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Multiple Roles, Multiple Lives: The Protective Effects of Role Responsibilities on the Health Functioning of African American Mothers

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Abstract

Using data from 747 rural African American mothers, this study incorporated Role Accumulation theory to test direct and indirect effects of stressors, coping behaviors, and role responsibilities on health functioning. Results indicated that demands emerging from financial strain were related to compromised mental health and decreases in mothers' use of effective coping strategies and role responsibility engagement. Conversely, mothers who effectively responded to stressors and fulfilled responsibilities to their children and communities experienced enhanced mental health, which in turn promoted optimal physical health. The results can inform research and intervention with African American women.

Keywords

African Americans; health; mothers; role responsibilities; stressors

Despite national efforts to decrease health disparities between members of ethnic minority and majority groups, chronic illnesses, related complications, and consequent deaths remain prevalent among African American women. Health statistics consistently show that, as an aggregate group, African American women experience more complications associated with chronic diseases than do Caucasian women (American Diabetes Association 2008; Murry et al. 2003; Centers for Disease Control 2003; National Center for Health Statistics 2008). For example, compared with Caucasian women, African American women are twice as likely to develop kidney disorders and diabetes mellitus (American Diabetes Association 2008). Among women with diabetes, African Americans are more likely than Caucasians to

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become blind, to have amputations, and to develop end-stage kidney disease as a consequence of the illness (Murry et al. 2003). Furthermore, the Centers for Disease Control and Prevention (CDC) reported in 2003 that African American women were more likely than those in any other ethnic group to die from the leading causes of death among women: heart disease, cancer, and strokes. Racial discrepancies in mental health functioning are similar to those for physical health: African American women tend to experience depression at higher rates than Caucasian women, and are less likely to seek treatment (National Center for Health Statistics, 2008).

Several plausible explanations have been offered to explain compromised mental and physical health among African American women, including disproportionate poverty, unemployment, and low educational attainment (Black and Murry 2003; Brown, Brody, and Stoneman 2000); the influence of macro level stressors such as racism and sexism on health functioning (Black and Murry 2003; Murry et al. 2001; Schulz et al. 2001; Williams 2002); a lack of health awareness; the absence of culturally sensitive health care resources; and poor communication with health care providers (Auslander et al. 2002; Jackson 2002; Samuel-Hodge et al. 2000). Although the number of published reports about the association of various sociodemographics, contextual stressors, and prevalence of illness among women is increasing, large gaps remain in the literature addressing basic questions about how the everyday life experiences of African American women—such as the inability to make ends meet, reactions to stressful life circumstances, and demands associated with parenting and community involvement—also affect their psychological and physical health. This study was designed to help fill these gaps by highlighting the complex association between stressors and health through our examination of empirically-driven mediators, stress-coping behaviors and role responsibilities, as contributors to the relationship between financial strain and women's health. In so doing, we addressed the following research questions: What health implications exist for African American women: 1) experiencing financial strain in their daily lives? 2) executing multiple role responsibilities in their daily lives? and 3) utilizing effective coping behaviors in their daily lives?

Theoretical Framework

Role accumulation theory (Sieber 1974) contributed to the current study's design and data analyses. According to this theory, having multiple roles and engaging in a variety of activities can benefit individuals' overall well-being. Role accumulation theory has heuristic value for our investigation because social roles and role responsibilities are treated as opportunities to garner more social capital in the form of economic and social resources through which one's options, self-concept, and life satisfaction are enhanced (Nordenmark 2004). Because African American women historically have been characterized as both the backbone of their communities and the cohesive force in their families, a sense of "we-ness" is likely to manifest through multiple role fulfillment and various responsibilities to network members (Beauboeuf-LaFontant 2008; Harris-Lacewell 2001). Thus, it seems important to examine the pathways through which the fulfillment of these role responsibilities is related to African American women's health. This study addressed these issues. The theory and empirical studies that guided the conceptual design and data analysis are discussed in the following section.

Conceptual Model and Proposed Hypotheses

This study tested a role accumulation theory of the salience of numerous roles in which increased fulfillment of responsibilities evinces benefits to one's life. We sought to understand the protective effects of multiple role responsibilities on African American mothers' health functioning in the presence of financial strain. We also investigated

mothers' experience and response to financial strain as they executed multiple role responsibilities. In addition, we examined the role mental health functioning plays in the relationship between financial strain and mothers' physical health status. The conceptual model that guided our examination of the pathways through which financial strain, stress-coping behaviors, and role responsibilities forecasted the health functioning of rural African American mothers is presented in Figure 1. Specifically, the following hypotheses were tested:

Hypothesis 1: Financial strain would be associated with mothers' compromised mental health.

Hypothesis 2: Mothers' mental health would mediate the links between financial strain and mothers' physical health status.

Hypothesis 3: Stress-coping behaviors would mediate the links between financial strain and mothers' mental health, which in turn would be associated with mothers' optimal physical health status. *Hypothesis 4:* Mothers' execution of multiple role responsibilities would mediate the links between financial strain and mother's mental health, which in turn would be associated with mothers' optimal physical health status.

Review of the Literature

Financial Strain and Women's Health

The association of financial strain and women's health has been well documented. In general, compared to men, women tend to be more financially burdened, and the demands emerging from financial strain occasion negative consequences for their mental and physical health (Gyamfi, Brooks-Gunn, and Jackson 2001; Grossi et al. 2001; Seto et al. 2005; Elliott 2001; Murry et al. 2008). The pathways that explain this process suggest that induced physiological arousal arises from effortful attempts to make ends meet with inadequate financial resources (McEwen and Lasley 2003). To the extent that financial resources are chronically strained, women may experience unrelenting cycles of increased psychological distress, resulting in upset to their physical homeostasis and disruption to overall physical well-being (McEwen and Lasley 2003; Murry et al. 2008). To this end, stressors may be directly associated with suboptimal mental health, while at the same time indirectly associated with compromised physical health through episodes of worry and distress. We sought to examine the direct and indirect relationships between chronic financial strain and African American mothers' health because of the historical income restrictions experienced as a function of their race and gender (U.S. Census Bureau 2001, 2007; King 1978). Specifically, as an aggregate group, African American women are paid less per dollar than European American men and women, as well as African American men (U.S. Census Bureau 2007), they are less likely to hold degrees of higher education than their White female counterparts, and more likely to be the sole heads of their households (U.S. Census Bureau 2001), all of which affect available resources. In the present study, we examined the extent to which financial strain was directly related to increased reports of anxiety and depression among African American mothers, as well as indirectly linked to compromised physical health.

Coping Behavior and Women's Health

Building on prior research that specifies the significance of effective coping on health outcomes, we examined the strategies through which African American mothers' response to financial strain had implications for their health functioning. Coping has been traditionally defined as either emotion-focused (i.e., geared toward changing one's own response to the situation) or problem-focused (i.e., aimed at improving some aspect of the

stressful situation; Lazarus and Folkman 1984). Examinations of coping styles in women suggest that women tend to be more sensitive to distress and, as a result, lend more attention to stressful events (Piko 2001). Women are also more likely to respond to stressors through emotion-focused strategies and seeking out support from others (Tamres, Janicki, and Helgeson 2002). To the extent that women respond constructively to stress, whether by eliciting social support or translating stressful events into meaningful experiences, they are in a better position to endure stress and strain, hence evincing protective benefits to mental and physical health outcomes (McEwen and Lasley 2003; Steptoe and Marmot 2003).

Various contextual factors have been reported to influence the mechanisms used to manage stressors (Murry et al. 2008). The presence of multiple and competing stressors, particularly stressors that are sustained and chronic in nature, can strain one's available coping resources (Murry et al. 2008). In these instances, responses to stressful events range from withdrawal from family and social activities (Campbell-Grossman et al. 2005) to a loss of perceived control over one's life circumstances (Caplan and Schooler 2007). Both responses inhibit productive help-seeking behaviors that aid in reducing the distress that emerges from trying to make ends meet, and, in turn, support behaviors needed to maintain a healthy lifestyle (Steptoe and Marmot 2003). In the present study, we were particularly interested in the extent to which mothers engaged in effective problem-solving strategies (e.g., figuring out the cause of a problem and taking action, talking with others about the problem, etc.) and perceived themselves as controlling their responses to financial strain. We therefore hypothesized that the use of effective coping behaviors would serve a protective function for African American mothers' health functioning by buffering the detrimental influence of financial strain.

Role Responsibilities and Women's Health

Examinations of the salience of social roles in women's lives suggest that maintaining varied responsibilities in multiple contexts evince costs and benefits to women's health (R. Barnett 2004). As women's role management exceeds the capacity for role engagement, role overload is likely to occur (Pearson 2008). Women may experience increased stress and strain that, over time, distract from maintaining healthful behaviors (Pearson 2008; Ainsworth et al. 2003). Economic strain may further exacerbate mothers' attempts at executing multiple roles, such that induced negative emotionality resulting from stressors may evince less nurturant and involved parenting (M. Barnett 2008; Murry et al. 2008) as well as hampering their ability to maintain network activities and responsibilities (Campbell-Grossman et al. 2005).

Conversely, role accumulation theory (Sieber 1974) suggests that the benefits women experience from multiple role engagement is notable (Ruderman et al. 2002; R. Barnett 2004). Specifically, the social connections accompanying role fulfillment boost feelings of self-worth, purpose, belonging, stability, and security, which in turn promote positive psychological functioning and self-efficacy for maintaining healthful lifestyles (Hurdle 2001; Kawachi and Berkman 2001). These benefits, however, have not been well documented among African American women in general, nor as a buffer to those executing various roles in financially strained environments, specifically. To address this need, we assessed the protective effects of African American mothers' engagement in parental and community role responsibilities on the link between financial strain and mental health functioning.

Methods

Study Sample

The hypotheses in this study were tested using data from Wave 1 of the longitudinal Family and Community Health Study (FACHS; <http://www.cfr.uga.edu/projects#fachs>), a multisite, large-scale study of neighborhood and family effects on African American children's health and development. Participants included 897 families, 475 in Iowa and 422 in Georgia, each of which included a child who was 10 or 11 years old when recruited; families with children of this age were chosen for study because systematic analyses of developmental and family processes among this population are rare.

Most (84%) of the primary caregivers in the FACHS sample were the children's biological mothers; 6% were biological fathers, 6% were grandmothers, 3% were foster or adoptive parents, 2% were other relatives, 1% were stepparents, and less than 1% were non-relatives such as babysitters. Overall, 93% of the primary caregivers were female. Their mean age was 37.1 years (range 23–80 years; $SD = 8.18$). Education among participants ranged from less than high school (19%) to graduate degrees (3%); the mode was a high school diploma (41%). Of the primary caregivers, 92% identified themselves as African American. The remaining 8% identified themselves as ethnically mixed or belonging to another ethnic group.

Participants in the Current Study

The present study was a secondary analysis of the first wave of data from the Family and Community Health Study (FACHS). A subsample of the FACHS sample was selected based on the following criteria: participants were biological mothers and primary caregivers. The current study included a subsample of 693 rural African American mothers participating in FACHS who met these criteria, of whom 293 were rearing children alone, 349 with a husband or other intimate partner, and 51 with a grandmother in addition to the husband or intimate partner. These mothers' mean age was 35.3 years ($SD = 5.77$) and 60.6% of them had at least a high school education. Mean gross household income for the subsample was \$39,362 per year, with mean per capita income in 1996 of \$6597 in Georgia ($SD = \6867) and \$6403 in Iowa ($SD = \5259). Subsample families had an average of 3 children, and 72% of the mothers were employed.

Sampling Strategy, Recruitment, and Interview Procedures

Family eligibility for FACHS participation included being an African American primary caregiver of a 10- to 12-year-old African American child. A primary caregiver was defined as the adult living in the same household as the child, who assumed primary responsibility for the child's care. Families were recruited for FACHS from census-defined Block Group Areas (BGAs) that varied considerably in racial composition and economic level. Using 1990 data, we identified BGAs in Iowa and Georgia in which African Americans made up 10% or more of the population and in which 20% to 100% of families with children lived below the poverty line. Families were recruited from 259 BGAs, 144 in Iowa and 115 in Georgia. The Family and Community Health Study (FACHS) protocol was approved by The University of Georgia's Institutional Review Board.

Recruitment strategies differed in Georgia and Iowa. In Iowa, BGAs in Waterloo (population 65,000) and Des Moines (population 193,000) that met the sampling criteria were identified. Families meeting the eligibility criteria were identified through the public schools, which provided rosters of all African American students in Grades 4 through 6. In Georgia, BGAs that met the criteria were identified in small towns and a suburban area adjacent to Atlanta. Community members that served as liaisons between University of

Georgia researchers and neighborhood residents compiled rosters of children who met the sampling criteria. Families were randomly selected from the compiled rosters in Iowa and Georgia and contacted to determine their interest in participation. Each family received an introductory letter, followed by a phone call and personal visit from a recruiter, requesting the child's and caregiver's participation in the study. The letter included a toll-free number through which families without home telephone service could contact the researchers. Families that declined were removed from the rosters, and other families were randomly selected until the required number of families from each BGA had been recruited. Recruitment rates did not differ significantly across sites (61% in Iowa vs. 68% in Georgia). Complete data were gathered from 72% of the families on the recruitment lists. Families who elected not to participate (28%) frequently cited interview length as a barrier to participation (see Cutrona et al. 2000 for further description of the FACHS sample and its recruitment strategies).

To enhance rapport and cultural understanding, African American university students and community members served as field researchers to collect data in the families' homes. Before collecting data, the researchers received 1 month of training in the administration of the self-report instruments. At each data collection wave, two home visits, each of which lasted 2–3 hours, were made to each family within 7 days, as the families' schedules allowed. During the first visit, informed consent was obtained; primary caregivers consented to their own and their children's participation and the children agreed to participate. At each home visit, self-report questionnaires were administered to the primary caregiver and child in an interview format. Each interview was conducted privately between the participant and a researcher, with no one else present or able to overhear the interview. The instruments were presented on laptop computers. Questions appeared in sequence on the computer screen, which both the researcher and the participant could see. The researcher read each question aloud and entered the participant's response using the computer keypad. Wave 2 (W2) data collection took place approximately 2 years after W1 ($M = 25$ months) and W3 data were collected slightly more than 3 years after W2 ($M = 38$ months). Caregivers received \$100 and children received \$70 for their participation.

Measures

Financial strain—Financial strain was measured using two self-report indicators: Unmet Material Needs and Can't Make Ends Meet (Conger and Elder 1994). On the 4-item Unmet Material Needs scale, mothers rated the extent to which their families had enough money to afford adequate shelter, clothing, food, and medical care, on a scale ranging from 1 (*strongly agree*) to 4 (*strongly disagree*); $\alpha = .80$. The Can't Make Ends Meet scale included 2 items: difficulty in paying bills, ranging from 1 (*no difficulty at all*) to 5 (*a great deal of difficulty*), and money remaining after bills were paid, ranging from 1 (*more than enough money left over*) to 4 (*not enough to make ends meet*), within the past 12 months; $\alpha = .69$.

Coping behaviors—Coping behaviors were measured using two indicators. On the 4-item Problem-solving Strategies Scale (Mirowsky and Ross 1989), mothers reported the extent to which they engaged in particular problem-solving behaviors such as finding the cause of a problem, talking to others about the problem, attempting to forget about the problem, or distracting themselves from thinking about the problem. The response set ranged from 1 (*strongly agree*) to 4 (*strongly disagree*); $\alpha = .38$. The 7-item Control Scale (Mirowsky and Ross 1989) assessed mothers' perceptions of the amount of control they had over their lives, using a rating scale ranging from 1 (*strongly agree*) to 4 (*strongly disagree*); $\alpha = .73$.

Role responsibilities—Measures of the latent construct of role responsibilities were developed for this study to index specific school-related and community-related maternal responsibilities. These indicators were formed by selecting items from existing scales and combining them to form new questionnaires. Cronbach's alphas were computed for each new scale. The measure of maternal school-related responsibilities included 8 items from three instruments ($\alpha = .69$): 2 items from the Parental Involvement in School Work subscale of the Family Routines scale (FRT; Conger 1995) 5 items from the Parental Monitoring Scale (MON; Thornberry, Huizinga, and Loeber 1989), and 2 items from the Familiarity with Target's Teacher Scale (FWT; Simons et al. 2003). The items from the FRT, rated on a scale ranging from 1 (*every day*) to 4 (*never*), were, "How often do you talk to [child] about schoolwork" and "How often do you help [child] with his or her homework?" The items from the MON, rated on a scale ranging from 1 (*always*) to 4 (*never*), included, "How often do you know what [child] is doing after school?" and "How often do you know how well [child] is doing in school?" Each item from the FWT was rated on its own response set. "How well do you know [child's] teachers?" was rated 1 (*not at all*) to 4 (*very well*); and "How often do you talk with [child's] teachers?" was rated 1 (*never*) to 5 (*several times*). The measure of community-related responsibilities included 9 items from 2 scales and assessed participants' involvement in clubs/organizations, religious activities, and neighborhood issues ($\alpha = .72$): 6 items from the Community Affiliation Scale (CAS; Sampson, Raudenbush, and Earls 1997) and 3 items written for this study. Of the items taken from the CAS, 5 came from the Religious Activities subscale and 2 came from the Neighborhood Cohesion subscale. CAS items, rated on response sets that varied by item, included, "How often in the past month did you attend social events with other members of your church?", "How often in the past month did you teach Sunday school or a class on religion?", and "Thinking of all the organizations, clubs, or groups you belong to, how often do you attend meetings or gatherings of these groups?" The items written for this study included, "About how often do you and people in your neighborhood do favors for each other?" and "When a neighbor is not home, how often do you and other neighbors watch over their property?" They were rated on a scale ranging from 1 (*often*) to 3 (*never*).

Predicted Outcomes: Mental and Physical Health Functioning

Mental health functioning during the past week was measured using two subscales from the Mini-Mood and Anxiety Symptom Questionnaire (Clark and Watson 1995) that mothers rated on a response set ranging from 1 (*not at all*) to 3 (*extremely*). These responses reflect a reverse coding such that high scores would indicate poor mental health. The 5-item General Distress–Depression subscale dealt with depressive symptoms ($\alpha = .80$) and the 3-item General Distress–Anxiety subscale addressed non-specific anxiety-related symptoms ($\alpha = .85$).

Physical health functioning was assessed using 2 items (Conger and Elder 1994), on which mothers compared their health status at the time of data collection ("In general, would you say your health is..") to their health status 1 year earlier ("Compared to one year ago, would you say your physical health is...") ($\alpha = .41$). Responses ranged from 1 (*poor; much worse*, respectively) to 5 (*excellent; much better*, respectively). These responses reflect a reverse coding such that high scores would reflect good physical health. Okun and George (1984) found self-reported global ratings of physical health to be reliable and strongly related to objective assessments.

Data Analysis

Because data were collected from mothers residing in Georgia and Iowa, an initial test was conducted to determine any site differences on the selected study variables. No site differences were found, and analyses were conducted on the combined sites.

The study variables were selected based on the theoretical significance of the associations between financial strain and health outcomes (Gyamfi, Brooks-Gunn, and Jackson 2001; Grossi et al. 2001; Seto et al. 2005; Elliott 2001; Murry et al. 2008), as well as the associations of stress-coping (Murry et al. 2008; Steptoe and Marmot 2003) and role responsibilities (R. Barnett 2004) with health outcomes in the lives of women. Descriptive statistics were executed on the demographic variables within the sample and correlations were conducted to examine the associations between the study variables. To determine whether the selected indicators for the study constructs clustered appropriately, factor loadings were examined in the measurement model. Next, using the Amos 4.0 software (Arbuckle and Wothke 1999), structural equation modeling (SEM) was used to test the hypothesized relations among the study variables in the conceptual model (Figure 1), because it allows for several relationships to be tested simultaneously, it accommodates measurement error, and it is capable of measuring both direct and indirect relationships (Raykov and Marcoulides 2000). Primary (χ^2/df ratio between 1 and 3) and secondary indices of fit (CFI, IFI, and RMSEA) were examined to assess model fit. Last, relying on Barron and Kenny's (1986) requirements for mediation, the extent to which financial strain was indirectly associated with mental health through stress-coping behaviors and role responsibilities was determined. In addition, a Sobel test (z) was conducted to assess the significance of the mediational effect. A z -value greater than zero indicated that the mediational effect was significant (Sobel 1987).

To handle missing data, the full information maximum likelihood (FIML) estimation method was employed. This method was selected because it circumvents potential problems such as biased parameter estimates that are more likely to occur when using pairwise or listwise deletion to handle missing data (Arbuckle and Wothke 1999). Additionally, FIML does not delete a case that may be missing a variable within a wave of data, further alleviating biased parameter estimates.

Results

The results of the bivariate correlations confirmed the expected associations of stressors with mental and physical health functioning (Table 1). The objective assessment of unmet material needs was significantly and positively associated with depressive ($r = .30, p < .01$) and anxious ($r = .18, p < .01$) symptoms, as was the subjective measure of inability to make ends meet ($r = .30, p < .01$, depression; $r = .20, p < .01$, anxiety). Similarly, unmet material needs ($r = -.20, p < .01$) and the inability to make ends meet ($r = -.16, p < .01$) were significantly and negatively associated with physical health status, indicating that financial strain resulting from these situations is associated with compromised physical health.

Measurement and Structural Models

Based on the parameters that emerged for the χ^2/df ratio, the data for the direct effect model showed marginal fit of the data ($\chi^2 = 13.61, df = 4, p = .009, \chi^2/df = 3.40$). On the other hand, the mediational model demonstrated slightly greater potential to fit the data well ($\chi^2 = 69.15, df = 23, p < .00, \chi^2/df = 3.01$). As suggested by the analysis plan, however, to proceed with certainty alternative fit indices were examined for both models. Evaluation of the structures of the latent factors revealed that the overall alternate goodness-of-fit indexes were well within accepted parameters (CFI = .96, RMSEA = .05). The loadings of the manifest variables on the respective latent constructs were adequate and significant (Figure 2). As expected, factors that assessed financial strain, coping behaviors, mental health functioning, and physical health functioning loaded significantly and positively on the latent constructs. The significant factor loadings of maternal school- and community-related responsibilities confirmed their utility as indexes of the latent construct of role responsibilities.

Testing Direct Effects

Consistent with Hypothesis 1, the inability to meet financial needs was associated with heightened depressive and anxious symptoms ($\beta = .43, p = .01$; Figure 3). Results also revealed an inverse association between financial strain and coping behavior ($\beta = -.40, p < .01$; Figure 4) and financial strain and engagement in role responsibilities ($\beta = -.73, p < .01$; Figure 4). In sum, results of the direct effects model suggest that increases in financial strain were negatively associated with mothers' mental health functioning, coping behaviors and role fulfillment.

Testing Mediation Effects

Further tests were conducted to explain the covariance among financial strain, stress-coping behaviors, role responsibilities, and women's mental and physical health functioning. Consistent with Hypothesis 2, compromised mental health was associated with suboptimal physical health ($\beta = -.29, p = .01$; Figure 3). Concurrent with Hypothesis 3, mothers who used effective coping behaviors and who reported a sense of control evinced fewer depressive and anxious symptoms ($\beta = -.33, p = .01$), which in turn was associated with optimal physical health ($\beta = -.30, p = .01$) (Figure 4). Similarly, findings from the study demonstrated support for Hypothesis 4. Mothers whose role responsibilities involved helping their children with homework and maintaining involvement in a variety of church and community activities reported fewer depressive and anxious symptoms ($\beta = -.40, p = .01$), which in turn were related to optimal physical health ($\beta = -.30, p = .01$) (Figure 4).

Sobel tests were conducted to determine the significance of: 1) mental health functioning as a mediator of the relationship between financial strain and physical health status, and 2) stress-coping behaviors and role responsibilities as effective mediators of the relationship between financial strain and mental health functioning. A z -value greater than 0 indicated a significant mediational effect (Sobel 1987). The Sobel tests demonstrated that mental health functioning ($z = 3.928, p < .001$; Table 2a) significantly mediated the link between financial strain and physical health status (Hypothesis 2) and that stress-coping behaviors ($z = 4.43, p < .001$; Table 2b) and role responsibilities ($z = 3.49, p < .001$; Table 2b) significantly mediated the link between financial strain and mental health functioning (Hypothesis 3 and 4, respectively).

Discussion

The associations of multiple role responsibilities with health outcomes have been well documented for Caucasian women (R. Barnett 2004; Pearson 2008; Ainsworth et al. 2003). Studies informed by role accumulation theory have determined that engaging in multiple responsibilities increases one's social capital and opportunities for making meaningful connections, which in turn support one's self-esteem and overall health and wellness (Ruderman et al. 2002; R. Barnett 2004). The extents to which these associations exist among rural African American women have not been fully explored. To help meet the need for such research, we specified the mechanisms and processes through which financial strain, stress-coping behaviors, and multiple role responsibilities would be associated with mental health, and, in turn, physical health. Financial strain and coping behaviors were included in our examination to explore the ways in which mothers executed multiple responsibilities while simultaneously managing stressors that emerge from the inability to make ends meet. Analyses of data from in-home interviews supported the hypotheses. These findings have implications for understanding the contribution of African American women's daily life experiences to their health functioning.

Increased financial strain was directly associated with decreased implementation of effective coping, decreased engagement in role responsibilities, and compromised mental health that affected physical health. That financial strain was a salient stressor corroborates existing studies of women's lives, which suggest that negative emotionality arising from the inability to make ends meet may incite withdrawal from loved ones and a loss of perceived control (Campbell-Grossman et al. 2005), impaired performance in various social roles (M. Barnett 2008; Murry et al. 2008), and increased psychological distress that amplifies vulnerability to suboptimal physical health (McEwen and Lasley 2003).

The results also supported tenets of role accumulation theory by demonstrating that African American women who fulfilled responsibilities to their children, communities, and religious organizations experienced enhanced mental health, which in turn was associated with optimal physical health. This enrichment of one's health and well-being through multiple roles has been found among women in various social roles across the lifespan (R. Barnett 2004; Janzen and Muhajarine 2003). Furthermore, our findings suggest that effective coping strategies and feeling in control of one's life circumstances was associated with better mental health for mothers which was positively associated with their physical health. Findings emerging from the current study lend support for Murry and colleagues (2008) work which specified the mechanisms and processes through which stressful life events and coping behaviors were associated, directly and indirectly, over time with partnered rural African American women's psychological functioning and physical health. Findings from the current study, as well as Murry et al. (2008) have implications for identifying malleable targets to inform intervention and prevention efforts to promote wellness among rural African American women across various family forms.

Limitations and Implications

Several limitations of the current study should be considered in assessing the results. First, the present study had a cross-sectional design, and thus cannot imply causality nor assess the direction or relation of the selected study variables over time. Second, several potentially intersecting biases (e.g., social acceptability bias of self-report, selection bias, and participation bias) may have limited the validity of the responses, representativeness of the study sample, and generalizability of the results, respectively. Our lack of tracking rates of eligibility contributed to our inability to assess the representativeness of the sample and the potential for selection bias. Last, this study did not completely measure the entire range of stressors experienced by mothers and confounding factors that might affect health. Models used in future studies should include more complex processes and evaluations of role responsibilities, caregiver stress, role strain, and work/family balance as contributors to African American mothers' health functioning.

Despite these limitations, the current results extend the knowledge base of contributors to rural African American mothers' health. The association of family and community connections with positive outcomes underscores a need to consider the mechanism(s) through which a sense of belonging and purpose foster mental and physical well-being among African American women. We recommend qualitative research methodologies to aid in unpackaging the significance of role fulfillment and reactions to compromised fulfillment of important social roles. McBride's (1993) model of GYN-ecology offers an excellent model from which to structure focus group questions, in-depth interviews, and narrative analysis probes. Through this inquiry, women become participants in the construction of knowledge regarding issues of their own health and wellness, including the ways in which health through social relationships and networks is experienced. Additionally, we contend that the context in which social role performance is embedded also requires additional investigation. Symbolic interaction theory (LaRossa and Reitzes 1993) may provide a useful

framework through which social roles can be understood through social histories and the unique cultural expectations of womanhood.

Given the prevalence of compromised health outcomes among African American women, there is an increased likelihood that African American mothers who fulfill multiple roles may also be balancing the added responsibility of chronic illness management. Insight gained from examinations of the significance of role fulfillment in African American mother's lives can benefit health management interventions. For example, acknowledging the salience of personal and public roles presents an opportunity to incorporate significant individuals as sources of support for various health behavior changes. Introducing issues such as role negotiation, boundary setting, and coping strategies into existing health promotion initiatives for African American women may help to support adherence to health behavior change in the context of family management responsibilities (Napholz 2000).

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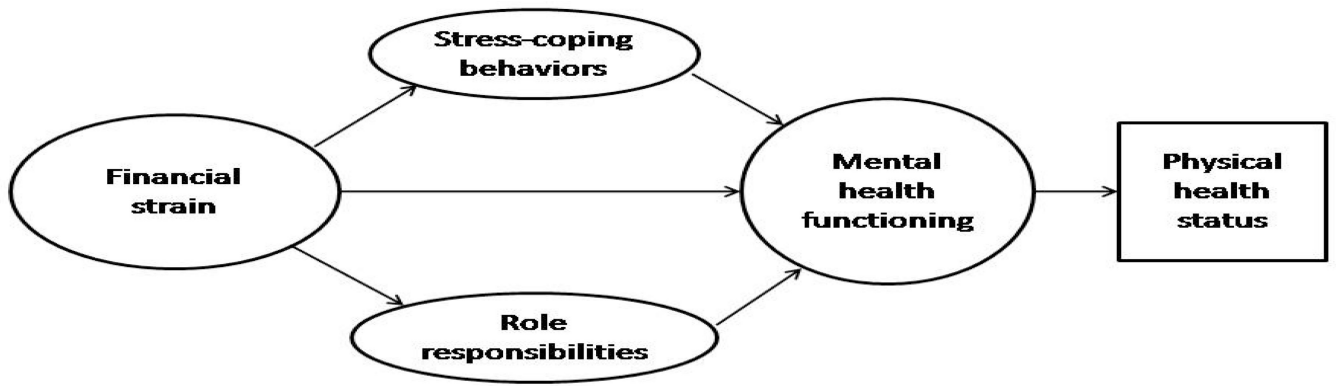


Figure 1.
The conceptual model for the relationships between research variables.

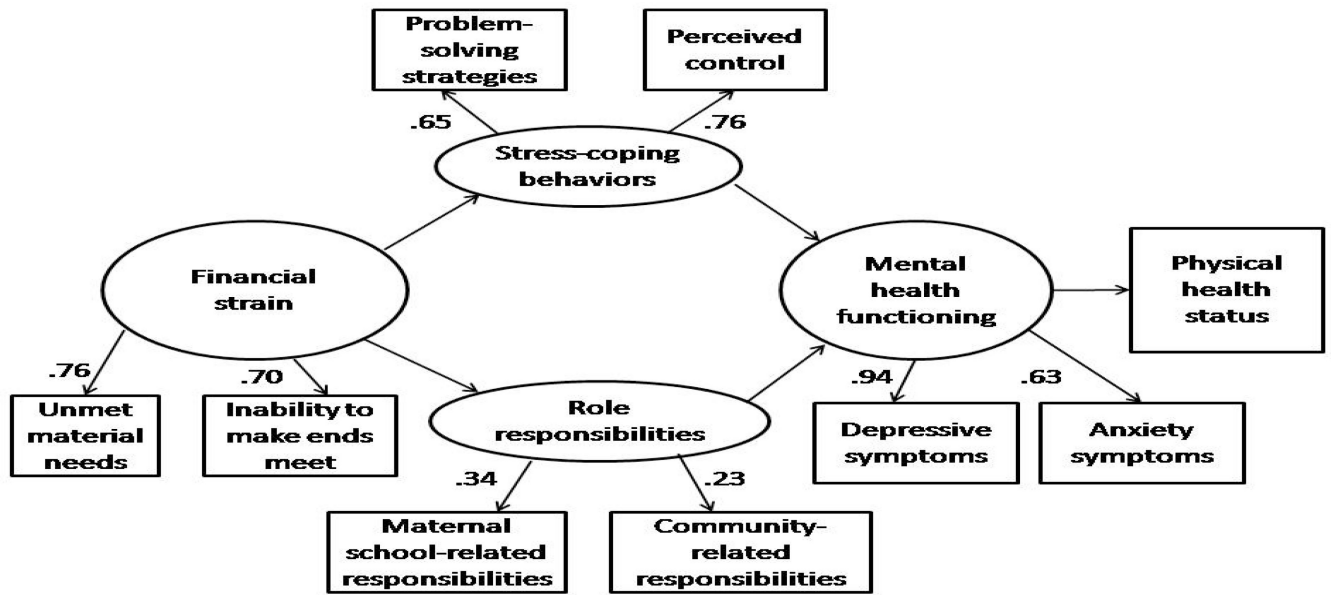
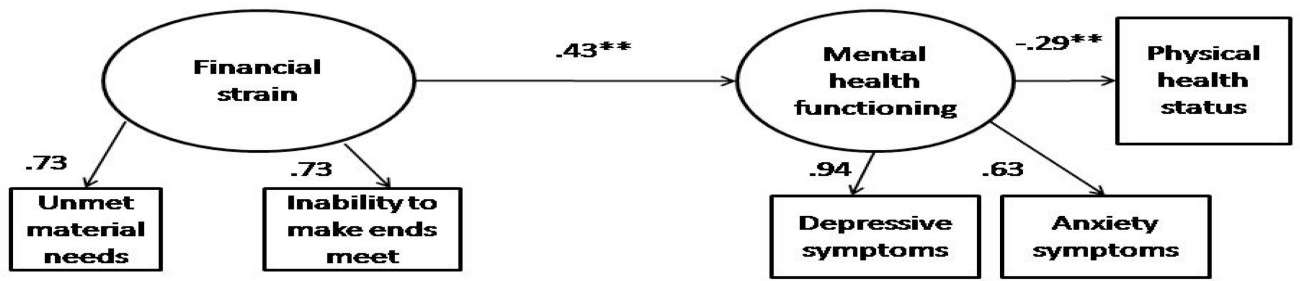


Figure 2.
 Factor loadings for the measurement model examining financial strain, stress-coping behaviors and role responsibilities on mothers' mental health functioning.



** p<.01
 $\chi^2=13.61(4 \text{ df}), p=.009$
 Ratio=3.40; RMSEA=.06;
 CFI=.99; IFI=.99

Figure 3. Structural model testing indirect effect of mothers’ mental health functioning on the paths from financial strain to mothers’ physical health status.

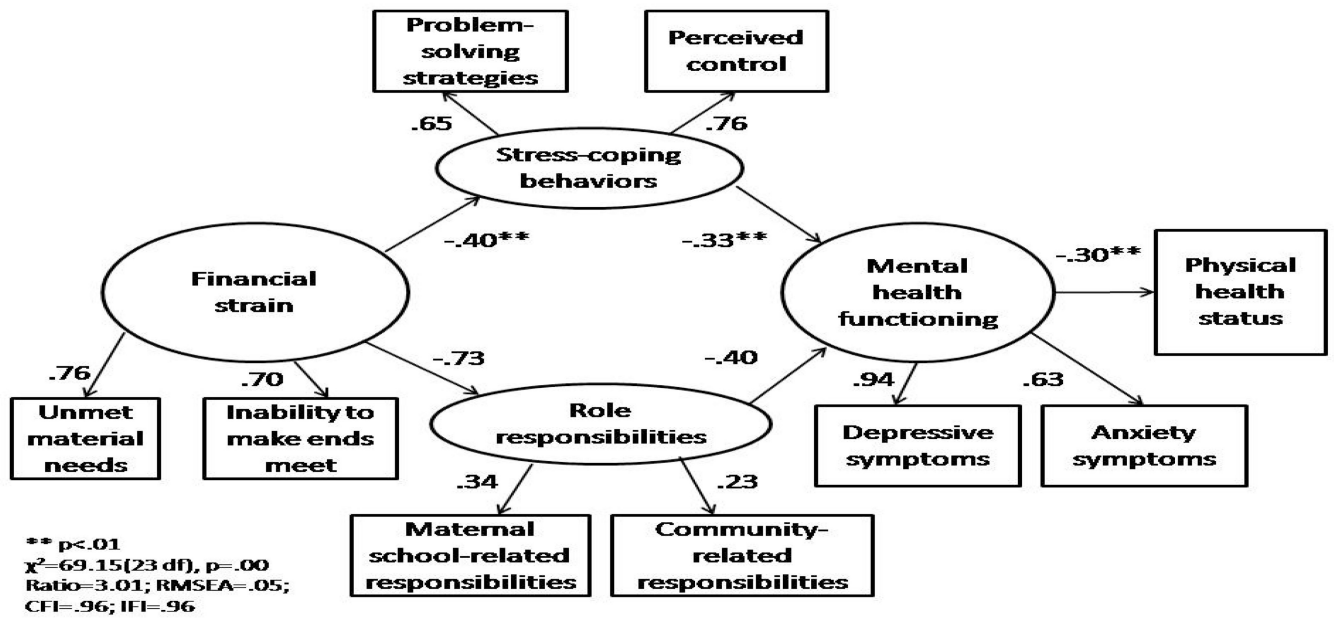


Figure 4. Structural model testing indirect effect of stress-coping behaviors and role responsibilities on the paths between financial strain, mothers' mental health functioning and mothers' physical health status.

Table 1

Correlations, Means, and Standard Deviations for All Study Variables

	<i>Measures</i>								
Measures	1.	2.	3.	4.	5.	6.	7.	8.	9.
<i>Financial strain</i>									
1. Unmet material needs	--								
2. Can't make ends meet	.54**	--							
<i>Stress-Coping Behaviors</i>									
3. Problem-solving strategies	-.18**	-.20**	--						
4. Perceived control	-.23**	-.19**	.50**	--					
<i>Role Responsibilities</i>									
5. School-related	-.18**	-.15**	*	.12**	--				
6. Community-related	-.11**	-.06	.17**	.13**	.17**	--			
<i>Mental Health Functioning</i>									
7. Depressive symptoms	.30**	.30**	-.27**	-.33**	-.13**	-.10**	--		
8. Anxious symptoms	.18**	.20**	-.15**	-.20**	-.15**	-.07	.59**	--	
<i>Physical Health Functioning</i>									
9. Physical health status	-.20**	-.16**	.16**	.18*	.10**	.16**	-.28**	-.14**	--
<i>M</i>	9.20	5.66	11.60	21.56	27.30	15.49	6.50	4.40	6.88
<i>SD</i>	2.54	2.04	1.57	3.07	3.15	6.53	1.85	1.45	1.48

* $p < .05$.

** $p < .01$.

Table 2a**Sobel Test for Indirect Effect of Mental Health Functioning**

Indirect Effects	Sobel Test (z)	p
Financial strain → Mental Health Functioning → Physical Health Status	3.93	.00

Table 2b**Sobel Test for Indirect Effects of Coping Behaviors and Role Responsibilities**

Indirect Effects	Sobel Test (z)	p
Financial strain → Coping Behaviors → Mental Health Functioning	4.43	.02
Financial strain → Role Responsibilities → Mental Health Functioning	3.49	.04