Relationships Among Strong Black Woman Belief, Coping Behaviors, Perceived Social

Support, and Psychological Distress for Black Mothers Bereaved by Stillbirth

A portion of the dissertation of:

Carrie J. Henry, PhD, CNM, RN

Dissertation Chair: Mi-Kyung Song, PhD, RN, FAAN

Committee Members:

Rasheeta D. Chandler, PhD, RN, FNP-BC, Anne L. Dunlop, MD, MPH,

Ursula Kelly, PhD, APRN, ANP-BC, PMHNP-BC,

Lauren Christiansen-Lindquist, PhD, MPH, & Sudeshna Paul, PhD, MS

Abstract

Psychological distress symptoms (symptoms of depression, anxiety, and post-traumatic stress) are common following stillbirth. Black women who experience stillbirth are less likely to seek support than White women, consistent with the Strong Black Woman (SBW) construct, which instructs Black women to tolerate stress and trauma gracefully, without seeking help. This cross-sectional study sought to determine the relative contributions of SBW belief, perceived lack of social support, and culturally relevant coping behaviors to psychological distress symptoms in Black women bereaved by stillbirth. We partnered with a stillbirth support organization to recruit a sample of 91 Black women bereaved by stillbirth in the 3 years prior to study participation. The online study survey measured SBW belief, culturally relevant coping behaviors, perceived social support, and psychological distress symptoms along with sociodemographics, pregnancy history, and stillbirth characteristics. We used stepwise selection in multiple linear regression to determine the relative contributions of SBW belief, perceived social support, and coping behaviors to measures of psychological distress symptoms in our sample. Increasing SBW belief, decreasing perceived social support, and increasing collective coping (coping behaviors involving other people) were found to predict increases in all three measures of psychological distress symptoms, controlling for age and other traumatic events. Further understanding of the influence of SBW belief on Black women's psychological distress following stillbirth may assist with the development of culturally appropriate interventions to mitigate psychological distress symptoms in this group.

Background

Approximately 24,000 stillbirths (fetal deaths after 20 weeks gestation[1]) occur annually in the United States, and are more common among non-Hispanic Black women compared to any other racial group (1%; 0.5% for non-Hispanic Whites; 0.7% for Native Americans/Alaskan Natives; 4% for Asians/Pacific Islanders).[2] Mental health and functional consequences include depression, anxiety, post-traumatic stress disorder (PTSD), substance use disorders, difficulty parenting other children, and relationship breakdown.[3,4] Depressive symptoms, anxiety, and substance use disorders may be more severe for Black women than for White women following stillbirth.[5]

Stillbirth support groups, offered by many hospitals and parental support organizations for parents who have been bereaved by stillbirth, may be effective at reducing psychological distress symptoms,[6,7] but are poorly attended by Black parents.[8] The reasons for avoiding support groups include discomfort with the mostly-White clientele, poor treatment as Black patients within the healthcare system, and a preference for managing grief and loss independently, without help from an outside source.[5] Not only are Black women uncomfortable attending stillbirth support groups; they are unlikely to seek professional help for psychological distress symptoms in general due to a lack of compassionate care from healthcare professionals,[5,9,10] lack of Black healthcare providers,[11,12] and stigma surrounding mental health care within Black communities.[13,14] Instead, they tend to emphasize spiritual and religious practices, talking with a few close friends, and solitude and silence.[5,7,15] While both Black and White women agree social support is integral to healing from a traumatic loss such as stillbirth, Black women tend to find the most support from other women, often their own mothers, while White women tend to list the baby's father as their best source of support.[5] These findings suggest that Black women cope

with the traumatic loss of stillbirth differently than White women, and that current services offered within the healthcare system to mitigate stillbirth-related psychological distress symptoms (e.g., support groups) may not be culturally appropriate for Black women.

Black women's preference for managing grief and loss independently is consistent with the "strong Black women" (SBW) construct, an example of Black womanhood which requires managing difficulties and trauma independently, with grace, fortitude, and tightly-controlled emotions. The SBW is expected to display strength, suppress emotions, resist vulnerability, help others, and succeed in her endeavors despite limited resources.[16,17] Many Black women report feeling an obligation to live up to the image of the SBW, which they learned from mothers, grandmothers, and other older Black women.[18] They describe watching these foremothers handle stress and difficulties without help and without pausing to care for themselves.[17] SBW belief (the belief that one must adhere to the SBW construct) has been positively associated with psychological distress symptoms (depressive symptoms, anxiety, loneliness),[19-21] and negatively associated with perceived emotional social support.[22] It has also been positively associated with eating for emotional reasons and with using drugs and alcohol to cope with stress.[23-25]

The relationships among SBW belief, culturally relevant coping behaviors (coping behaviors often preferred by members of the Black/African American community[26]), perceived social support, and psychological distress symptoms among Black mothers bereaved by stillbirth have not been examined. Therefore, the aims of this study were to 1) characterize SBW belief, culturally relevant coping behaviors, perceived social support, and psychological distress symptoms (symptoms of depression, anxiety, and post-traumatic stress), 2) examine bivariate associations among SBW belief, psychological distress symptoms, culturally relevant coping behaviors, and perceived social support, and 3) examine the relative contributions of SBW belief,

perceived social support, and culturally relevant coping behaviors on psychological distress symptoms, after adjusting for sociodemographic and clinical covariates, in a sample of Black women bereaved by stillbirth.

Methods

Study Design and Population

This cross-sectional study surveyed Black women bereaved by stillbirth who met the following inclusion criteria: 1) were at least 18 years old, 2) had a stillbirth in the three years preceding study participation, 3) self-identified as Black or African American, and 4) were able to communicate in English. Recruitment took place during March, 2020 – January, 2021. To access this target population, we partnered with Rachel's Gift (RG), a stillbirth support organization located near Atlanta, Georgia. RG partners with 47 hospitals nationwide (but primarily in Georgia) to provide follow-up to their patients who experience perinatal loss and who consent to having their contact information shared with RG. RG mails cards to bereaved mothers on significant dates (e.g., Mother's Day, 1-month anniversary of the loss) and provides support groups for bereaved parents at many of their partnering hospitals.

Procedures

We used two modes of contacting our target population. First, RG mailed invitation packets to the women on their mailing list who had experienced stillbirth between six months and 3 years prior to the mailing. Although we did not exclude women whose stillbirth was less than six months prior, RG preferred to delay direct mailings until that time. Second, RG staff posted our study invitation on their social media (Facebook and Instagram) pages every three to four weeks throughout the recruitment period. Word-of-mouth referrals were possible as well, due to the online nature of the study.

The mailed invitation packets included a statement of support for the research from RG, a description of the study and its inclusion criteria, an invitation to participate, the principal investigator's (PI) contact information, an opt-in/out postcard to request further information or to be removed from the mailing list, and a resource card listing stillbirth support organizations, along with the phone number for the Suicide Prevention Hotline. The social media invitations included a description of the study, inclusion criteria, a link to the study survey, and the PI's contact information. We offered women three ways to participate: online, by mail, or over the phone. Our study survey was hosted by REDCap, an online platform which allows for electronic administration of surveys with data capture and data security for research studies.

The first page of the online survey was the eligibility screening. After completing the screening, all respondents saw a message thanking them for their interest and directing them to stillbirth support organizations and the Suicide Prevention Hotline, if needed. Ineligible respondents were informed that they were not eligible, and eligible respondents were directed to the informed consent. The following page began the data collection survey. Participants who completed the survey and chose to give their contact information were sent a $30 gift card and a handwritten thank-you note from the PI. The study was approved by the Institutional Review Board of Emory University (IRB00115909).

Measures

Our survey began with questions about sociodemographic characteristics and obstetric history, followed by screenings for substance use disorders and validated instruments to measure lifetime traumatic events, strong Black women belief, perceived social support, culturally relevant coping, depressive symptoms, anxiety, and post-traumatic stress symptoms (PTSS).

Sociodemographic and Clinical Covariates

Sociodemographic characteristics elicited by our survey included age, marital status, educational attainment, employment status, household income, and religious preference. We also screened for substance use disorders and asked participants about prior pregnancies (e.g., gestational age, outcome), details about the stillbirth (e.g., gestational age, time since stillbirth), and additional lifetime traumatic experiences.

Substance abuse disorders. We used the CAGE questionnaire (for alcoholism),[27] and the Drug Abuse Screening Test—10 item version (DAST-10).[28,29] The CAGE questionnaire is four "yes/no" questions (e.g., "Have you ever felt you should cut back on your drinking?"), and two or more "yes" answers is suspicious for an alcohol use disorder. The DAST-10 questionnaire has 10 "yes/no" questions (e.g., "Do you ever feel bad or guilty about your drug use?"), and each "yes" response scores one point (except one reverse-scored item). Higher scores indicate increasing consequences related to drug use, with scores ≥ 3 indicating likely drug abuse.[29,30]

Lifetime trauma. We used a modified version of the Life Stressors Checklist-Revised (LSC-R), a self-report measure of traumatic or stressful life events with a focus on events particularly relevant to women and mothers, such as sexual assault or having a child enter the foster system.[31,32] We selected 12 of the traumatic events from the 30 included on the LSC-R (e.g. "Have you even been mugged, robbed, or physically attacked [not sexually] by someone you did not know?") and asked participants whether they had experienced each event, and whether it was before or after the stillbirth. We also included a space to report unlisted traumatic events. Each endorsed event received one point, so the modified LSC-R scores could range from 0-13. We calculated overall scores, before-stillbirth scores, and after-stillbirth scores.

Strong Black Woman Belief

We measured SBW belief using the **Stereotypic Roles for Black Women Scale (SRBWS)**.[33] The full SRBWS is 34 questions answered on a Likert-type scale with answer choices ranging from 1 (Strongly Disagree) to 5 (Strongly Agree; e.g. "Black women have to be strong to survive."). The instrument is composed of four subscales: Mammy, Superwoman, Jezebel, and Sapphire. Each subscale score is calculated by taking the mean of the item scores on the subscale; thus, subscale scores range from 1-5. The SBW construct is measured with the Mammy and Superwoman subscales; the Jezebel and Sapphire subscales relate to stereotypes about Black women that are unrelated to the SBW construct. Thus, we chose to use the Mammy and Superwoman subscales, and to treat them as a single scale,[21-23,34] as recommended by the instrument developer.[35] The SRBWS has been used in research among Black women aged 18-65 years, including trauma survivors.[21-23,34,36] The Mammy and Superwoman subscales contain 16 items in total, with higher scores indicating stronger SBW belief. When used as one scale, the Mammy and Superwoman subscales have demonstrated good internal consistency reliability, with Cronbach's alpha .77 - .89.[21-23,34]

Perceived Social Support

Perceived social support was measured with the **Social Provisions Scale (SPS)**, a 24-item scale, with each item answered on a 4-point Likert-type scale with responses ranging from 1 (strongly disagree) to 4 (strongly agree; e.g., "There are people I can depend on to help me if I really need it").[37] Negatively-worded statements are reversed-scored. The SPS score is calculated by adding the item scores, with scores ranging from 24-96. Higher scores indicate more perceived social support. The scale has been used with a variety of populations including African American parents,[38] low-income mothers,[39] and mothers bereaved by stillbirth.[40] Cronbach's alphas .81 - .96 have been reported.

Culturally Relevant Coping Behaviors

We used the **Africultural Coping Systems Inventory (ACSI)** to measure culturally relevant coping behaviors. It was chosen because it was designed to reflect the coping behaviors typically exhibited by members of the African American/Black community.[26] In particular, Africultural coping tends to recognize the individual primarily as a member of a group, rather than mainly as an independent actor.[26] This orientation reveals itself in coping behaviors such as seeking connections with other members of the group, and engaging in spiritual and religious practices.[26] The ACSI is comprised of four subscales (30 total items), and all items are answered on a 4-point Likert-type scale with answer choices from 0 (Did not use) to 3 (Used a great deal). Higher subscale scores indicate greater reliance on each type of coping. Subscale scores are calculated by adding the item scores. Cognitive Emotional Debriefing (CED; 11 items, scores 0-33)) includes coping behaviors aimed at distraction or reappraising the significance of the problem (e.g., "Tried to forget about the situation"). Spiritual-Centered Coping (SCC; 8 items, scores 0-24) includes behaviors involving religion or spirituality (e.g., "Asked someone to pray for me"). Collective Coping (CC; 8 items, scores 0-24) includes behaviors involving other members of one's social group (e.g., "Shared my feelings with a friend or family member"). Ritual-Centered Coping (RCC; 3 items, scores 0-9) includes behaviors centered on rituals (e.g., "Lit a candle for strength or guidance in dealing with the problem"). The ACSI has been used with African American women of all ages, including trauma victims,[41] college students,[21,42] and general-population Black women.[43,44] Cronbach's alphas have been .80 - .90 for CED, .79 - .90 for SCC, .71 - .87 for CC, and .70 - .86 for RCC.

Depressive Symptoms and Anxiety

We used instruments from the Patient Reported Outcomes Measurement Information Systems (PROMIS) to measure depressive symptoms and anxiety. Both the **PROMIS Depression Short Form 8a**[45] and the **PROMIS Anxiety Short Form 8a**[46] consist of 8 items which assess the frequency of various symptoms of depression and anxiety during the past 7 days. Answer choices range from 1 (never) to 5 (always; e.g., "I felt worthless," "I felt fearful"), with higher scores indicating greater symptom burden during the past week. Scores are reported as T-scores, standardized scores with a mean of 50 and a standard deviation of 10.[45,46] For both instruments, a T-score of 60 ($\mu + 1SD$) is the suggested cut-point for symptoms suggestive of clinical diagnoses.[47,48] Both scales have been extensively tested with large groups of adults representative of the U.S. population, with Chronbach's alpha consistently > .90.[47-51]

Post-traumatic Stress

PTSS were measured using the **PTSD Checklist for DSM-5 (PCL-5)**.[52,53] The scale includes 20 items assessing how much the participant has been bothered by symptoms of post-traumatic stress in the past month. Items are answered on a 5-point Likert-type scale with answer choices ranging from 0 (not at all) to 4 (extremely bothered). Scores range from 0 – 80; higher scores indicate greater symptom severity. A score ≥ 33 is suggestive of a PTSD diagnosis. It has been used in a variety of populations, with Cronbach's alphas >.90 consistently reported.[52,54,55]

Data Analysis

We used descriptive statistics to characterize participants' sociodemographic and clinical characteristics, SBW belief, Africultural coping behaviors, perceived social support, and psychological distress symptoms. Spearman's rank-order correlation coefficients were used to examine bivariate associations between SBW belief and 1) perceived social support, 2) psychological distress, and c) Africultural coping behaviors. We also used Spearman's rank-

order correlation coefficients to examine bivariate associations between psychological distress symptoms and 1) Africultural coping behaviors and 2) perceived social support. We used multiple linear regression to examine the relative contributions of SBW belief, perceived social support, and Africultural coping behaviors on psychological distress symptoms, adjusting for sociodemographic and clinical covariates. We built separate models for depressive symptoms, anxiety, and PTSS, and selected the final models in two steps. First, we used stepwise selection to identify the most parsimonious model to explain the relative contributions of SBW belief, perceived social support, and Africultural coping behaviors to each measure of psychological distress. We then used stepwise selection to select which covariates to include in the final model. Candidates for inclusion were covariates which exhibited significant correlations ≥ 0.30 with any of the psychological distress measures. For all analyses, we used only cases with complete data for the included variables. We used IBM SPSS v 28 for all statistical analyses.

Results

Sample Characteristics

Our final sample included 91 women, with a mean age of 30 years (± 5.77; see Table 1 for participant characteristics). Eighty women (87.9%) provided complete demographic data, and 80 (87.9%) provided complete data for all validated instruments. Most women were currently married ($n = 38$, 42.7%) or living with a partner or significant other ($n = 18$, 20.2%). Most women were employed full time ($n = 39$; 43.3%) or part-time ($n = 16$; 17.8%), and 40 (44.4%) reported an annual household income of at least \$50,000. Nearly all ($n = 87$; 96.7%) were high school graduates, and 31 (34.4%) had earned at least a Bachelor's degree. Most women ($n = 54$; 60.7%) identified as Catholic, Protestant, or Other Christian, although 34 (38.2%) reported no

religious preference. The median number of traumatic events reported on the modified LSC-R was 2.0 (range 0-7).

Most women ($n = 47$; 58.0%) were living with at least one son, daughter, or step-child, and for those women, the median number of children in the household was 2 ($IQR = 1$). The median number of living biological children was 1 ($IQR = 2$), and 18 women (20.5%) were currently pregnant. More than one-third (37.9%) had not had a livebirth, and 9 of those (27.3%) were currently pregnant. For three women (3.3%), the time elapsed since the stillbirth was less than six months; for 31 (34.1%) it was 6-12 months; for 24 (26.4 %) it was 13-18 months; for 15 (16.5%) it was 19-24 months; for 9 (9.9%) it was 25-30 months, and for 9 (9.9%) it was 30-38 months. The median gestational age of the stillborn infants was 26.0 weeks ($IQR = 13$, range 20 – 40+). Nearly a third of our sample ($n = 27$; 30.0%) had attended, at least once, a support group for mothers bereaved by stillbirth.

Fifteen women (17.0%) scored ≥ 2 on the CAGE questionnaire, suggesting an alcohol use disorder. Six (6.8%) scored ≥ 3 on the DAST-10, suggesting drug abuse or dependence (range 0-10). Twenty-eight (35.0%) women's PROMIS depression T-scores suggested clinical depression, and 38 (47.5%) women's PROMIS anxiety scores suggested clinical anxiety. Twenty-eight (35.0%) women's PCL-5 scores were suggestive of PTSD.

Correlations With SBW Belief

A summary of the validated instrument scores is shown in Table 2. All Cronbach's alphas for this study were acceptable ($\geq .70$; see Table 2). We found positive associations between SBW belief and depression ($r_s = .36$, $p = .001$), anxiety ($r_s = .34$, $p = .002$), and PTSS ($r_s = .44$, $p < .001$). SBW belief was not significantly associated with perceived social support. We found that SBW belief was associated differently with different ACSI subscales. We found significant

negative associations with both spiritual-centered coping (r_s = -.26, p = .021) and collective coping (r_s = -.28, p = .012), but did not find a significant association with cognitive emotional debriefing or ritual-centered coping.

Correlations Among Perceived Social Support, Coping Behaviors, and Psychological Distress Symptoms

Associations with psychological distress symptoms. We found significant negative associations between perceived social support and depressive symptoms (r_s = -.52, p < .001), anxiety (r_s = -.29, p = .009), and PTSS (r_s = -.35, p = .002). There was a significant positive association between cognitive emotional debriefing and depressive symptoms (r_s = .30, p = .006), anxiety (r_s = .25, p = .025), and PTSS (r_s = .34, p = .002). Ritual-centered coping was significantly positively associated with PTSS (r_s = .23, p = .045). Neither spiritual-centered coping nor collective coping was significantly associated with any measures of psychological distress. We found significant positive associations among symptoms of depression, anxiety, and post-traumatic stress (r_s = .75 - .80; p < .01).

Perceived social support and Africultural coping behaviors. Perceived social support was positively associated with spiritual-centered coping (r_s = .23, p = .04), but not with any other measures of Africultural coping behaviors.

Sociodemographic and Clinical Covariates Correlated with Psychological Distress

Age was negatively associated with depressive symptoms (r_s = -.51, p < .01), anxiety (r_s = -.52, p < .01), and PTSS (r_s = -.48, p < .01). Education was negatively associated with depressive symptoms (r_s = -.22, p = .048). DAST scores were positively associated with depressive symptoms (r_s = .32, p < .01), anxiety (r_s = .32, p < .01), and PTSS (r_s = .34, p < .01). Overall modified LSC-R scores were positively associated with depressive symptoms (r_s = .32, p

$< .01$), anxiety ($r_s = .36$, $p < .01$), and PTSS ($r_s = .32$, $p < .01$). Neither marital status, gestational age of the stillborn infant, nor time since the stillbirth were significantly associated with any psychological distress symptoms.

Relative Contributions of SBW Belief, Coping, and Perceived social support to Psychological Distress

We built three linear regression models, one for each psychological distress outcome (scores on PROMIS Depression, PROMIS Anxiety, and PCL-5). For all three outcomes SRBWS score, SPS score, and collective coping score were selected for inclusion in the model at Step 1. Including variables at Step 1 which were excluded via stepwise selection resulted in decreased adjusted R^2. For all three outcomes, age and modified LSC-R score were selected for inclusion as covariates in the final models (Table 3). Increasing SBW belief, collective coping, and traumatic experiences predicted increasing symptoms of depression, anxiety, and post-traumatic stress. Conversely, increasing perceived social support and increasing age predicted decreasing symptoms of depression, anxiety, and post-traumatic stress (see Table 3 for coefficients and model summaries). Including DAST score at Step 2 (the variable excluded via stepwise selection) resulted in decreased adjusted R^2 for depression and anxiety scores, and a negligible R^2 increase ($< .01$) for PCL-5 score. Adjusted R^2 for all three final models exceeded 40% (depressive symptoms = 0.45; anxiety = 0.46; PTSS = 0.41).

Discussion

We conducted a cross-sectional study to examine the relationships among SBW belief, perceived social support, culturally relevant coping, and psychological distress symptoms (symptoms of depression, anxiety, and post-traumatic stress) in Black mothers bereaved by stillbirth. We found that SBW belief, cognitive emotional debriefing, number of traumatic life

events, and drug use for non-medical purposes were positively associated with all measures of psychological distress. Conversely, perceived social support and age were negatively associated with all measures of psychological distress. SBW belief was negatively associated with spiritual-centered coping and collective coping. SBW belief, collective coping, and perceived social support were the variables selected to predict psychological distress symptoms, controlling for age and other traumatic life events.

While existing research is replete with findings that various facets of social support improve psychological distress outcomes in a variety of traumatic experiences, the contribution of the SBW construct to those outcomes is just beginning to be explored. Our finding that SBW belief was positively associated with symptoms of depression, anxiety, and post-traumatic stress was similar to other studies.[19,21,22,25,34,56] We found a negative association between perceived social support and SBW belief of similar magnitude to previous work,[22] although the association was not statistically significant in our sample. The positive association between spiritual-centered coping and perceived social support suggests that spiritual and religious beliefs and practices may contribute to perceived social support in this group.

Our finding that cognitive emotional debriefing, behaviors aimed at distraction or reappraisal of a stressful problem (e.g., "Tried to forget about the problem"), was positively associated with all three types of psychological distress symptoms suggests that these coping strategies may worsen psychological distress in this group. The association with PTSS is complicated, however, by the similarity in some of the cognitive emotional debriefing subscale items and the items on the PCL-5 assessing avoidant behaviors typically observed in trauma survivors (e.g., "Avoiding memories, thoughts, or feelings related to the stressful experience"). Thus, the association between PTSS and cognitive emotional debriefing in our sample may be

partially caused by confounding of coping behaviors with avoidant PTSS. This association warrants further study, therefore. It is important that culturally relevant coping behaviors not be pathologized as symptoms of post-traumatic stress. It is equally important that Black women struggling with stillbirth-related PTSS have access to appropriate and culturally acceptable support and treatment.

Our finding that none of the coping subscales was negatively associated with psychological distress symptoms warrants further consideration. Although it is possible that our participants did not use coping behaviors which mitigated psychological distress, it is more likely that our study survey failed to capture the range of coping behaviors used by our sample. We purposely chose a culturally relevant coping scale, but it may be that any coping behaviors preferred by participants with lower symptom burden were not represented on this scale. The ACSI has rarely been used in studies of Black adults who experienced trauma. However, in a recent study of Black women who had experienced recent trauma, Watson-Singleton and colleagues {, 2020 #1258} found the instrument performed better in a two-factor model than the four-factor model which was optimal in the initial validation studies. This psychometric difference suggests the ACSI may perform differently for women following trauma compared to other groups of Black adults. Given that the coping behaviors our survey assessed did not predict decreasing symptom burden, the relationship between coping behaviors and psychological distress symptoms warrants further study.

It is significant that the only instrument score which was negatively associated with psychological distress symptoms was the SPS which measures perceived social support, the subjective feelings of connection with others. This finding is highlights the importance of perceived social support in healing and recovery from a traumatic loss such as stillbirth. The lack

of negative association between collective coping and psychological distress symptoms suggests that it is the perception of social support, rather than the active engagement in social support activities, which is important for reduced psychological distress symptoms. This distinction is more salient since, coincidentally, our data collection occurred during the first ten months of the Covid-19 pandemic. Thus, our participants were living through a time of increased isolation, uncertainty, and fear.[57] Perceived social support was still protective against psychological distress symptoms despite participants' inability to participate in normal social activities and interactions. We cannot speculate as to whether our participants' psychological distress symptoms would have been different if we had collected data at a different time, but the relationships (or lack thereof) among psychological distress symptoms, perceived social support, and collective coping may be helpful in focusing efforts to assist Black women and their families in building social support networks effective in mitigating psychological distress outcomes following traumatic loss such as stillbirth. Specifically, social support-building activities which address perceived social support may be most helpful for these women. These relationships offer a promising avenue for further study.

The standardized coefficients in our regression analyses indicated that, after controlling for age and other traumatic experiences, perceived social support was the strongest predictor of a lack of depressive symptoms, and the use of collective coping strategies was the strongest predictor of both anxiety and PTSD symptoms. These findings suggest that high perceived social support and the use of protective coping strategies are important for this group in mitigating the risk of psychological distress after stillbirth. Although SBW belief demonstrated a smaller contribution to psychological distress outcomes, it remains important that it was selected for inclusion in the regression models for all three psychological distress outcomes. Given the

relatively recent inclusion of SBW belief in studies examining Black women's psychological distress,[19-22,25,34,36,56] little is known about mechanisms by which SBW belief may contribute to Black women's psychological distress symptoms, or what unrecognized variable may contribute to both SBW belief and psychological distress symptoms. Further research is needed to investigate the relationship between SBW belief and psychological distress, particularly to assist the development of culturally appropriate interventions to mitigate psychological distress in this group.

Limitations

Our study is limited by the relatively small sample size, the convenience sampling, and by significant differences between our sample and the population of Black women who experienced a stillbirth nationally. Specifically, our sample size of 91 may have been too small to reveal associations among variables, leading to the possibility of a Type II error. Second, our sampling frame was limited to women who consented to have RG contact them post-stillbirth, and of this group, we do not know whether those who chose to participate differed systematically from those who did not. Finally, compared to the population of Black women experiencing stillbirth in the Unites States, our sample was older (30 years of age vs. 28) and of higher socioeconomic status (34% with bachelor's degrees vs. 13%).[58] This may be because we relied on mailing addresses collected 6 months to 3 years prior to study recruitment, and women of higher socioeconomic status were more likely to live at the same address. This may also be because RG partners with many large, tertiary hospitals serving relatively affluent areas, although we could not identify which hospitals served the specific members of our sample.

Implications for Practice and Research

Our findings highlight the importance of focusing on women's family and social support systems in providing care following stillbirth. Although the bereaved mother is the patient, healthcare providers can be instrumental in including patients' partners, sisters, mothers, and other important people in memory-making, information-sharing, and planning for discharge and future care. Our finding that the awareness of available social support (i.e., perception) is an independent predictor of reduced future psychological distress symptoms, apart from any active efforts to engage available support, is important for healthcare providers to understand. It means that efforts towards helping bereaved mothers increase their awareness of available support people and networks may be beneficial even if there is no concrete action or plan to activate those resources.

Our findings that culturally relevant coping behaviors and SBW belief are also important in predicting the burden of stillbirth-related psychological distress symptoms can aid in the development of culturally appropriate and accessible interventions to mitigate those symptoms in this group. Further research is needed, however, to understand which coping behaviors can help mitigate psychological distress symptoms both short- and long-term, and for what period of time they may be constructive following a traumatic loss such as stillbirth. Additionally, more research is needed to investigate several relevant aspects of perceived social support for this group, specifically, what relationships and activities contribute to the perception of social support, and what interventions can help optimize women's social support resources. Finally, more research is needed to understand how the SBW construct may be used to develop culturally appropriate interventions to help Black women optimize their coping strategies and social support to mitigate their psychological distress symptoms following stillbirth. To date, research using the SBW construct is mainly descriptive, but the strength of SBW belief and the

widespread recognition of the construct for Black women suggest it may be useful in designing culturally based interventions for this group.[59]

Not only the content, but the delivery of these interventions must be acceptable for this group. For example, Black women often find that other Black women are able to offer the most helpful support after a stillbirth, and a lack of Black healthcare providers can hamper efforts at providing support for this group.[60] These findings suggest Black women may be most comfortable with an intervention delivered by other Black women. Additionally, given many Black women's preference for coping with stillbirth-related grief privately and the stigma that may be attached to help-seeking following a loss such as stillbirth, information about support options should be made readily accessible to them rather than requiring efforts to locate support options.[5,60] Finally, practical accessibility concerns such as transportation to and from an intervention location, associated costs, convenient scheduling, and childcare for other children must always be part of the planning and delivery of such interventions.[14]

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Table 1. *Participant Characteristics (*N *= 91)*

Characteristic	*n* (%)
Age, *M* (*SD*) (range)	30.43 (5.77) (19-43)
Current marital status	
Currently married	38 (42.7)
Living with partner or significant other	18 (20.2)
Not married or living with partner or significant other	33 (37.1)
Current employment status	
Full-time	39 (43.3)
Part-time	16 (17.8)
Unemployed or disabled	35 (38.9)
Gross annual household income	
Under $20,000	24 (26.7)
$20,000 – 49,999	26 (28.9)
$50,000 and over	40 (44.4)
Educational attainment	
Grade school	3 (3.3)
High school	36 (40.0)
Associate degree	20 (22.2)
Bachelor's degree or higher	31 (34.4)
Religious preference	
None	34 (38.2)
Catholic, Protestant, or other Christian	54 (60.7)
Muslim	1 (1.1)
CAGE score ≥ 2	15 (17.0)

Table 1, cont.

Characteristic	*n* (%)
DAST score 3+	6 (6.8)
Life Stressors Checklist score, *Mdn* (*IQR*) (range)	2.0 (3.0) (0 - 7)
Life stressors prior to stillbirth, *Mdn* (*IQR*) (range)	1.5 (3.0) (0 - 7)
Life stressors after stillbirth, *Mdn* (*IQR*) (range)	0.0 (1.0) (0 - 5)
Living with a son, daughter, or step-child	47 (58.0)
If living with a child, number of sons, daughters, or step-children in household, *Mdn* (*IQR*)(Range)	2 (1) (1-7)
Number of living children, *Mdn* (*IQR*) (Range)	1.0 (2.0) (0-7)
Currently pregnant	18 (20.5)
No history of live birth	33 (37.9)
No history of live birth, currently pregnant	9 (27.3)
Time since stillbirth, in months	
< 6	3 (3.3)
6-12	31 (34.1)
13-18	24 (26.4)
19-24	15 (16.5)
25-30	9 (9.9)
31-38	9 (9.9)
Gestational age of stillbirth in weeks, *Mdn* (*IQR*) (Range)	26.00 (13) (20 – 42+)
Attended a stillbirth support group	27 (30.0)
Depression T-score ≥ 60	28 (35.0)
Anxiety T-score ≥ 60	38 (47.5)
PCL-5 score ≥ 33	28 (35.0)

Table 2. *Instrument Scores and Bivariate Correlations*

Instrument	Instrument Score *Mdn* (*IQR*) (Range)	Cronbach's Alpha	Spearman's Rank-Order Correlation Coefficients								
			1	2	3	4	5	6	7	8	9
1. SRBWS	3.59 (0.88) (1.13 - 4.63)	.88	1.0								
2. SPS	77.00 (16.75) (47 - 96)	.93	-.144	1.0							
3. ACSI: CED	13.50 (8.50) (0 - 24)	.77	.176	-.189	1.0						
4. ACSI: CC	10.00 (5.75) (0 - 20)	.71	-.279*	.220	.394**	1.0					
5. ACSI: SCC	12.00 (8.00) (0 - 23)	.82	-.257*	.226*	.260*	.532**	1.0				
6. ACSI: RCC	1.00 (3.00) (0 - 9)	.70	-.041	-.121	.324**	.467**	.350**	1.0			
7. Depression	55.03 (15.28) (38.2 – 81.3)	.95	.357**	-.515**	.302**	.095	.011	.209	1.0		
8. Anxiety	59.4 (11.40) (37.1 – 78.2)	.93	.339**	-.292**	.251*	.216	.067	.216	.801**	1.0	
9. PCL-5	20.00 (31.75) (0 - 62)	.95	.441**	-.349**	.348**	.107	.000	.225*	.749**	.752**	1.0

*Significant at < .05; **Significant at < .01

SRBWS = Stereotypic Roles for Black Women Scale; SPS = Social Provisions Scale; ACSI = Africultural Coping Systems Inventory;

CED = Cognitive Emotional Debriefing; CC = Collective Coping; SCC = Spiritual Centered Coping; RCC = Ritual Centered Coping;

PCL-5 = PTSD Checklist for DSM5

Table 3. *Summary of Linear Regression Models for Symptoms of Depression, Anxiety, and Post-traumatic Stress (*N = *80)*

	Depressive Symptoms					
	Step 1			**Step 2**		
	F statistic = 14.17, *p* < .001			**F statistic = 14.12, *p* < .001**		
	Adj. *R²* = .34; df = 3, 78			**Adj. *R²* = .46; df = 5, 78**		
	B (SE) (95% CI)	**β[a]**	***p***	**B (SE) (95% CI)**	**β[a]**	***p***
(Constant)	69.15 (8.69) (51.84, 86.46)		< .001	76.36 (8.82) (58.77, 93.95)		< .001
SRBWS	4.03 (1.41) (1.22, 6.84)	.27	.01	2.89 (1.31) (.28, 5.49)	.20	.03
SPS	-.45 (.08) (-.62, -.29)	-.51	< .001	-.36 (.08) (-.53, -.20)	-.41	< .001
ACSI CC	.70 (.23) (.25, .1.15)	.30	< .01	.62 (.21) (.21, 1.03)	.27	< .01
Age				-.42 (.16) (-.75, -.10)	-.24	.01
LSC-R (modified)				1.45 (.45) (.55, 2.36)	.27	< .01

	Anxiety Symptoms					
	Step 1			**Step 2**		
	***F* statistic = 11.38; *p* < .001**			***F* statistic = 13.85; *p* < .001**		
	Adj. *R²* = .29; *df* = 3, 78			**Adj. *R²* = .45; *df* = 5, 78**		
	B (SE) (95% CI)	**β[a]**	***p***	**B (SE) (95% CI)**	**β[a]**	***p***
(Constant)	51.69 (8.70) (34.37, 69.01)		< .001	63.10 (8.55) (46.05, 80.13)		< .001
SRBWS	4.81 (1.41) (2.00, 7.62)	.34	.001	3.46 (1.27) (.94, 5.98)	.24	< .01
SPS	-.27 (.08) (-.43, -.10)	-.31	< .01	-.14 (.08) (-.30, .02)	-.17	.08
ACSI CC	1.03 (.23) (.58, 1.47)	.27	< .001	.91 (.20) (.51, 1.31)	.41	< .001
Age				-.59 (.16) (-.91, -.27)	-.34	< .001
LSC-R (modified)				1.30 (.44) (.42, 2.17)	.25	< .01

Table 3, cont.

	PTSD Symptoms					
	Step 1			**Step 2**		
	F statistic = 13.02; *p* < .001			**F statistic = 11.89; *p* < .001**		
	Adjusted R^2 = .32; *df* = 3, 78			**Adjusted R^2 = .41; *df* = 5, 78**		
	B (SE) (95% CI)	**β[a]**	***p***	**B (SE) (95% CI)**	**β[a]**	***p***
(Constant)	28.36 (15.48) (-2.47, 59.19)		.08	41.53 (16.12) (9.40, 73.67)		.01
SRBWS	9.02 (2.51) (4.01, 14.02)	.35	< .001	7.15 (2.39) (2.40, 11.91)	.28	< .01
SPS	-.64 (.15) (-.94, -.35)	-.42	< .001	-.49 (.15) (-.79, -.19)	-.32	< .01
ACSI CC	1.51 (.40) (.71, 2.3)	.37	< .001	1.36 (.38) (.61, 2.11)	.34	< .001
Age				-.73 (.30) (-1.33, -.13)	-.24	.02
LSC-R (modified)				2.16 (.83) (.51, 3.81)	.23	.01

df = degrees of freedom; SE = standard error; CI = confidence interval

[a]standardized coefficients

SRBWS = Stereotypic Roles for Black Women Scale; SPS = Social Provisions Scale;

ACSI CC = Africultural Coping Systems Inventory, Collective Coping;

LSC-R = Life Stressors Checklist—Revised