showed a significant correlation with PTSD symptoms, which resulted in positive religious coping being excluded from the analysis. Regression analyses indicated that the model significantly predicted PTSD symptoms accounting for 31% of the total variance in PTSD scores. Total CM and total IPV (first step) accounted for 14% of the variance. The second step (adding self-esteem, social support, and negative religious coping) accounted for 17% of the variance (see Table 2).

Finally, in light of the lack of literature on mediators of PTSD among low-income African American women, we followed Baron and Kenny's (1986) recommendations for mediation analysis to explore self-esteem, social-support, and negative religious coping as

potential mediators of the relationship between abuse and PTSD symptoms in this sample. To maximize reliability of measurement and decrease the number of analyses conducted, we created a composite abuse variable by standardizing ($M = 0$, $SD = 1$) and averaging the CTQ and ISA total scales to create a total abuse scale.

Step 1

In the first step for mediation analysis, it is required that the predictor variable(s) (i.e., total abuse) be significantly associated with the criterion variable (i.e., PTSD symptoms). To assess this, we conducted a regression, with PTSD symptoms as the criterion variables and total abuse as the predictor variable. This yielded a significant association ($\beta = .38$, $p < .001$).

Step 2

Step 2 requires that the predictor variable be significantly related to the potential mediating variables. Total abuse was related to self-esteem ($\beta = -.30$, $p < .001$), social support ($\beta = -.39$, $p < .001$), and negative religious coping ($\beta = .22$, $p < .01$).

Steps 3 and 4

See Figs. 1 and 2 for a summary of Steps 3 and 4 in the mediation analysis. Step 3 requires that the potential mediating variables (self-esteem, social support, and negative religious coping) be significant predictors of the criterion (PTSD symptoms) and that the association between the initial predictor variable (abuse) and the criterion variable (PTSD) decrease when both variables are included in the regression equation. These criteria

Table 2. Hierarchical Regression Analyses Predicting PTSD Symptoms

Predictor	β	<i>R</i>	<i>R</i> ²	ΔR^2	<i>F</i> change	<i>df</i>
Step 1		.37	.14	.14	10.15***	2, 126
Child Abuse (CTQ total)	.26**					
Adult Abuse (ISA total)	.23**					
Step 2		.56	.31	.17	10.04***	3, 123
Child Abuse (CTQ total)	.19*					
Adult Abuse (ISA total)	.20*					
Self-Esteem	-.34***					
Social Support	.13					
Negative Religious Coping	.20*					

Note. CTQ = Childhood Trauma Questionnaire; ISA = Index of Spouse Abuse.

* $p < .05$. ** $p < .01$. *** $p < .001$.

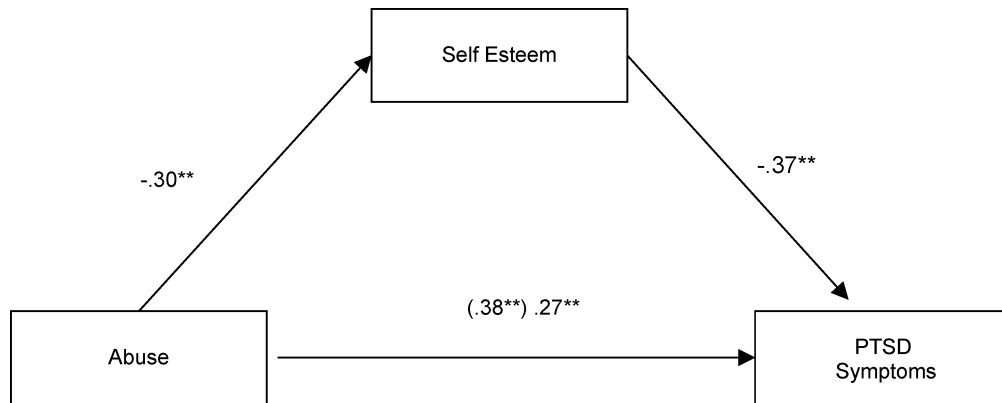


Fig. 1. Mediation of the association between abuse and PTSD symptoms by self-esteem. ^aAll values are standardized regression coefficients. In parentheses is the β for the unmediated regression of PTSD symptoms on Abuse. The β for this path decreased significantly when PTSD symptoms were entered into the regression equation predicting self-esteem. * $p < .01$. ** $p < .001$.

were met in the case of two potential mediating variables: self-esteem and negative religious coping. The relationship between social support and PTSD was no longer significant when child abuse also was entered into the regression equation predicting PTSD. Step 4 requires that the regression coefficient for the predictor variable (abuse) in Step 3 must be significantly smaller than the regression coefficient for the predictor variable in Step 1. This is tested with a Sobel z test; although there are several ways to calculate the error term used in the Sobel statistic, we used the version of the SE term described by (Baron & Kenny, 1986; Holmbeck, 2002; Sobel, 1982). For both self-esteem ($z = 2.66$, $p < .01$), and negative religious

coping ($z = 2.02$, $p < .05$), the z test indicated a significant reduction in the regression coefficient between abuse and PTSD from Step 1 to Step 3.

This finding might suggest that CM and IPV lead to higher levels of negative religious coping and lower levels of self-esteem, which in turn lead to more severe PTSD symptoms; however, another explanation of the data is that women with more severe PTSD symptoms have higher levels of negative religious coping and lower levels of self-esteem and social support (i.e., that PTSD symptoms might be the mediator between IPV/CM and these variables). To evaluate this possibility, we tested these three models using the same methods.

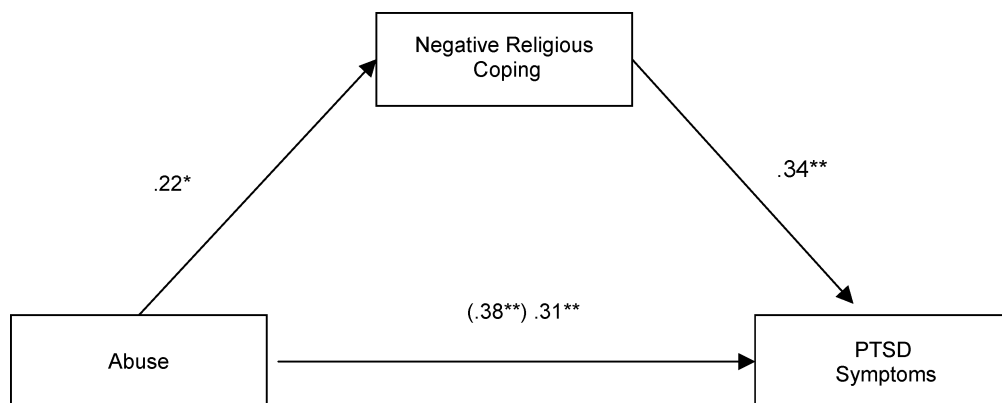


Fig. 2. Mediation of the association between abuse and PTSD symptoms by negative religious coping. ^aAll values are standardized regression coefficients. In parentheses is the β for the unmediated regression of PTSD symptoms on Abuse. The β for this path decreased significantly when PTSD symptoms were entered into the regression equation predicting self-esteem. * $p < .01$. ** $p < .001$.

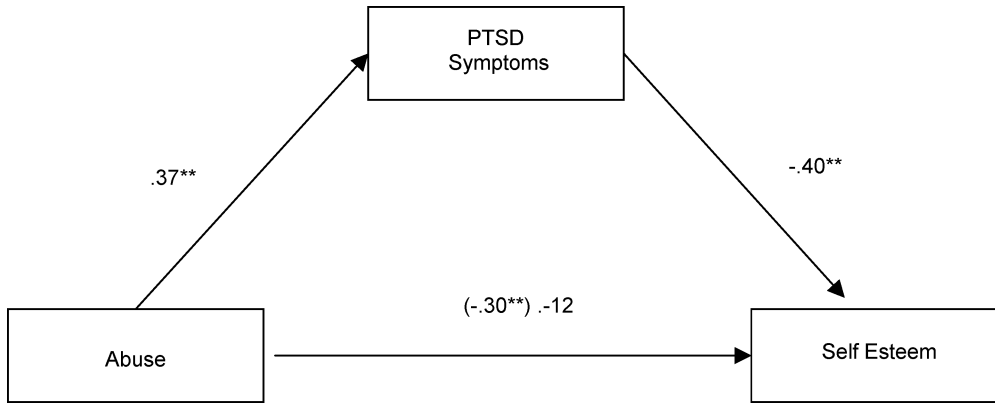


Fig. 3. Mediation of the association between abuse and self-esteem by PTSD symptoms. ^aAll values are standardized regression coefficients. In parentheses is the β for the unmediated regression of PTSD symptoms on Abuse. The β for this path decreased significantly when PTSD symptoms were entered into the regression equation predicting self-esteem. ** $p < .001$.

Step 1

We conducted three regressions, with the three criterion variables being self-esteem, social support, and negative religious coping. In all cases, total abuse was the predictor variable, and all yielded a significant association for self-esteem ($\beta = -.30, p < .001$), for social support ($\beta = -.39, p < .001$), and for negative religious coping ($\beta = .22, p < .01$).

Step 2

Total abuse predicted PTSD symptoms ($\beta = .37, p < .001$).

Steps 3 and 4

See Figs. 3 and 4 for a summary of Steps 3 and 4 in the mediation analysis. The relationships between PTSD and both self-esteem and negative religious coping remained significant after controlling for abuse, but the relationship between PTSD and social support did not remain significant after controlling for abuse. The z test indicated a significant reduction in the regression coefficient between abuse and both self-esteem ($z = 3.25, p < .001$) and negative religious coping ($z = 3.25, p < .001$), from Step 1 to Step 3, indicating that PTSD serves as mediator in these cases. Thus, the data allow for at least two alternate overall models: one in which self-esteem and negative religious coping mediate the relationship between abuse and PTSD

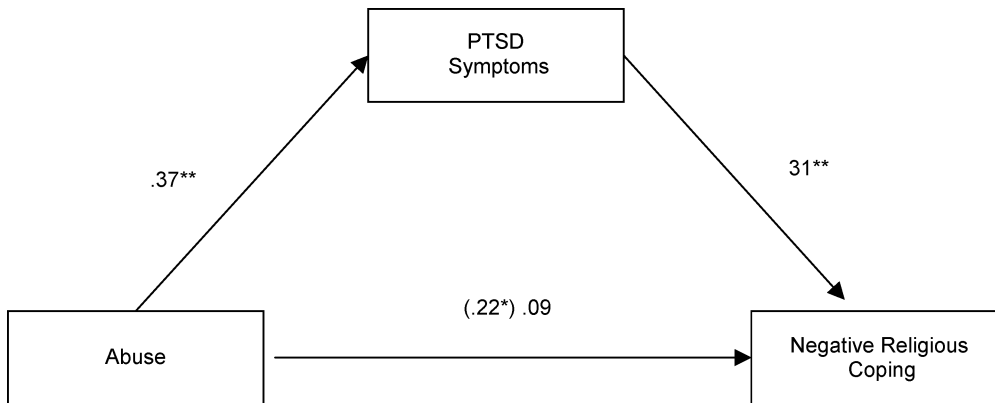


Fig. 4. Mediation of the association between abuse and negative religious coping by PTSD symptoms. ^aAll values are standardized regression coefficients. In parentheses is the β for the unmediated regression of PTSD symptoms on Abuse. The β for this path decreased significantly when PTSD symptoms were entered into the regression equation predicting self-esteem. * $p < .01$. ** $p < .001$.

and one in which PTSD is the mediating variable between abuse and both self-esteem and negative religious coping. Moreover, we did not measure other variables (e.g., locus of control) that are likely to relate to negative religious coping, self-esteem, and PTSD symptoms. Thus, we only can conclude that these data are consistent with models in which lowered self-esteem and higher levels of religious coping lead to higher levels of PTSD symptoms and vice versa.

Discussion

The results, consistent with low-income, African American prior literature, suggest two primary conclusions. First, women presenting for treatment in a public hospital who report a recent history of both IPV and a suicidal behavior report strikingly high levels of PTSD symptoms. Second, higher levels of both IPV and CM related positively with severity of PTSD symptoms. As predicted, we found that IPV, CM, and severity of PTSD correlated negatively with social support and self-esteem and positively with negative religious coping. To more fully understand these relationships, we conducted two sets of mediational analyses. The first tested the possibility that self-esteem and negative religious coping serve as mediators of the relationship between IPV/CM and PTSD symptoms. The second tested an alternate model in which PTSD symptoms serve as a mediator of the relationships between IPV/CM and both social support and negative religious coping.

The data provided support for mediation in both models; however, PTSD appeared to serve as a stronger mediator than self-esteem and negative religious coping (based on the relative magnitude of the reductions of the strength of relationship between the predictor variable and the outcome variable). This raises the question of how an increase in PTSD symptoms leads to changes in self-esteem and religious coping. One explanation invokes a social cognitive perspective in which PTSD symptoms are interpreted as an inability to effectively manage one's emotions, leading to decreased self-efficacy with a concomitant impairment in self-esteem (for a discussion of the role of perceived self-efficacy in recovery from trauma, see Benight & Bandura, 2004). A similar social cognitive model proposed by Janoff-Bulman (1992) also may account, at least to some extent, for the increase in negative religious coping. In this model, the experience of trauma leads to changes in previously held positive beliefs about self, world, and other (e.g., good things happen to good people, bad things happen to bad people). Changes in these core beliefs may well extend to religious beliefs. For example,

the presence of PTSD symptoms may lead to a sense of being abandoned by God (one of the items in the negative religious coping scale).

The mediation found in both models suggests that the relationships among these variables are likely to be reciprocal. That is, child abuse is a risk factor for increased PTSD symptoms, decreased self-esteem, and increased negative religious coping, and these three variables then affect one another in a cyclical manner. For example, lowered self-esteem may result in decreased use of active or effective coping strategies (e.g., "Nothing I do will help these problems."), which may lead to increased PTSD-related distress. In turn, the increased PTSD symptoms may lead to damaged beliefs about the self (e.g., "If I were a strong person, I would not have these symptoms.")

Perhaps the most notable finding in this study was the lack of support for positive religious coping as related to either IPV/CM or PTSD symptom severity. Although the data are consistent with prior literature on the importance of religion in women's interpretations of life experiences (e.g., Banks-Wallace & Parks, 2004), they suggest a specific impact of negative religious-coping styles. This finding is consistent with the second mediation hypothesis evaluated earlier in which traumatic experiences and PTSD symptoms may lead to a disruption in previously held positive beliefs about self, world, and others, including religious beliefs. In addition, studies looking at positive and negative religious coping have found that positive religious coping is associated with improvement in medical and psychological conditions whereas negative religious coping is associated with a worsening of symptoms or with a lower level of improvement over time (for a review, see Harrison, Koenig, Hays, Eme-Akwari, & Pargament, 2001). As an example, one study of heart patients found that negative religious coping predicted morbidity (Pargament et al., 1998). One way of looking at these data is that negative religious coping is a marker of distress levels, and positive religious coping is a resiliency variable. As noted, the women in this study most likely presented for assessment at a time when their levels of functioning were most impaired and their distress high (based on the way in which they were recruited—often following a suicide attempt), and this may have influenced levels of negative religious coping. In particular, suicidal ideation would be expected to be related to state of helpless/hopelessness, similar to some aspects of negative religious coping. It is possible that as the women in this study return to more adaptive levels of function and initial distress abates, positive religious coping may become more related to their functioning.

Another notable finding is that although the measure of social support was related to PTSD and history

of abuse as a bivariate correlation, it was not significant in a regression model when religious coping and self-esteem also were taken into account. This suggests that social support interacts in some meaningful way with one or both of these two variables. One explanation of this might be that social support (as well as religious coping) may be contingent on overall level of self-efficacy. Specifically, self-esteem may be required for the sense of efficacy needed to mobilize resources (social and otherwise) for effective coping with or recovery from traumatic experiences (Benight & Bandura, 2004).

This study includes a number of limitations. First, the study design is cross-sectional, and the data are correlational. Thus, no statements regarding causality can be made. Second, these data were collected on women with recent suicide attempts and recent histories of IPV; therefore, the data may represent women at the most severely impaired levels of functioning and may not generalize to less impaired groups of women. The nature of our sample may lead to sample-specific patterns in the data. Clearly, prospective/longitudinal research is needed to clarify the nature of the relationship among these variables.

Furthermore, given our focus on low-income African American women, we do not know to what extent our findings generalize to other socioeconomic or racial/ethnic groups. Although we used standardized instruments and made efforts to address constructs expected to be particularly relevant to our population, most research on African American and low-income populations begins with constructs developed in other contexts. Another research strategy would begin with open-ended or qualitative research to gather data without imposing preexisting frameworks or constructs on the experience of IPV/CM and PTSD symptoms in this population. This alternative would provide guidance in the design of more specifically focused research using a quantitative/standardized assessment.

The weaknesses of this study are balanced by two benefits specific to this population: (a) the use of a sample that is historically underrepresented in research on IPV, CM, and PTSD; and (b) the focus on a group of patients with problems (i.e., recent interpersonal violence and suicidality) that represent significant public health concerns. The results of the study provide both suggestions for the direction of future research and clinical implications for working with a group of patients who are often underserved.

These data provide suggestions for tailoring intervention for this or a similar population. First, if PTSD symptoms themselves lead to further impairment as a result of changes in variables such as self-efficacy, treatments directly addressing these symptoms should be

considered when choosing an approach to PTSD treatment (for reviews of the PTSD treatment literature, see Bradley, Greene, Russ, Dutra, & Westen, 2005; Robertson, Humphreys, & Ray, 2004). These might include both exposure-based treatments (e.g., Foa et al., 1999) and treatments designed to increase coping skills such as Stress Inoculation Therapy (Meichenbaum, 1974) or Skills Training in Affective and Interpersonal Regulation (Cloitre, Koenen, Cohen, & Han, 2002). Specifically, it might be beneficial to use a mode of therapy with an explicit focus on cognitive variables such as self-related cognitions/schemata and trauma-related changes in belief structures.

Second, consistent with previous recommendations for working with a low-income African American population, religious/spiritual issues are likely to be important components of intervention. Specific interventions might include working with patients to nurture effective invocation of spirituality and religion in coping with PTSD symptoms and developing relationships with spiritual and religious leaders to encourage their involvement in the treatment and recovery process (e.g., Abrams, 2000; Banks-Wallace & Parks, 2004). One example of such an approach is a "spirituality-focused genogram" (Dunn & Dawes, 1999), in which treatment might be to use writing-based/narrative approaches that can be tailored to address specific issues, including the relationship of traumatic experiences and religious beliefs (for an example of writing based treatments, see Bradley & Follingstad, 2003; for a review, see Sloan & Marx, 2004).

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