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Relationships Among Strong Black Woman Belief, Culturally Relevant Coping Behaviors, Perceived Social Support, and Psychological Distress Symptoms for Black Mothers After Stillbirth

By
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Doctor of Philosophy

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Relationships Among Strong Black Woman Belief, Culturally Relevant Coping Behaviors, Perceived Social Support, and Psychological Distress Symptoms for Black Mothers After Stillbirth

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An abstract of

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Abstract

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By Carrie J. Henry

Psychological distress symptoms (depression, anxiety, and post-traumatic stress) are common following stillbirth. Black women are less likely to seek support than White women after stillbirth, consistent with the Strong Black Women (SBW) construct, which instructs Black women to tolerate stress and trauma independently. Black women are underrepresented in healthcare research, despite being more likely than White women to suffer negative health outcomes and trauma. We conducted a cross-sectional study to examine the relative contributions of SBW belief, perceived social support, and culturally relevant coping behaviors to psychological distress symptoms in Black mothers bereaved by stillbirth. We also investigated differences between Black women recruited via mail vs. social media. We used mailed letters and social media posts to recruit 91 Black women who had a stillbirth in the three years prior to study participation. Our online survey measured SBW belief, culturally relevant coping behaviors, perceived social support, and psychological distress symptoms along with sociodemographics, pregnancy history, and stillbirth characteristics. We compared participants recruited via mail vs. social media for age, marital status, education, employment, income, gestational age of stillbirth, and time since stillbirth. We used stepwise selection in linear regression to determine the relative contributions of SBW belief, perceived social support, and culturally relevant coping behaviors to measures of psychological distress symptoms. Participants recruited via mail were more likely to report annual household income ≥$50,000, but otherwise were similar to those recruited via social media. Increasing SBW belief and collective coping (coping behaviors involving other people), and decreasing perceived social support predicted increases in all three measures of psychological distress symptoms, controlling for age and other traumatic events. It may be important to include SBW belief, perceived social support, and culturally relevant coping behaviors in interventions to mitigate psychological distress for Black mothers after stillbirth.

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Introductory Literature Review

Black Mothers Experience Significantly Higher Risk of Stillbirth

Stillbirth, the death of a fetus after 20 weeks gestation,[1] is one of the most devastating experiences mothers can endure.[2] Black mothers in the U.S. experience a stillbirth rate similar to mothers in Vietnam and Jordan, double the rate of their White counterparts (1%; 0.5% for Whites; 0.7% for Native Americans).[3] Despite giving birth to only 16% of the babies, in the U.S., Black mothers experience 29% of the stillbirths (approximately 7,000 annually).[3] These statistics have not changed in over a decade.[3] Moreover, experiencing one stillbirth increases the likelihood of another, increasing Black mothers' risk of a second stillbirth as much as ten-fold.[4]

Long-Term Consequences of Stillbirth

Stillbirth carries significant long-term psychological and psychosocial consequences for mothers, including symptoms of depression, post-traumatic stress, and anxiety; relationship breakdown; substance abuse; suicidal ideation; and suicide attempts.[2,5-9] The increase in psychological distress symptoms, such as symptoms of depression, anxiety, and post-traumatic stress disorder (PTSD), for mothers following stillbirth is well-established. A recent systematic review found that 77% of studies reported an increase in psychological distress symptoms following stillbirth.[5] This increase in symptoms can last for years. Studies report over 50% of mothers bereaved by stillbirth screen positive for depression, even when the time since loss has been considerable (up to 18 years).[10-13] Huberty and colleagues[13] reported that during the first year post-loss, the rate of depression could be as high as 80%. Others reported mothers bereaved by stillbirth suffer a 2-4-fold increase in depressive symptoms.[14] Two studies found 12-13% of mothers exhibited post-traumatic stress symptoms significant enough to suggest PTSD 5-18 years after a stillbirth.[7,8] Substance abuse is increased following stillbirth, as well as divorce or separation from an intimate partner.[5,6]

Black Mothers' Coping Behaviors Following Stillbirth

To date, most studies of mothers bereaved by stillbirth do not include race-specific data. However, studies of mothers bereaved of children for various reasons (e.g. childhood cancer) show Black mothers may be more likely to experience depressive symptoms, and may be more likely to turn to drugs and alcohol to cope with the loss.[15] In addition, Black mothers are more likely to suffer from multiple devastating losses within a relatively short period of time, compounding any difficulties coping, and perhaps increasing the chances of significant psychological distress.[15] After the loss of a baby during pregnancy, Black mothers, similar to their White counterparts, report social support is crucial in their healing, but their sources of support following a traumatic loss such as stillbirth vary. While White mothers typically cite the baby's father as their primary support person, Black mothers are more likely to turn to their own mothers.[15] Additionally, while White mothers often list their healthcare providers as sources of support, Black mothers rarely do; rather, they are more likely to report ill treatment from their healthcare providers.[15] Although support group involvement has been shown to decrease psychological symptoms, Black mothers are unlikely to attend, citing discomfort with the mostly-White attendees as well as cultural pressure to manage their grief without needing external help.[16,17] Instead, Black mothers tend to emphasize solitude and silence, religious or spiritual practices, and talking with a few close friends or family.[15,16,18] These findings suggest that what White mothers find helpful to cope after stillbirth may not be helpful or available for Black women. Moreover, currently-available treatments for stillbirth-related psychological distress may not be appropriate or culturally sensitive for Black mothers. Given their higher stillbirth risk and higher burden of negative psychological symptoms, effective interventions for this group are urgently needed.

Strong Black Woman Construct

The strong Black woman (SBW) construct[19,20] is a culturally specific and multidimensional construct internalized by many Black women as an imperative prescription for living life as a Black woman. The SBW construct includes the imperative to "be strong," avoiding emotional displays and handling whatever happens with fortitude and dignity.[20-23] Many Black women report tremendous pressure to live up to the examples of their mothers, grandmothers, and foremothers, who endured stress and trauma without asking for help and without pausing to care for themselves.[19,20,23-26] Some Black women identify this imperative of strength as a stumbling block to accepting help from anyone, especially mental healthcare providers.[24,27,28] Instead, when faced with stress and trauma, they aspire to draw on their own internal resources, supplemented by religious and spiritual activities.[21,22,24,27] Besides the pressure to manage their own needs independently, living up to the SBW construct requires Black women to care for others in their families and communities as well, even if that means neglecting their own needs.[20-23,29,30] SBW belief (the belief that Black women must conform to the SBW construct), then, may give many Black women multiple reasons to avoid seeking treatment for psychological symptoms: seeking out or accepting help would indicate weakness rather than strength, and it may interfere with other caretaking responsibilities.[31]

Black women trace the development of the SBW construct to the history of racial oppression in the U.S., and they trace their personal SBW belief to their observations of the other women in their families, their personal histories of coping with difficulties, and their spiritual values.[24,30] One study among Black college students suggests that SBW could serve as a source of the courage, self-reliance and self-esteem necessary to pursue important goals, such as college

education.[26] Conversely, many Black women have held the SBW construct responsible for negative consequences such as relationship strain (especially with intimate partners), unhealthy stress behaviors (e.g. overeating), and psychological distress symptoms (e.g., symptoms of anxiety and depression).[20,24,30] Many cite the SBW construct as an ideal they are working to achieve and finding overwhelming.[20,26,29]

Relationships Among SBW, Coping Behaviors, Perceived Social Support, and Psychological Distress Symptoms in Black Women

SBW belief has consistently been positively associated with psychological distress (e.g., symptoms of depression, anxiety, stress, and post-traumatic stress).[32-40] SBW belief has also been associated with lower perceived social support in a sample where perceived social support was negatively correlated with psychological distress symptoms (anxiety and depressive symptoms).[34] SBW belief has been found to strengthen the relationships between depressive symptoms and suicidality,[38] and between stress and psychological distress symptoms (depression and anxiety).[41]

The relationship between SBW belief and coping behaviors has been examined on a few occasions. Jones and colleagues[35] found that the relationship between SBW belief and depressive symptoms was mediated by disengagement coping, but not by social support coping (coping behaviors centered on the activation of social support networks). Liao and colleagues[40] found SBW belief was positively associated with spiritual-centered coping (behaviors focused on spiritual and religious practices) and collective coping (behaviors involving social activities with other people), but that collective coping did not mediate the relationship between SBW belief and symptoms of depression and anxiety.[40] These findings suggest that despite the negative association between perceived social support and psychological distress symptoms, and the

negative association between SBW belief and perceived social support, the positive correlation between SBW belief and psychological distress may not be mediated by coping behaviors aimed at mobilizing one's social support network. SBW belief has not yet been studied in the context of bereavement. Additionally, the variation in age and education in these studies was limited, and sociodemographic characteristics (e.g. age, income, education) have failed to correlate with strength of SBW belief.[36,41]

Conclusion and Conceptual Framework

Our study was designed to address a significant knowledge gap in perinatal palliative care of Black mothers who experience stillbirth. Findings from this study will inform future research to develop interventions to prevent or mitigate poor bereavement outcomes. Despite the burden of poor psychological and psychosocial outcomes for Black mothers who have experienced stillbirth, little is known about what contributes to their worse outcomes (relative to their White counterparts), what unmet needs they have, and how ill-coping behaviors and adverse bereavement outcomes can be reduced or prevented. It is likely SBW belief contributes to the coping behaviors exhibited by this group, but this has not yet been studied among bereaved Black mothers. Therefore, the purposes of this cross-sectional descriptive study of Black mothers bereaved by stillbirth were to describe their coping behaviors and psychological distress symptoms and to examine the mechanisms by which their adoption of SBW belief promotes or hinders constructive coping (see Figure 1). The specific aims were to:

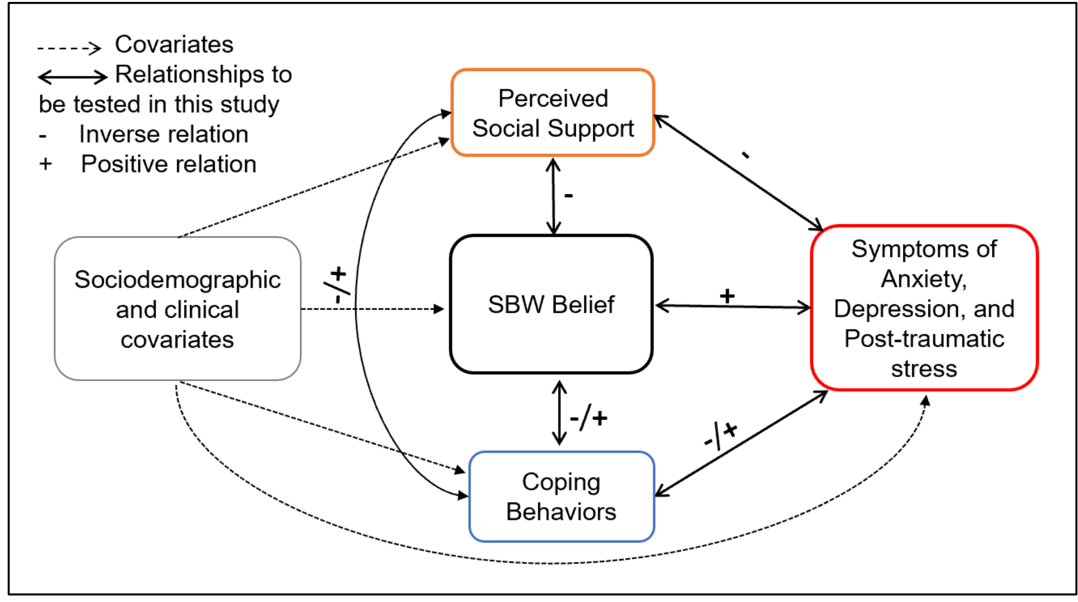
1. Characterize SBW belief, coping behaviors, social support, and psychological distress symptoms (symptoms of depression, anxiety, and post-traumatic stress) following stillbirth among a sample of 100 Black mothers bereaved by stillbirth.

2. Examine bivariate associations between SBW belief and, (a) psychological distress symptoms, (b) social support and (c) coping behaviors, within the study sample. Examine bivariate associations between psychological distress symptoms and a) coping behaviors and b) social support.
3. Examine the relative contributions of SBW belief, social support, and coping behaviors on psychological distress symptoms following stillbirths within the study sample, after adjusting for sociodemographic and clinical covariates.

At the time we proposed this study, Liao and colleagues[40] had not yet published their finding that SBW belief was positively associated with both spiritual-centered coping and collective coping. Therefore, based on the available literature at the time of our study proposal, we hypothesized that:

1. SBW belief would be positively correlated with psychological distress symptoms, and inversely correlated with perceived social support.
2. SBW belief would be positively correlated with coping behaviors involving spirituality and ritual, and negatively correlated with coping behaviors involving social activities and relationships with other people.

Figure 1. Conceptual Framework of the Study



Paper 1

Use of the Strong Black Woman Construct in Research: An Integrative Review

Abstract

Although the strong Black woman (SBW) construct has been used to study Black women's coping with hardship, the extent of its use in research is unknown. We searched for data-based articles which mentioned SBW and examined topical areas of investigation, health outcomes and other constructs associated with SBW, and methods used to assess SBW. The search yielded 47 articles. SBW was used to study coping with trauma (n = 11) or perceived offense (n = 10), or engaging in health-seeking behaviors (n = 10). Eighteen studies suggested that SBW was linked to several major health conditions (e.g., hypertension, obesity, heart disease), and depressive and anxiety symptoms. SBW was positively correlated with undesirable coping behaviors (e.g., self-silencing, maladaptive perfectionism) and negatively associated with self-compassion and help-seeking. The most common method of assessing SBW was using a structured questionnaire (n = 21). Our review revealed that longitudinal studies which can go beyond correlations to examine the impact of SBW belief on Black women's coping with hardship were lacking.

Introduction

The strong Black woman (SBW) construct describes Black women's tendency to feel pressured to live up to an image of the "strong Black woman," who endures adversity with grace and composure.[21,30,42] First described by Michele Wallace in her book, *Black Macho and the Myth of the Superwoman,*[43] SBW has been used to help researchers examine how Black women respond to stressful and traumatic events and circumstances (e.g., racism and sexism).[31,44] Research has shown that this SBW belief (the belief that Black women must conform to SBW) stems from watching their mothers and grandmothers manage hardship and sacrifice without asking for help or pausing to care for themselves.[20,42]

Although researchers have used SBW as a guiding construct for their studies, the extent of the use of SBW in research is largely unknown. Specifically, (1) What Black women's experiences has SBW been used to investigate? (2) What health outcomes have been associated with SBW? (3) What other constructs (e.g., social support) have been found to be associated with SBW? And (4) How has SBW been assessed in research studies? We conducted an integrative review to answer those questions. Understanding the uses of SBW in research will assist researchers in designing future studies to examine Black women's coping with hardship and health challenges.

Materials and Methods

Literature Search

With the assistance of an experienced librarian, we searched PubMed, Embase, and PsychInfo using combinations of "strong Black woman," "strong Black womanhood," "superwoman," "super woman," "African-American," "African American," "Black," "schema," "construct," "framework," "imperative," "ideal," and "model." Inclusion criteria were articles

that were (1) study reports in which the SBW construct was mentioned, (2) published in peer-reviewed journals, and (3) written in English. The searches returned 97 articles. After screening, the final sample included 47 articles (See Figure 1). We did not conduct quality assessment of the included studies because our purpose was to assess the scope of the SBW use and thus the designs of the included studies were diverse.

Data Abstraction

We extracted each study's purpose, methods, and findings and then determined the purpose of each study by noting what experiences of Black women or what phenomenon the construct was used to study (e.g., breastfeeding difficulties or intimate partner violence), what health conditions or outcomes have been associated with the construct (e.g., depression or binge eating), and what relationships have been found between SBW and other constructs (e.g., social support). Finally, we examined how the SBW construct has been assessed in studies (e.g., with a survey instrument or semi-structured qualitative interviews). We examined similarities and differences in the extracted information across studies. For studies which examined the SBW construct with qualitative methods (e.g., focus groups), we categorized the study findings (e.g. which experience of Black women was being examined), combining similar categories as appropriate. For studies which used quantitative measures (e.g., structured questionnaires) of the SBW construct, we recorded the type of association (e.g., positive or negative, if there was a significant relationship) between the SBW construct and others, and how the SBW construct was treated in the analysis (e.g., mediator or moderator).

Results

Sample Characteristics

Of the 47 articles (see Table 1), 20 (42%)[19-25,28,29,31,42,44-51] were qualitative studies that used focus groups, in-depth individual interviews, open-ended questions in online surveys, or blog and magazine articles. Nineteen articles (40%)[32-34,36-41,52-61] were survey studies. Four studies (9%)[30,62-64] used a mixed-methods design, and four (9%)[65-68] were studies to develop an instrument to measure SBW belief.

Most studies (n = 32, 62%) included a wide age range ≥ 20 years (often young adult to elderly), while nine studies (19%)[32,42,48,53,56-58,60] focused on adolescents (ages 12-18), young women (age 17-30, or mean age 19-22), or women in their childbearing years (ages 18-40), depending on the phenomenon of interest.

Data Synthesis

Experiences the SBW Construct was Used to Study

In twelve studies (26%), the SBW construct was used to examine Black women's coping with traumatic or stressful experiences (e.g., domestic violence), balancing the competing demands of everyday life, and raising adolescent daughters.[21,29,37,41,44,50,51,58,61-64] Those studies suggested that Black women with strong SBW belief tended to take on extraordinary responsibilities, believing they must "do it all," handling the multiple demands on their time and energy independently, often leading to ambivalence, stress, and physical symptoms such as poor sleep and depressive symptoms.[21,41,44,46,58] For example, Monterrosa[50] found that with SBW, Black women rationalized their tolerance for domestic violence rather than seeking legal protection from the law enforcement system. Black women may consider "strength" to be an integral part of womanhood[51] and may believe they must cope independently, eschewing help, when they face challenges such as physical disabilities.[62] Oshin & Milan[63] and Ramirez and

colleagues[64] suggested that for Black mothers, the SBW construct seems to provide a parenting "curriculum," dictating the skills and traits they want to instill in their adolescent daughters.

In eleven studies (23%), the SBW construct was used to examine Black women's coping with perceived offense, often attributed to racial insensitivity, discrimination, or stereotypical expectations of Black women.[31,37,39,44,48,52,55,57,59,65,66] These studies suggested that in response to such stressful experiences, Black women may consciously alter their behaviors, such as "putting on" the strong Black woman, as a way to muster self-control to avoid responding emotionally,[37,44,48,65] or get together with other Black women to encourage one another in their strong Black woman status.[55] Unfortunately, these coping strategies may not prevent the development of psychological distress symptoms, or the use of alcohol and drugs to cope with the stress.[57]

Another ten studies (21%) examined Black women's health-seeking behaviors, suggesting that SBW belief might serve as a barrier for seeking treatment for troublesome symptoms, choosing healthy coping behaviors, or scheduling routine health screenings.[24,28,31,33,36,38,42,45,47,49] That is, SBW belief may contribute to Black women believing that they are exhibiting weakness or selfishness by taking care of personal health needs, and thus they try to manage their symptoms alone.[24,31,33,42,45,47] Moreover, the emotional suppression and invulnerability imposed by SBW belief may also discourage Black women from disclosing physical or mental symptoms to healthcare providers.[24,28,31,47] Instead, they may pursue unhealthy coping behaviors such as overeating.[36]

Four studies (9%) examined the relationships of SBW belief to Black women's consumption of various types of media, including watching movies and TV (general audience and Black-oriented), spending time on social media sites, and using Black-oriented hashtags on

social media sites.[53,54,56,60] But those studies found inconsistent associations between SBW belief and media consumption.

Health Conditions or Health Outcomes Associated with SBW

Nineteen studies (40%; 6 qualitative and 13 quantitative) investigated links between SBW belief and various health conditions. Some studies[19,20,26,30,46,49] found that many Black women attributed a variety of health conditions to SBW belief, including hypertension, obesity, heart disease, digestive difficulties, sleep disturbances, breastfeeding complications, anxiety. In these studies, participants explained that the stress of adhering to the SBW led to unhealthy behaviors (e.g., overeating), "nervous breakdowns," and the failure to recognize symptoms needing medical attention. Health problems (e.g., obesity, depression) thus go unrecognized and untreated, leading to unnecessary suffering and early death.

In other studies, SBW belief demonstrated weak or moderate correlations with eating for emotional reasons ($r = 0.22$),[36] using food or substances to cope with stress ($r = 0.21$ and $r = 0.24$),[52,57] insomnia ($r = 0.36$),[58] perceived stress ($r = 0.38 – 0.43$),[37,58,59] and psychological distress including depressive and anxiety symptoms, and loneliness ($r = 0.11 – 0.60$).[32-34,38-40,57,60] In contrast to other included studies,[41] found no association between SBW belief and depressive and anxiety symptoms. The relationship between SBW belief and psychological distress (anxiety, depressive symptoms, and loneliness) was mediated by self-silencing,[32] maladaptive perfectionism,[40] collective coping (highly social coping behaviors), self-compassion, and social support.[40] Psychological distress, in turn, mediated the relationship between SBW belief and the use of drugs and alcohol.[57] The relationship between SBW belief and eating for emotional reasons was mediated by emotional inhibition and emotional regulation difficulties.[36] The relationship between SBW belief and stress was moderated by racial stress.[37] The relationship

between SBW belief and psychological distress was not moderated by the use of Black-oriented hashtags on social media,[60] nor by help-seeking attitudes.[33]

SBW belief was found to be a mediator or moderator in other primary relationships on a few occasions. SBW belief strengthened the relationship between depressive symptoms and both suicidality and stress,[38,41] but did not moderate the relationship between racial tension and stress among college students.[59] It was found to mediate the relationship between experiencing racial microaggressions and psychological distress.[39] Allen and colleagues[52] investigated whether four aspects of SBW belief (the obligation to help others, the intense motivation to succeed, the obligation to present an image of strength, and the obligation to suppress emotions) moderated the relationship between racial discrimination and allostatic load. They found that the obligation to help others and the intense motivation to succeed exacerbated the relationship, and the obligations to present an image of strength and to suppress emotions were protective against increasing allostatic load.[52] However, because those studies used a concurrent correlational design, the causal relationships between SBW and health outcomes were not demonstrated.

Other Constructs Associated with SBW Belief

SBW belief demonstrated small to moderate correlations (r = 0.26 – 0.50) with many undesirable emotions and responses, such as self-silencing,[32,36] emotional inhibition,[36] emotional regulation difficulties,[36] maladaptive perfectionism,[40] perceived racial discrimination or tension,[52,59] and shifting (self-altering behaviors, particularly in response to anticipated or perceived discrimination).[65] In other studies, SBW belief was negatively correlated (r = -0.25 - -0.50) with self-compassion,[40] self-esteem,[67] and help-seeking attitudes.[33] There were no longitudinal studies to demonstrate causal relationships. Two studies (4%) found weak correlations (a mix of positive and negative; r = -0.08 - 0.25) between SBW belief and collective

coping (highly social coping behaviors, such as getting a group of people together to help with a stressful situation), spiritual centered coping (coping behaviors including spiritual or religious activities, such as going to church), and perceived social support.[34,40]

Assessment of SBW

SBW belief has been assessed with both standardized measures (n = 20, 43%) and qualitative interviews or focus groups (n = 8, 17%). The Stereotypic Roles for Black Women Scale (SRBWS)[67] was the most commonly used standardized measure (n = 10).[32-34,36,37,39-41,54,67] The SRBWS is composed of four Likert-type subscales (Mammy, Superwoman, Sapphire, and Jezebel), all of which have demonstrated acceptable internal consistency reliability (Cronbach's α = .70 - .85, except twice Mammy subscale Cronbach's α = .52 and .64). Its construct validity is supported by its negative associations with self-esteem (r = -0.25 - -0.36),[67] and by its lack of association with sociodemographic variables, including age, education, and income.[36] Seven studies (15%)[32-34,36,37,40,41] used only the Mammy and Superwoman subscales to assess SBW belief, a choice which is endorsed by the instrument developer (Thomas, personal communication, Jan. 10, 2019).

Other measures used in more than one study were the Strong Black Woman Scale (SBWS;[69] n = 4)[53,56,57,60,69] and the Giscombe Superwoman Schema Questionnaire (G-SWS-Q[68]; n = 4) .[39,52,58,68] The SBWS has demonstrated good internal consistency reliability (Cronbach's α = .73 - .90), and construct validity was supported by its positive association with growing up in a mainly Black neighborhood.[60] The G-SWS-Q was developed following qualitative research into the ways Black women described the SBW construct and its meaning in their lives[20] It has five subscales (Obligation to Present an Image of Strength, Obligation to Suppress Emotions, Resistance to Being Vulnerable, Intense Motivation to Succeed, and Obligation to Help Others)

and all five have demonstrated good internal consistency reliability (Cronbach's α = .70 - .89). Construct validity was supported by all five subscales' positive association with depressive symptoms and stress, negative association with sleep quality, and lack of association with demographic variables (age, marital status, education, and poverty).[52,68] Test-retest reliability was acceptable at 0.46 – 0.89.[68]Three studies (7%) used a unique scale, including the Pillar Syndrome questionnaire,[30] the Strong Black Woman Attitudes Scale,[38] and the Strong Black Woman Cultural Construct/[59]

Nine studies (19%) assessed SBW belief using qualitative interviews,[19,22,23,25,29,30,51] focus groups,[21,30] or online open-ended survey questions.[26] Of those, seven studies investigated the meaning of SBW belief for different groups of Black women including American Black women,[19,21,23,25] Black female college students,[22,26] Black mothers,[29] or Canadian Black women.[30] Five studies (11%) investigated the strength and prevalence of SBW belief,[22,23,26,29,30,51] two by using a closed-ended question such as "Is it important to be a strong Black woman?"[22,26] The various groups of Black women described the SBW construct in similar ways. Additionally, the researchers concluded that SBW belief was prevalent and strong in the various groups in which the strength and prevalence of SBW belief were assessed.

Discussion

For this review of the extent of the use of the SBW construct in research, we found 47 study reports that mentioned the SBW construct. We found that the SBW construct has been used to investigate Black women's coping with stressful, traumatic, or offensive experiences; Black women's health-seeking behaviors; and young Black women's media consumption. Studies have linked SBW belief to several physical and mental health concerns, including sleep disturbances, hypertension, obesity, depression, anxiety, loneliness, and eating for emotional

reasons. SBW belief has been positively associated with unhealthy emotional responses including self-silencing, emotional inhibition, and maladaptive perfectionism; and negatively associated with healthy emotional responses such as self-compassion and help-seeking attitudes. SBW belief has most often been assessed with a standardized instrument.

The SBW construct is important for studying Black women's life experiences and health outcomes because it is influential in the way many Black women perceive the world and live their lives. For example, Jones and colleagues [44] found Black mothers employed in office settings believed the behaviors and attitudes associated with the SBW construct to be necessary for thriving at work. Similarly, Corbin and colleagues [48] found Black college women consciously invoked the SBW construct when deciding how to respond to offensive encounters. Beyond influencing the way they live their lives, there is evidence that the SBW construct influences the health of many Black women as well. It has indeed been associated with negative emotional states and health outcomes such as depression, anxiety, and stress,[32,33,37-40,57-60] However, caution is warranted in the interpretation of these findings. First, the reported relationships have mostly been weak, suggesting that other constructs influence the relationship between SBW belief and Black women's health and wellbeing. Second, all studies were cross-sectional, and thus the actual impact of SBW belief on coping and health is unknown. The relationships may not be causal, and even if they are, the direction of causality cannot be established with cross-sectional studies.

Efforts to identify other constructs which are influential in the observed associations between SBW belief and poor health outcomes are underway, and have revealed several such constructs, including emotional inhibition, self-silencing, and maladaptive perfectionism. Some of these constructs are conceptually similar to aspects of the SBW construct itself. For example it

is unsurprising that emotional inhibition is positively associated with SBW belief, given that controlling emotions is part of the SBW construct.[22,25,68] Given the variety of other constructs which have been studied with SBW belief, and the variety of relationships which have been investigated (e.g., mediation, moderation, or SBW belief as mediator or moderator), some themes are emerging. In particular, most studies have found that SBW belief strengthens relationship involving undesirable health outcomes, but Allen and colleagues[52] found that some aspects of SBW belief were protective against allostatic load allostatic load. These mixed findings, along with the finding that SBW belief was usually, but not always, associated with psychological distress,[41] suggests that there may be circumstances in which SBW belief (or particular aspects of SBW belief) is harmful for Black women's health and well-being, and circumstances in which it is not. This is consistent with many Black women's insistence that SBW belief was necessary for the Black family and Black community to survive and thrive despite years of hardship and oppression.[20,21,23] More studies, particularly longitudinal, are needed to fully explain these relationships and to assist investigators in developing interventions and strategies to improve the health and well-being of Black women.

The variety of methods of assessing SBW belief is attributable, in part, to the different purposes for assessment in different studies. For example, the various standardized instruments available yield quantitative scores which can reveal the variability in SBW belief present in a sample. A simple "yes or no" question, by contrast, can efficiently deliver a general idea of the SBW identification of a sample and perhaps minimize missing data due to participant response fatigue. For research investigating the contribution of SBW belief to Black women's emotional and health outcomes, or the circumstances in which SBW belief may be beneficial or harmful, standardized instruments are most likely to be appropriate. Two standardized instruments

(SRBWS and G-SWS-Q) have rigorous published development and validation data available.[67,68] The SRBWS, having been available longest, has been used the most frequently. More recently, Woods-Giscombe and colleagues[68] developed the G-SWS-Q to conform to the SBW construct as described in qualitative descriptive research conducted for that purpose.[20] It has been used to investigate the contributions of different aspects of SBW belief to Black women's health outcomes. These findings demonstrate that there is an array of assessment methods available for researchers; multiple standardized instruments are available, and the SBW construct is familiar to Black women of all ages and stages, making a single-question assessment such as "Are you a strong Black woman?" feasible as well. Thus, researchers can use an assessment method which best suits the research question.

Conclusion

The SBW construct has been used to study a variety of experiences of Black women. It has been used in both quantitative and qualitative studies, and usually associated with worse health outcomes and negative emotional states for Black women. It has been evaluated using a variety of standardized instruments, with focus group or interview data, and with single closed-ended questions. Since all available studies are cross-sectional, further research is needed to investigate mediation, moderation, and causality in the relationships that have been identified.

Table 1. *Use of the SBW Construct in Included Studies*

Study	Design	Purpose	Sample	Experiences Studied	Health Outcomes Associated with SBW	Other Constructs Associated with SBW	Method of SBW Assessment
Abrams et al. (2019)	Cross-sectional, correlational	To examine the relationship between SBW belief and depressive symptoms	194 Black women ages 18-32; 98 college students		Psychological distress symptoms[1]	Self-silencing	SRBWS[2]
Abrams et al. (2014)	Focus groups	To build on existing work describing the SBW construct by describing additional characteristics and creating universally-recognized terminology	44 Black women ages 18-91, in 8 focus groups	Balancing competing demands			Analysis of focus group data

Table 1, cont.

Study	Design	Purpose	Sample	Experiences Studied	Health Outcomes Associated with SBW	Other Constructs Associated with SBW	Method of SBW Assessment
Allen et al. (2019)	Cross-sectional, correlational	To examine whether SBW belief modifies the relationship between racial discrimination and allostatic load.	208 Black women ages 30-50	Coping with perceived offense	Allostatic load; Using food or substances to cope with stress	Racial tension	G-SWS-Q[3]
Amankwaa (2003)	Semi-structured interviews	To describe African-American women's experience of postpartum depression	12 African-American women ages 22-40, with postpartum depression within 3 years	Health-seeking behaviors			

Table 1, cont.

Study	Design	Purpose	Sample	Experiences Studied	Health Outcomes Associated with SBW	Other Constructs Associated with SBW	Method of SBW Assessment
Anyiwo et al. (2018)	Cross-sectional, correlational	To explore the relationships among SBW belief, mainstream gender roles, and TV watching among adolescents	121 Black adolescents ages 12-18, 60% female	TV viewing			SBWS[4]
Beauboeuf-Lafontant (2007)	Semi-structured interviews	To investigate the potential relationship between the SBW construct and Black women's self-silencing and extreme caretaking	44 Black women ages 19-67		Hypertension, heart disease, gastrointestinal distress, depressive symptoms		Qualitative interview data

Table 1, cont.

Study	Design	Purpose	Sample	Experiences Studied	Health Outcomes Associated with SBW	Other Constructs Associated with SBW	Method of SBW Assessment
Bellinger et al. (2015)	Semi-structured interviews	To explore Black women's knowledge and attitudes about cervical cancer prevention	28 Black women ages 18-70, 8 rural, 10 urban	Health-seeking behaviors			
Black & Peacock (2011)	Qualitative analysis of blog posts and magazine articles	To explore the relationship between the SBW construct and Black women's management of daily life activities	20 articles from Black women's magazines, & 10 blog posts mentioning "strong Black woman"	Balancing competing demands	Overeating, hypertension, heart disease, depression		

Table 1, cont.

Study	Design	Purpose	Sample	Experiences Studied	Health Outcomes Associated with SBW	Other Constructs Associated with SBW	Method of SBW Assessment
Black & Woods-Giscombe (2012)	Secondary analysis: focus groups, blog posts, magazine articles	To explore ways in which SBW belief may interfere with timely breast cancer screening and treatment	20 articles from magazines for Black women, 10 blog posts mentioning the "strong Black woman," 48 Black women ages 18-72, in 8 focus groups	Health-seeking behaviors			

Table 1, cont.

Study	Design	Purpose	Sample	Experiences Studied	Health Outcomes Associated with SBW	Other Constructs Associated with SBW	Method of SBW Assessment
Coleman et al. (2020)	Cross-sectional, correlational	To investigate the relationship between Black women's reality TV-viewing habits and SBW belief	115 Black women ages 18-25, 78% college students	TV viewing			SRBWS
Corbin et al. (2018)	Semi-structured interviews	To describe the impact of stereotypical views of Black women on Black women's lives	13 Black college women, ages 18-30	Coping with perceived offense			

Table 1, cont.

Study	Design	Purpose	Sample	Experiences Studied	Health Outcomes Associated with SBW	Other Constructs Associated with SBW	Method of SBW Assessment
A. W. Davis et al. (2018)	Cross-sectional, correlational	To examine the relationship between SBW belief and perceived stress, and whether it is moderated by racial stress	292 Black women ages 18-67, 48% college students	Coping with traumatic or stressful experiences; coping with perceived offense	Perceived stress	Racial stress	SRBWS
S. M. Davis & Afifi (2019)	Cross-sectional, observations of Black female friend groups & surveys	To test the theory that Black female friend groups will promote strength and provide solidarity to cope with perceived offenses	156 Black women ages 18-69, in 52 groups of 3 friends	Coping with perceived offense			

Table 1, cont.

Study	Design	Purpose	Sample	Experiences Studied	Health Outcomes Associated with SBW	Other Constructs Associated with SBW	Method of SBW Assessment
Donovan & West (2015)	Cross-sectional, correlational	To explore whether SBW belief moderates the relationship between stress and psychological distress	92 Black female college students ages 18-47	Coping with traumatic or stressful experiences	Psychological distress		SRBWS
Dow (2015)	Secondary analysis of semi-structured interviews	To investigate the images of motherhood which affect middle- and upper-middle-class African-American mothers in their work- and family-related decision-making	60 African-American middle-class mothers ages 25-49, with at least 1 child ≤ age 10	Balancing competing demands			Analysis of qualitative data

Table 1, cont.

Study	Design	Purpose	Sample	Experiences Studied	Health Outcomes Associated with SBW	Other Constructs Associated with SBW	Method of SBW Assessment
Etowa et al. (2017)	Mixed methods: semi-structured interviews, focus groups, survey instruments	To explore whether Black Canadian women recognized the SBW construct as described by American Black women	50 Canadian Black women, ages 40-65		Unspecified “health problems”		Pillar Syndrome Question-naire; Analysis of focus group and interview data
Green (2019)	Cross-sectional, correlational, partial secondary data analysis	To examine moderation effects of SBW belief on the relationship between depression and suicidality	191 Black women, mean age 40, 102 newly-recruited, 89 as secondary data analysis	Health-seeking behaviors	Depressive symptoms, suicidality		Strong Black Woman Attitudes Scale

Table 1, cont.

Study	Design	Purpose	Sample	Experiences Studied	Health Outcomes Associated with SBW	Other Constructs Associated with SBW	Method of SBW Assessment
Gross et al. (2015)	Focus groups	To describe breastfeeding behaviors and norms of low-income Black women, from the perspective of breastfeeding peer counselors	23 breastfeeding peer counselors, 48% Black	Health-seeking behaviors	Breastfeeding complications		
Harrington et al. (2010)	Cross-sectional, correlational	To examine the associations among trauma, SBW belief, and binge eating among African American female trauma survivors	179 African American female trauma survivors ages 17-63	Health-seeking behaviors	Eating for emotional reasons, emotional regulation difficulties	Self-silencing; emotional inhibition; emotional regulation difficulties	SRBWS

Table 1, cont.

Study	Design	Purpose	Sample	Experiences Studied	Health Outcomes Associated with SBW	Other Constructs Associated with SBW	Method of SBW Assessment
Jerald et al. (2017)	Cross-sectional, correlational	To examine the relationships among SBW belief, well-being, and racial identity	609 Black women from 2 colleges (1 historically Black, one predominantly White), mean age 22	Coping with perceived offense	Psychological distress symptoms, drug and alcohol used for coping		SBWS
Jerald et al. (2016)	Cross-sectional, correlational	To examine the relationships among media use, endorsement of traditional roles and stereotypes, and racial identity	404 Black or African American undergraduate college students (74% female), mean age 20	Media use			SBWS

Table 1, cont.

Study	Design	Purpose	Sample	Experiences Studied	Health Outcomes Associated with SBW	Other Constructs Associated with SBW	Method of SBW Assessment
Johnson et al. (2016)	Cross-sectional, scale development	To develop and validate a scale to measure shifting behaviors in Black women.	408 Black women ages 18-73, divided into 2 samples	Coping with perceived offense		Shifting behaviors	African American Women's Shifting Scale
H. J. Jones et al. (2019)	Focus groups	To describe the life stressors experienced by "midlife" Black women	11 Black women ages 41-54	Balancing competing demands, Coping with perceived offense			

Table 1, cont.

Study	Design	Purpose	Sample	Experiences Studied	Health Outcomes Associated with SBW	Other Constructs Associated with SBW	Method of SBW Assessment
M. K. Jones et al. (2020)	Online survey questions, 2 open-ended, 1 closed-ended	To explore the meaning of the SBW construct for American Black college women	220 American Black college women, ages 18-48				Analysis of qualitative data
Knighton et al. (2020)	Cross-sectional, correlational	To investigate SBW belief as a mediator in the relationship between racial microaggressions and psychological distress for middle-class African American women	243 African American women ages 19-72	Coping with perceived offense	Psychological distress symptoms		SRBWS G-SWS-Q

Table 1, cont.

Study	Design	Purpose	Sample	Experiences Studied	Health Outcomes Associated with SBW	Other Constructs Associated with SBW	Method of SBW Assessment
Lewis & Neville (2015)	Cross-sectional, scale development	To develop a scale to measure racial microaggressions aimed at Black women	469 Black women ages 18-77, divided into 2 samples	Coping with perceived offense	Stress		
Liao et al. (2020)	Cross-sectional, correlational	To examine the relationships among SBW belief, maladaptive perfectionism, self-compassion, africultural coping, and psychological distress	222 Black women ages 18-67		Psychological distress symptoms	Self-compassion; maladaptive perfectionism; collective coping; spiritual centered coping	SRBWS

Table 1, cont.

Study	Design	Purpose	Sample	Experiences Studied	Health Outcomes Associated with SBW	Other Constructs Associated with SBW	Method of SBW Assessment
McLaurin-Jones et al. (2020)	Cross-sectional, correlational	To examine the relationships among SBW belief, stress, alcohol use, and sleep	110 Black or African American female college students ages 18-24	Coping with traumatic or stressful experiences	Perceived stress, poor sleep		G-SWS-Q
Miles (2019)	Secondary analysis of mixed methods: semi-structured interviews and standardized instruments	To examine the self-concept of African American women with disabilities who participated in a study about home ownership	32 African American women with disabilities ages 25-58 (30 participated in semi-structured interviews)	Coping with traumatic or stressful experiences			

Table 1, cont.

Study	Design	Purpose	Sample	Experiences Studied	Health Outcomes Associated with SBW	Other Constructs Associated with SBW	Method of SBW Assessment
Monterrosa (2019)	Semi-structured interviews	To examine intimate partner violence and help-seeking for women	15 female victims of intimate partner violence ages 24-57, 10 Black	Coping with traumatic or stressful experiences			
Nelson et al. (2016)	Semi-structured interviews	To explore how Black women conceptualize the SBW construct	30 Black women ages 18-66	Coping with perceived offense			Analysis of interview data
Nelson et al. (2020)	Secondary data analysis of semi-structured interviews	To investigate how the SBW construct may inform the way Black women view help-seeking for depression	30 Black women ages 18-66	Health-seeking behaviors			

Table 1, cont.

Study	Design	Purpose	Sample	Experiences Studied	Health Outcomes Associated with SBW	Other Constructs Associated with SBW	Method of SBW Assessment
Nicolaidis et al. (2010)	Focus groups	To explore the influence of racism, violence, and social context on Black women's beliefs about depression and depression treatment	30 low-income Black women age 19-53 with depression and a history of intimate partner violence	Health-seeking behaviors			

Table 1, cont.

Study	Design	Purpose	Sample	Experiences Studied	Health Outcomes Associated with SBW	Other Constructs Associated with SBW	Method of SBW Assessment
Oshin & Milan (2019)	Secondary analysis of mixed-methods: semi-structured interviews, Q-sort tasks, and standardized instruments	To examine racial and ethnic differences in mothers' opinions of the importance and meaning of SBW-related qualities in their daughters	194 low-income mothers or caretakers of adolescent girls, ages 22-66 (22% Black)	Raising adolescent daughters			

Table 1, cont.

Study	Design	Purpose	Sample	Experiences Studied	Health Outcomes Associated with SBW	Other Constructs Associated with SBW	Method of SBW Assessment
Ramirez et al. (2017)	Mixed-methods: Semi-structured interviews, Q-sort task, standardized instruments	To examine racial/ethnic differences in mothers' socialization goals for their adolescent daughters	192 low-income mothers or caretakers of adolescent girls, ages 22-66 (22% Black)	Raising adolescent daughters			
Settles et al. (2008)	Focus groups	To compare and contrast Black and White women's concepts of womanhood	31 Black and White women ages 18-84 (14 Black)	Coping with traumatic or stressful experiences			Analysis of focus group data

Table 1, cont.

Study	Design	Purpose	Sample	Experiences Studied	Health Outcomes Associated with SBW	Other Constructs Associated with SBW	Method of SBW Assessment
Shahid et al. (2018)	Cross-sectional, correlational	To examine relationships among campus racial tensions, stress, and SBW belief in Black college women	129 Black college women at predominantly White colleges, mean age 20	Coping with perceived offense			Strong Black Woman Cultural Construct
Stanton et al. (2017)	Cross-sectional, correlational	To examine Black women's use of social media for self-empowerment, creating positive media portrayals, and cultivating cultural narratives	412 Black or African-American women, ages 18-30 (1/3 college students)	Media use	Psychological distress symptoms		SBWS

Table 1, cont.

Study	Design	Purpose	Sample	Experiences Studied	Health Outcomes Associated with SBW	Other Constructs Associated with SBW	Method of SBW Assessment
Stevens-Watkins (2014)	Secondary analysis: cross-sectional, correlational	To examine female African American trauma survivors' active coping with both psychosocial and environmental stressors	161 urban, female African American trauma survivors	Coping with traumatic or stressful experiences			
Thomas et al. (2004)	Cross-sectional, correlational, scale development	To develop and validate the Stereotypic Roles for Black Women Scale, and to examine the relationship between SBW belief and self-esteem	186 African American women ages 18-63			Self-esteem	SRBWS

Table 1, cont.

Study	Design	Purpose	Sample	Experiences Studied	Health Outcomes Associated with SBW	Other Constructs Associated with SBW	Method of SBW Assessment
Watson & Hunter (2015)	Cross-sectional, correlational	To explore the relationships among SBW belief, psychological distress, and help-seeking attitudes	95 Black women ages 18-65	Health-seeking behaviors	Psychological distress symptoms	Help-seeking attitudes	SRBWS
Watson & Hunter (2016)	Semi-structured interviews	To investigate Black women's view of the SBW construct and its associated tensions	13 Black women ages 18-65, half college students				Analysis of interview data
Watson-Singleton (2017)	Cross-sectional, correlational	To examine emotional support as a mediator in the relationship between SBW belief and psychological distress	159 African American women ages 18-59		Psychological distress symptoms	Social Support	SRBWS

Table 1, cont.

Study	Design	Purpose	Sample	Experiences Studied	Health Outcomes Associated with SBW	Other Constructs Associated with SBW	Method of SBW Assessment
West et al. (2016)	Online questionnaire, open- and closed-ended questions	To describe the way Black college women describe the SBW construct, and their beliefs about the construct's influence on mental health	94 Black college women, not at historically Black colleges, ages 18-47		Negative effects on mental health		Analysis of answers to survey questions
Woods-Giscombe (2010)	Focus groups	To learn how Black women describe the SBW construct, including the contributing factors, and the advantages and disadvantages of SBW belief	48 Black women in 8 focus groups, ages 19-72		"nervous breakdowns," sleep disturbance, fetal loss, weight gain, hair loss, psychological distress		

Table 1, cont.

Study	Design	Purpose	Sample	Experiences Studied	Health Outcomes Associated with SBW	Other Constructs Associated with SBW	Method of SBW Assessment
Woods-Giscombe et al. (2019)	Cross-sectional, instrument development	To evaluate the psychometrics of the Giscombe Superwoman Schema Questionnaire	739 Black women, ages 18-75, divided into 3 samples		Psychological distress symptoms, stress, poor sleep		G-SWS-Q
Woods-Giscombe et al. (2016)	Secondary analysis of focus group data	To explore the relationship between SBW belief and the use of mental health care, and to uncover information to help health care providers address the needs of these women	48 African American women in 8 focus groups, ages 19-72	Health-seeking behaviors			

[1] Psychological distress = symptoms of depression and/or anxiety; [2]SRBWS = Stereotypic Roles for Black Women Scale;

[3]G-SWS-Q = Giscombe Superwoman Schema Questionnaire; [4]SBWS = Strong Black Woman Scale

Paper 2

Similarities and Differences in Characteristics of Black Women Recruited by Mail vs. Social Media After Stillbirth

Abstract

Black women are underrepresented in healthcare research, despite being more likely than White women to suffer negative health exposures, outcomes, and trauma. Recruitment strategies for enhancing the participation of Black women in research have included partnering with trusted organizations, making participation convenient, offering participation incentives, and using social media. However, little is known about potential systematic differences between women who respond to social media vs. mailed study invitations. This study served to 1) describe the recruitment experience of a study of Black women after stillbirth (fetal loss ≥ 20 weeks gestation), and 2) explore differences between participants who responded to mailed study invitations vs. social media posts. This secondary analysis used data from a cross-sectional study of Black women after stillbirth. We partnered with a stillbirth-support organization that mailed letters to potentially-eligible women and posted about the study on social media. We offered options to make participation convenient and offered a participation incentive. We used Mann-Whitney U tests or Fisher's Exact tests to examine whether letter responders differed from social media responders by age, marital status, education, employment, income, gestational age of stillbirth, and time since stillbirth. We estimate that our partnering organization mailed letters to 618 eligible women between start date and end date, with 14% response rate (n = 89). Our partner posted the invitation on social media ten times during the recruitment period. We received 216 total responses, and 205 individuals completed eligibility screens. Most (n = 136; 66%) were eligible. Most who were ineligible were not Black (n = 47; 68%). Most eligible women (n = 111; 81%) consented to participate, and 91 (82%) provided data. Letter responders did not differ from social media responders by age, marital status, education, employment, gestational age of stillbirth, or time since stillbirth. However, letter responders were more likely

than social media responders to have an annual household income ≥ $50,000 (47% vs. 30%). We successfully recruited Black women who had a stillbirth for research using previously-recommended strategies, including partnering with trusted organizations, making participation convenient, and offering a participation incentive. Both mail and social media may be viable avenues for recruitment; participants recruited by mail and social media are similar, although mail respondents reported higher household income.

Background

Black women remain underrepresented in research, despite being more likely than White women to suffer from various adverse health exposures, conditions, and outcomes.[70,71] Several researchers have investigated methods for effectively recruiting Black women in studies of breast cancer,[72] diabetes,[73] pregnancy,[74] and parental bereavement.[75,76] The findings of these studies indicate that successful recruitment of Black women should include partnering with an organization trusted by the target population,[77,78] making participation as convenient as possible,[72,78] emphasizing the likely benefits of the research for the Black community,[72,73] encouraging word-of-mouth referrals,[77] and offering an incentive for participation.[76,78] Although not always successful, social media sites such as Facebook have also been used to recruit Black women for research.[74,76,79] However, little is known about potential systematic differences between women who respond to research invitations via social media compared to those who respond to more traditional modes of contact (e.g. mailed letters). Thus, caution is warranted in the use of social media as a mode of contacting study samples.

Black women experience more traumatic and stressful life events than their White counterparts.[80] and stillbirth (fetal death ≥ 20 weeks gestation)[1] is a prime example of this rule, with Black women being twice as likely to experience stillbirth as their White counterparts.[81] Research among Black women who have experienced traumatic events such as stillbirth is particularly urgent because Blacks may be more likely to experience the types of trauma which are likely to lead to post-traumatic stress disorder (PTSD),[82] more likely to develop PTSD over the course of a lifetime,[83] and less likely to seek treatment for PTSD symptoms.[31,82,83] Despite these differences, little is known about recruiting Black women who have experienced trauma for research studies. This is partially due to small absolute numbers of Black women experiencing

some types of trauma. For example, despite the increased frequency of stillbirth for Black women compared to other races, it is still a relatively rare event, occurring approximately 7,000 times (for Black women) annually in the United States (U.S.).[84] Therefore, in recruiting Black women for research after trauma, the challenge of recruiting Black women for any type of healthcare research is compounded by the small absolute numbers of Black women available for research after certain traumatic events such as stillbirth.

The purposes of this secondary data analysis were to 1) describe the recruitment experience of one study of Black women who had experienced a stillbirth and 2) explore whether there were differences between participants who responded to mailed study invitations and those who responded to social media posts.

Methods

This was a secondary data analysis of cross-sectional data collected for a study of psychological distress in Black mothers bereaved by stillbirth. We partnered with Rachel's Gift (RG), a stillbirth support organization based near Atlanta, Georgia, to contact our target population of Black women ≥ 18 years old who had a stillbirth within the three years prior to study participation. Several Black women who had had a stillbirth and were involved with RG's outreach efforts reviewed our study communications and our study survey to assess their appropriateness for our target population. Then, RG mailed participation invitation letters between March and December, 2020, to their clients who had experienced a stillbirth between 6 months and 3 years prior to the study mailing. RG does not collect race information from their clients, so we did not know which letter recipients were Black. The letters included a statement of support from RG, information about the study, an invitation to be screened for eligibility, instructions on how to access eligibility screening and the study survey, and contact information

for the principal investigator. We planned to have RG mail up to five letters to the women on the list, but after the first two mailings, several women contacted RG to say they experienced distress at receiving the letters, so we mailed only one letter to women who were added to the mailing list after the first mailing. RG also posted study invitations on their social media pages (Facebook and Instagram) approximately ten times during the study recruitment period. These posted invitations included a brief summary of the study purpose and procedures, a link to the online survey, and contact information for the principal investigator (PI).

Study data were collected and managed using REDCap electronic data capture tools hosted at Emory University.[85,86] REDCap (Research Electronic Data Capture) is a secure, web-based software platform for data capture, manipulation, and export. We included the survey URL in the invitation letters. The first page of the survey included questions to verify eligibility and document how the woman found out about the study (e.g., letter or social media). Inclusion criteria were: Black women ≥ 18 years who had a stillbirth within 3 years prior to study participation and were able to communicate in English. There were no exclusion criteria. To make participation as convenient as possible, we offered potential participants the options of completing the study survey online, contacting the PI via phone or email, or returning an opt-in postcard (letter recipients only) authorizing contact by the study team. Those who contacted the PI or returning the postcard were screened for eligibility over the phone and could choose to answer the remaining survey questions over the phone or receive a paper copy of the survey in the mail to complete and return. Our recruitment materials emphasized our plan to use the results of the study to help other Black mothers who may experience stillbirth in the future. Finally, we offered a $30 gift card, mailed with a hand-written thank-you note after participation was complete, as a participation incentive.

We used Mann-Whitney U tests or Fisher's exact tests as appropriate to examine whether there were differences in the sociodemographic or stillbirth characteristics of participants who responded to mailed invitations compared to those who responded to social media posts. Characteristics of interest included: age, marital status, education, employment status, household income, gestational age of the stillborn infant, and time elapsed since the stillbirth. IBM SPSS (version 28) was used for all statistical analyses.

Results

RG mailed letters to 1451 women ≥ 18 years of age who had a stillbirth between 6 months and 3 years prior to the mailing date. Despite not having race information for the women on the mailing list, we estimate that 50% were Black because more than two-thirds of the hospitals served by RG (28/40) were located in Georgia, a state where 52-53% of the stillbirths occurred to Black women between 2017 and 2020.[87] After accounting for letters returned as undeliverable (*n* = 188) and known ineligible women inadvertently included in the list (*n* = 27), we estimate RG mailed invitation letters to 618 eligible women (see Fig. 1). The response rate for eligible letter recipients was 14.4% (*n* = 89). Overall, we received 216 responses to all methods of contacting potential participants, and 205 (94.9%) completed eligibility screening online or over the phone. Most women who were screened were eligible (*n* = 136; 66.3%). The most common reasons for ineligibility were: not identifying as Black (*n* = 47, 68.1%), fetal loss more than 3 years prior to screening (*n* = 18, 26.0%), and fetal loss prior to 20 weeks gestation (*n* = 15, 21.7%). Of the eligible women, 111 (81.6%) consented to study participation, and 91 (82.0% of those consented) began the study survey. Thirty-one women (27.9%) withdrew from the study. Twenty of those who withdrew (18.0%) did not complete any of the survey items, and 11 (9.8%) provided some data but did not complete the survey. Our final sample size was 91.

For our investigation of differences in characteristics between participants who responded to mailed invitations compared to those who responded to social media posts (Table 1), our sample size was 86 because we included only those respondents who clearly indicated hearing about the study via one of those two means and provided sociodemographic data (see Figure 1). The remining five heard about the study some other way (e.g., word of mouth; $n = 3$), did not indicate how they heard about the study ($n = 1$), or did not provide sociodemographic data ($n = 1$). The median age for our sample was 31.0 years ($IQR = 8.25$). Most ($n = 54$, 62.8%) were married or living with a partner or significant other, and had completed at least an associate's degree ($n = 50$, 58.1%). Most ($n = 51$, 59.3%) were employed full-time or part-time, and nearly half ($n = 38$, 44.7%) reported annual household incomes of at least $50,000. The median gestational age of the stillborn infants was 26.0 weeks ($IQR = 13.0$). Most participants ($n = 68$, 79.1%) had experienced their stillbirths during the two years prior to study participation.

Women who responded to mailed invitation letters ($n = 75$; 87.2%) did not differ from those who responded to social media posts ($n = 11$, 12.8%) in age (31.0 vs. 28.0 years, $p = .16$). They were no more likely to be married or living with a significant other (61.3% vs. 72.7%, $p = .53$), nor to have completed at least an associate degree (54.7% vs. 81.8%, $p = .11$). They were no more likely to be employed full-time or part-time (60.0% vs. 54.5%, $p = .75$). The gestational age of the stillborn infant did not differ between women who responded to mailed letters and those who responded to social media posts (26.0 vs. 25.0 weeks, $p = .28$), and the two groups were similar in likelihood of experiencing their stillbirths during the two years prior to study participation (76.0% vs. 100%, $p = .11$). The only difference between groups was in household income. Women who responded to mailed letter invitations were more likely than those who

responded to social media posts to report annual household incomes of at least $50,000 (46.7% vs. 30.0%, $p < .01$).

Discussion

We found that both mailed letters and social media posts were viable methods of recruiting our sample. Our recruitment strategies resulted in 216 interested women contacting the study team. The response rate for letter recipients was 14.4%. After eligibility screening, consent, and partial or full completion of the study survey, our sample size was 91. Of the women who were ineligible to participate in the study, most did not identify as Black. Participants who responded to mailed invitation letters did not differ from those who responded to social media posts by age, marital status, education, or employment. They were, however, more likely to report annual household incomes of at least $50,000. The two groups did not differ in gestational age of the stillborn infant, or in length of time elapsed since the stillbirth.

Although we used several previously-published recommended strategies for recruiting Black women for research,[76] the most important strategy was partnering with an organization trusted by our participants. First, the organization allowed us to consult with several Black mothers who had experienced stillbirth to solicit feedback on our study materials prior to the commencement of our study, strengthening our confidence that our study communications and the study survey were appropriate for our intended audience. Second, the organization distributed all our study invitations, using both mail and social media; thus, it was their relationship with their clients which gave our study the chance to be successful, regardless of the other strategies we employed (e.g., emphasizing the benefits of the research for the Black community, offering a participant incentive). With the growth of community-based participatory research (CBPR) methods, investigators are increasingly recognizing the importance of seeking buy-in and input

from the community as part of research studies.[88] While our study was not CBPR research, it was important nevertheless to seek input from those who were closely engaged with the community as we implemented our study.

Our response rate to our mailed invitations was lower than the reported rate for other studies using mailed letters to recruit mothers for research after stillbirth. Those studies have reported response rates of 30-44%,[14,89,90] but have rarely mentioned race-specific response rates. However, Christiansen-Lindquist and colleagues[89] reported a response rate of 22% for Black women who had a stillbirth. In that study, women received a total of 4 mailings (including 2 copies of the study survey), and follow-up phone calls for those who did not respond by mail. Our mid-study change of plans, limiting most women to receiving two letters and the rest to one letter likely impacted our response rate. However, it was important to us and RG to minimize further distress for a group of women who had already experienced a traumatic loss. Despite consistent findings that women who participate in stillbirth research do not report increased psychological distress as a result,[91,92] it remains important for investigators to balance the risk of harm to women with the need for rigorous recruitment practices to produce valid research findings.

Previous research using Facebook for recruitment has yielded mixed results regarding differences in participants recruited via Facebook versus other methods, but any differences are typically small. Contrary to our study, some studies have found Facebook responders to be of higher income than those recruited via other methods,[93] but others have found no difference.[94]. A recent systematic review found that for most studies based in the United States using Facebook for recruitment, the sample recruited via Facebook was representative of the target population, or differed slightly (e.g., younger than the target population).[93] Most of the studies included in the

review used Facebook to recruit mainly young and middle-aged adults (≤ 40; although a few studies included older participants), mirroring the trend of younger people using social media more than their older counterparts. Despite inconsistent findings suggesting that participants recruited via Facebook may differ from participants recruited via other means, there have been no consistent findings. Thus, it is reasonable for investigators to consider using social media within a comprehensive recruitment strategy.

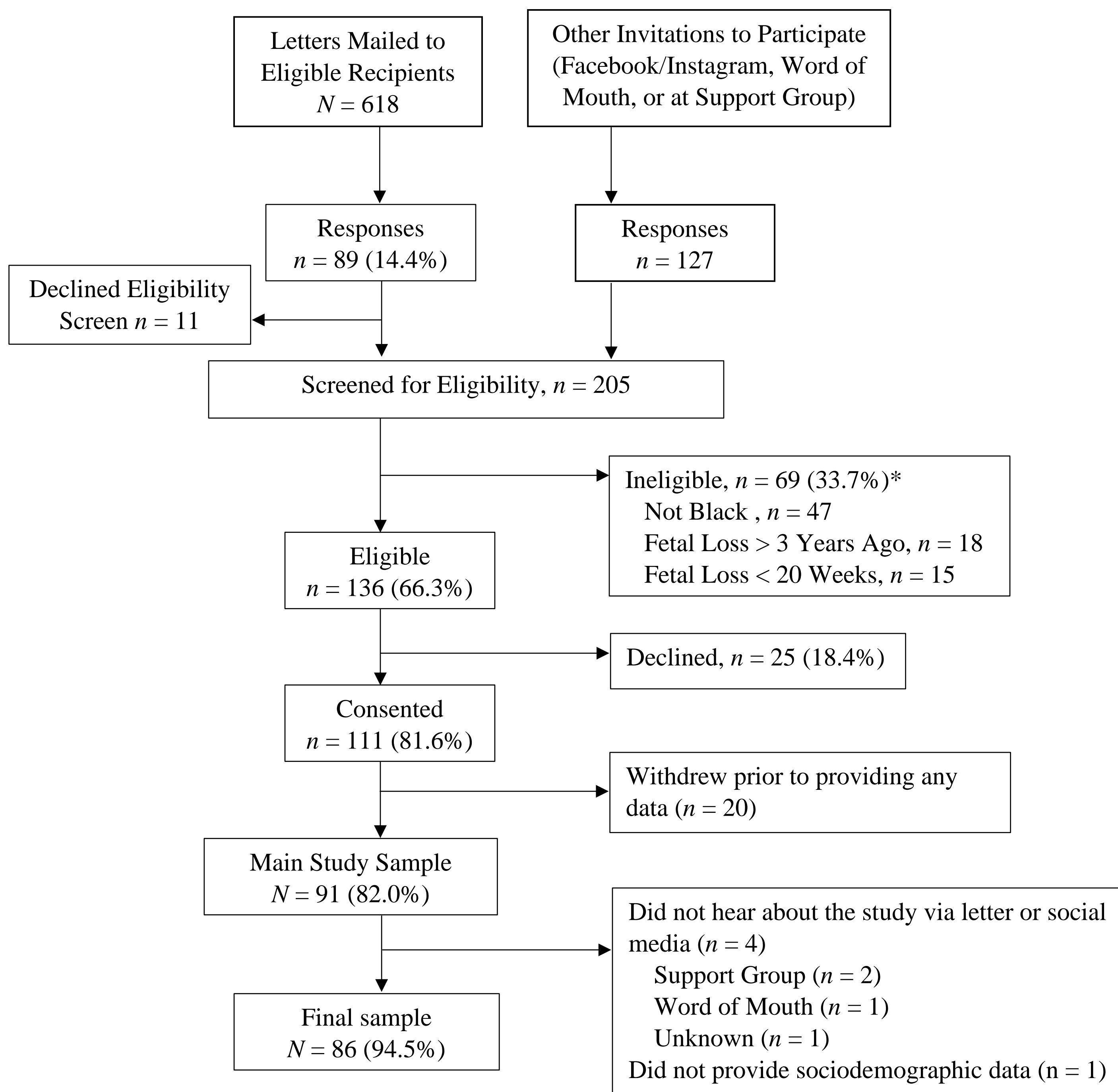
Our study has a few notable limitations. First, the sample size for social media responders was small, so results should be interpreted with caution. Second, we did not have data for women who did not respond to mailed invitation letters, so we could not investigate differences between responders and non-responders.

Conclusion

For this study, we used several previously-published strategies to recruit a sample of Black women who had a stillbirth for research. Our most important strategy was partnering with an organization trusted by our study population. Our findings aligned with previous research findings that participants recruited via social media differ minimally from those recruited via mailed letters; the only difference we found between the groups was that women recruited via social media were more likely to report annual household incomes ≥ $50,000. We found that both mailed letters and social media can be used as part of a plan for successfully recruiting Black women who had a stillbirth for research.

Figure 1

Recruitment Flow Chart



*Could be ineligible for more than one reason

Table 1

Differences Between Letter Recipients and Social Media Responders (N = 86)

Parameter	**Overall (N = 86)**	**Letter Recipients (n = 75)**	**Social Media Responders (n = 11)**	**P-value**
Age, *mdn* (IQR)[a]	31.0 (8.25)	31.0 (8.0)	28.0 (8.0)	.160
Married or Living With Partner, *n* (%)[b]	54 (62.8)	46 (61.3)	8 (72.7)	.527
Completed Associate's Degree or Higher, *n* (%)[b]	50 (58.1)	41 (54.7)	9 (81.8)	.111
Employed Full- or Part-time, *n* (%)[b]	51 (59.3)	45 (60.0)	6 (54.5)	.752
Household Income, *n* (%)[b]				.009
< $30,000	20 (34.1)	28 (37.3)	1 (10.0)	
$30,000 - $49,999	18 (21.2)	12 (16.0)	6 (60.0)	
≥ $50,000	38 (44.7)	35 (46.7)	3 (30.0)	
Stillbirth Gestation in Weeks, *mdn* (IQR)[a]	26.0 (13.0)	26.0 (14.0)	25.0 (9.0)	.281
Stillbirth Within Two Years, *n* (%)[b]	68 (79.1)	57 (76.0)	11 (100)	.110

[a]Mann-Whitney U test; [b]Fisher's Exact Test

Paper 3

Relationships Among Strong Black Woman Belief, Coping Behaviors, Social Support, and Psychological Distress for Black Mothers After Stillbirth

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).[81] Mental health and functional consequences include depression, anxiety, post-traumatic stress disorder (PTSD), substance use disorders, difficulty parenting other children, and relationship breakdown.[95,96] Depressive symptoms, anxiety, and substance use disorders may be more severe for Black women than for White women following stillbirth.[15]

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,[16,97] but are poorly attended by Black parents.[98] 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.[15] 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,[15,99,100] lack of Black healthcare providers,[28,101] and stigma surrounding mental health care within Black communities.[31,76] Instead, they tend to emphasize spiritual and religious practices, talking with a few close friends, and solitude and silence.[15,16,18] 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.[15] 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.[20,30] 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.[22] They describe watching these foremothers handle stress and difficulties without help and without pausing to care for themselves.[20] SBW belief (the belief that one must adhere to the SBW construct) has been positively associated with psychological distress symptoms (depressive symptoms, anxiety, loneliness),[32,38,40] and negatively associated with perceived emotional social support.[34] It has also been positively associated with eating for emotional reasons and with using drugs and alcohol to cope with stress.[36,39,57]

The relationships among SBW belief, culturally relevant coping behaviors (coping behaviors often preferred by members of the Black/African American community[102]), 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 at Emory University, an online platform which allows for electronic administration of surveys with data capture and data security for research studies.[85,86]

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),[103] and the Drug Abuse Screening Test—10 item version (DAST-10).[104,105] 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.[105,106]

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.[107,108] 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)**.[67] 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,[33,34,36,40] as recommended by the instrument developer.[109] The SRBWS has been used in research among Black women aged 18-65 years, including trauma survivors.[33,34,36,40,41] 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.[33,34,36,40]

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”).[110] 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,[111] low-income mothers,[112] and mothers bereaved by stillbirth.[113] 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.[102] In particular, Africultural coping tends to recognize the individual primarily as a member of a group, rather than mainly as an independent actor.[102] This orientation reveals itself in coping behaviors such as seeking connections with other members of the group, and engaging in spiritual and religious practices.[102] 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,[114] college students,[40,115]

and general-population Black women.[116,117] 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**[118] and the **PROMIS Anxiety Short Form 8a**[119] 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.[118,119] For both instruments, a T-score of 60 ($\mu + 1SD$) is the suggested cut-point for symptoms suggestive of clinical diagnoses.[120,121] Both scales have been extensively tested with large groups of adults representative of the U.S. population, with Chronbach's alpha consistently > .90.[120-124]

Post-traumatic Stress

PTSS were measured using the **PTSD Checklist for DSM-5 (PCL-5)**.[125,126] 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.[125,127,128]

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 (≥ .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.[32-34,39,40,68] We found a negative association between perceived social support and SBW belief of similar magnitude to previous work,[34] 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 investigation. 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[114] 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 for this group warrants further study.

The only instrument score which was significantly negatively associated with psychological distress symptoms was the SPS which measures perceived social support, the

subjective feelings of connection with others. This finding highlights the importance of perceived social support in healing and recovery from a traumatic loss such as stillbirth. The lack of negative association between the use of social 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 because 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.[129] 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,[32-34,38-41,68] 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%).[130] This may 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. This may also 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 as when they experienced the stillbirth.

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 and mitigate their psychological distress symptoms following stillbirth. Although 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.[131]

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.[132] 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.[15,132] 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.[76]

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. R^2 = .34; df = 3, 78			**Adj. R^2 = .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. R^2 = .29; *df* = 3, 78			**Adj. R^2 = .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

Dissertation Summary and Synthesis

Introduction

This dissertation focused on the relationships among the strong Black woman (SBW) construct, culturally relevant coping behaviors, and perceived social support in predicting the psychological distress symptoms experienced by Black mothers who had a stillbirth. Beginning with a review of the use of the SBW construct in research, we proceeded to design and execute a cross-sectional, exploratory study using an online survey for data collection.

The Strong Black Woman Construct

Despite the widespread recognition of the SBW construct among Black women, it has only been used in healthcare research for approximately the past fifteen years.[131] Research thus far has been descriptive and exploratory, with various studies aiming to describe the SBW construct and explore the way it functions in Black women's lives. These studies have used the SBW construct to investigate the ways Black women cope with stress, trauma, and offense; their health-seeking behaviors; and media consumption habits of Black adolescent girls. Similar to several previous studies, this study used the SBW construct in the investigation of Black women's response to stillbirth, a traumatic event. Unlike most previous work, however, this study examined relationships between SBW belief and coping behaviors. These relationships are likely to be important because the attitudes and behaviors associated with the SBW construct may encourage or discourage various coping behaviors. For example, the independence required by the SBW construct may discourage women from asking for help and from engaging in social activities as a way to cope with traumatic grief.

Recruitment Experience and Differences Between Participants Recruited via Letters and Social Media

Using several published strategies for recruiting Black women for research, we recruited a sample of 91 Black women who had experienced a stillbirth during the three years prior to study participation. Our major strategy was partnering with a regional stillbirth-support organization which agreed to distribute our study invitations via mail and social media. Our partnering organization facilitated connections with several Black mothers who had experienced a stillbirth so they could offer feedback on our study materials. We also offered potential participants options to make participation convenient and offered a participation incentive for women who completed the study survey. Although our response to the mailed invitations was lower than that of some previous studies, we were able to complete our planned data analyses. Moreover, we found that women recruited via mail differed from those recruited via social media only in household income, alleviating some of our potential concerns about the study's validity. Using multiple modes to contact a target population (e.g., mail and social media) can increase sample size, but may introduce bias if participants contacted via different modes are systematically different from one another. This study showed that using both mail and social media can be a viable strategy for recruitment for Black women who have suffered a stillbirth.

Relationships Among Variables of Interest

Our conceptual framework (Fig. 1) predicted that SBW belief, culturally relevant coping behaviors, and perceived social support would be important in predicting psychological distress symptoms for our sample. Our framework also predicted that SBW belief, perceived social support, and culturally relevant coping behaviors would be related to one another, and that various sociodemographic and clinical variables may be important covariates to control for in our analysis. Broadly, our findings conformed to our expectations based on our framework, but many of the relationships warrant further study. Our findings about the relationships between

SBW belief and both psychological distress symptoms and perceived social support were similar to previous work. Also, the relationship between perceived social support and psychological distress symptoms was similar to previous work. However, several of the relationships with culturally relevant coping behaviors were surprising. First, none of the subscales were negatively associated with psychological distress symptoms, suggesting the culturally relevant coping scale we chose failed to capture the range of strategies and behaviors our sample used to cope with their loss. Second, although the cognitive emotional debriefing subscale was positively associated with psychological distress symptoms, some items are also similar to the avoidant subscale of the PCL-5, raising the possibility of confounding between cognitive emotional debriefing coping behaviors and trauma-related avoidant behaviors. Confusion between coping behaviors and symptoms of posttraumatic stress could lead to pathologizing coping behaviors often used by Black women, or to ignoring symptoms needing further support and/or treatment. Either error would result in Black women being poorly served by the healthcare system.

Clinical Relevance

Our study findings can inform both clinical practice and future research. The importance of the SBW construct for Black women indicates many of them may be trying to align themselves with the construct. Healthcare providers need to recognize that the SBW construct may be part of the "lens" their Black female patients are using to view the world and themselves. This awareness can help them provide respectful and culturally appropriate counsel and education to their Black female patients. Additionally, providers caring for Black mothers after stillbirth need to remember the importance of perceived social support in predicting decreased psychological distress symptoms so they can guide Black mothers to increase their awareness of their available support people and networks. They also need to remember that increasing

awareness of available social support may be beneficial even if the bereaved mother does not access much of her available support.

Future Research Directions

The SBW Construct

The SBW construct has not yet been used in developing interventions to optimize the health and well-being of Black women. Given its influence in Black women's lives, it may be a helpful construct in designing culturally appropriate interventions. Despite its frequent association with negative health outcomes and emotional states, Black women often credit the SBW construct with the survival of the Black family and community through centuries of oppression and suffering. This belief suggests that there may be beneficial aspects of SBW belief which are as yet poorly explored, but which may help healthcare providers support Black women in optimal coping with hardship and trauma.

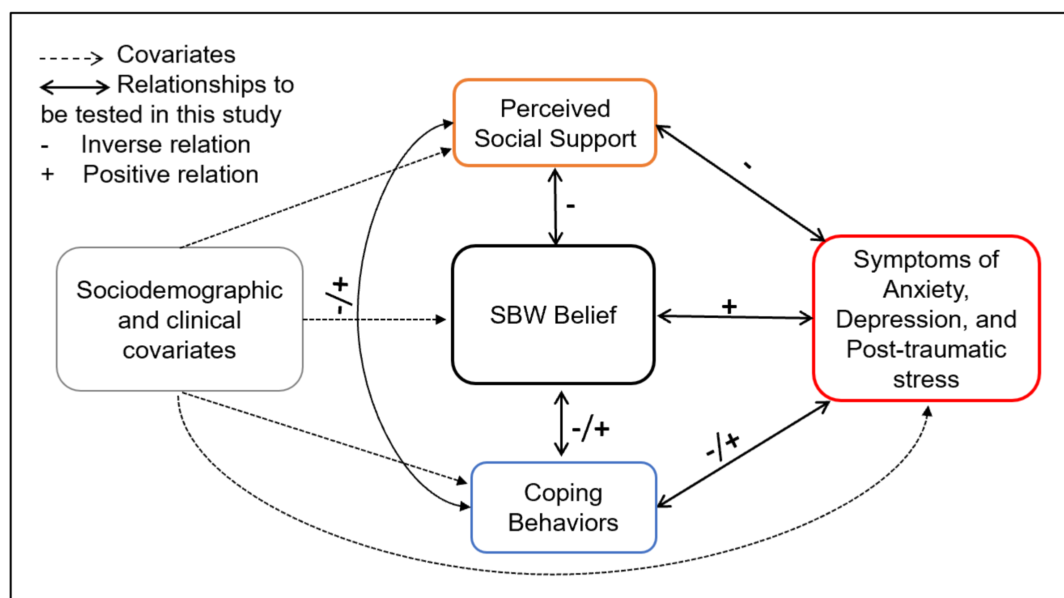
Recruiting Black Women for Research

There is widespread recognition that Black women are underrepresented in healthcare research, and this dissertation adds to the body of knowledge about recruiting Black women for research. We demonstrated that several of the strategies which have been used successfully to recruit Black women for a variety of research studies can also be used successfully for Black women who had a stillbirth. This is important because the relative infrequency of many traumatic events such as stillbirth compounds the difficulty of recruiting Black women for research on these topics. Using more than one mode to contact these women can increase sample size, and our study findings suggest this practice may not introduce bias due to women recruited via one mode being systematically different from those recruited via another mode.

Coping Behaviors and Social Support

Our findings suggest further examination of coping behaviors, perceived social support, and SBW belief may be fruitful in developing interventions to mitigate psychological distress symptoms for Black women following stillbirth. In particular, further research is needed to investigate which coping behaviors may serve to reduce or exacerbate the risk of developing psychological distress symptoms, and for what period of time. Additionally, given the importance of perceived social support for predicting reduced psychological distress symptoms, further research is needed to investigate the perception and activation of social support resources for this group. Our finding that coping behaviors involving social events (collective coping) was important in predicting increasing psychological distress symptoms suggests perceived social support and social activities do not have the same relationship with psychological distress symptoms. Thus the relationships among perceived social support, social activities, and psychological distress symptoms may be complex. Longitudinal studies will be needed to fully explain these relationships, identify other important variables to consider, and optimize the content, timing, and delivery of interventions to mitigate psychological distress in this group.

Figure 1. Conceptual Framework of the Study



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