

In Brief

This article examines the influence of social and personal stressors on the physical and psychological functioning of African-American mothers with type 2 diabetes. The conceptual model presented proposes that exposure to multiple stressors may lead some African-American women to implement exaggerated coping behaviors to prove their competence, which in turn may prevent them from seeking and accepting the help they need. The negative consequences for health of this “superwoman syndrome” are emphasized. The moderating or buffering effect of social support and maternal psychological resources on the links between stressors, coping behaviors, and health are also considered.

Factors and Processes Associated With Physical and Psychological Health of African-American Mothers With Type 2 Diabetes: A Heuristic Model

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Health care professionals are becoming more interested in the environmental factors associated with the control of diabetes,^{1,2} but few researchers have examined the impact of endemic stress on diabetes self-care and psychological functioning. Endemic stress is defined as a heightened awareness of the occurrence of stressful life events that create conditions characterized as mundane sources of continuous and manifold changes in the everyday life experiences of marginalized individuals. Endemic stress, for example, acknowledges that the daily life experiences, including stressors, of African Americans are greatly affected by racism, oppression, and discrimination emerging from several external sources, such as economic, political, social, and physical environmental conditions. Race-related stressors appear to induce physiological and psychological arousal, which may have consequences for health.³ For these reasons, there is a need to develop conceptual models and paradigms that include race/ethnicity, social class, age, and sex to enhance our understanding about why some people are healthier than others. Such information can have implications for policy development, research, and resource allocation.⁴

In this article, we limit our search to empirical or theoretical published articles that may inform our understand-

ing of stress, coping behaviors, and physical and psychological health of African-American women. We focus specifically on the influence of endemic stress on diabetes and depression management of African-American women. Our aim is to emphasize that the interlocking oppressions of race and sex are inseparable in the lives of African-American women⁵ and, therefore, must be considered together in order to understand how they influence the conglomerate of stressors these women experience and how these women respond to the demands associated with occurring stressors.

We describe how the combined effect of social, family, and individual stressors create endemic stress that can evoke coping behaviors that may compromise the physical and psychological health of African-American mothers with type 2 diabetes. We have relied on available theoretical and empirical evidence to provide support for the development of a conceptual model (Figure 1) that identifies specific factors that may provide directions for future efforts in assessing the underlying processes and mechanisms by which stressors and coping can lead to the co-occurrence of compromised physical and mental health of African-American women. The conceptual model incorporates a stress-coping framework for physical and mental health⁶; conceptions of the

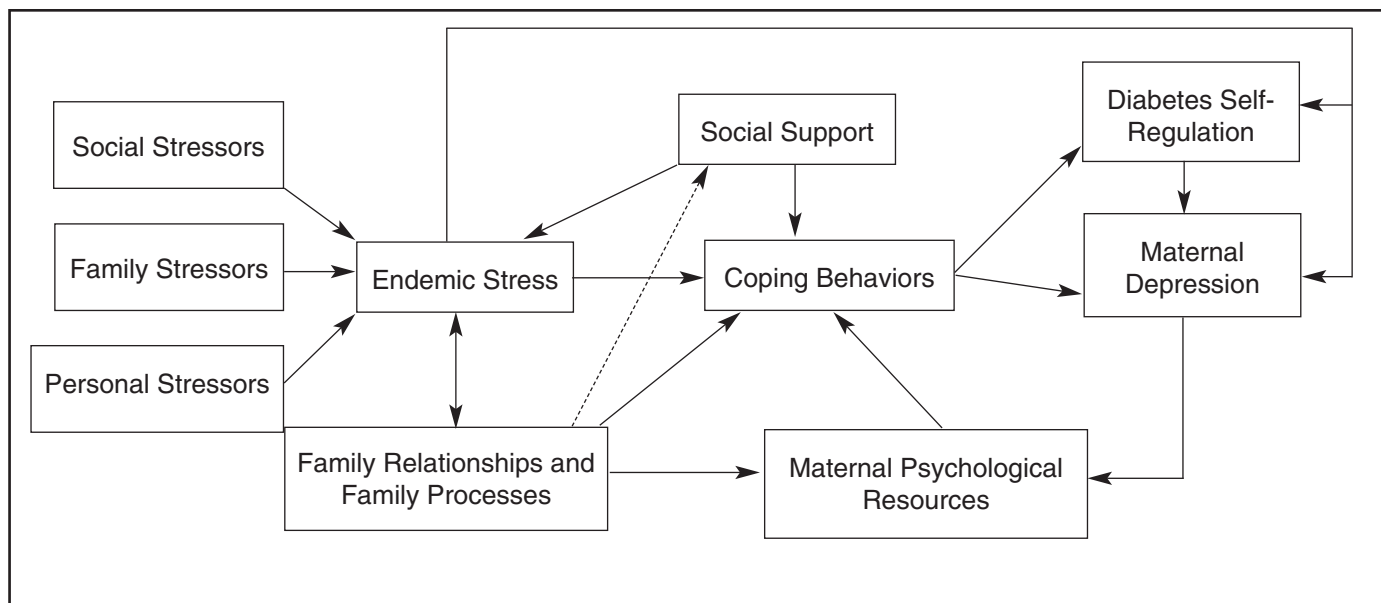


Figure 1. Conceptual model.

ecology of life-span development,^{7,8} self-efficacy, and self-regulation⁹; and research on competence and health-promoting family processes among African Americans.^{10–14} The model also has been informed by a report from the Institute of Medicine,¹⁵ which called for greater understanding of the ways in which social contexts, such as families, communities, society, and environment, affect individuals' ability to manage chronic diseases.

We focus specifically on how social, familial, and personal forces, defined as stressors, create pervasive stress in these women's lives, but acknowledge that the coping behaviors they use may be harmful and may feed back into their compromised health behaviors. The quality of family relationships, levels of social support, and personal psychological resources are hypothesized to buffer the links between stressors, negative coping behaviors, and compromised health.

Illustrated in Figure 1 are pathways modeling those key constructs we perceive to have significant impact on the everyday life experiences of African-American mothers diagnosed with type 2 diabetes. We describe how these contextual processes instigate the engagement of stress-coping behaviors that are hypothesized to explain variations in self-regulation and metabolic control of their disease and, in turn, affect these mothers' psychological well-being.

Although these processes are likely to operate for all women regardless of

race or ethnicity, certain processes, such as racism, are unique to women of color, particularly African-American women. Health professionals need to consider social, environmental, and individual factors to understand and treat women's chronic and psychological health, and such information is also useful in prescribing treatment and designing programs and approaches that will foster profound effects and lasting benefits. In the next section, we provide a brief description of the pervasive nature of type 2 diabetes among adult African Americans.

African Americans aged 20 years or older are twice as likely to have type 2 diabetes as whites of similar age,¹⁶ and they experience greater morbidity and mortality from the disease.¹⁷ We propose here that the differential effects of diabetes on African Americans may be attributed to the fact that this population must balance the demands associated with managing a major chronic illness in the midst of multiple stressors occurring in several domains of their lives. The manifestation of this stressor overload may be evinced in compromised psychological and physical health.

In the general diabetic population, poor glycemic control or extreme shifts in blood glucose levels may make individuals vulnerable to depression and anxiety,¹⁸ and conversely, depression can compromise individuals' ability to maintain an appropriate self-care regimen. Among adults with diabetes, rates of clinical depression and anxiety are about two to four times higher than in the general population.^{18,19} African-

American women, as a group, bear a heightened risk of depression because of poverty, unemployment, low educational attainment, and single parenthood.^{20,21} This high likelihood of mental health comorbidity notwithstanding, however, researchers know little about the additive effects of diabetes and depression for African-American mothers. Furthermore, no studies have explored the unique and combined contributions of social, family, and personal stressors to those effects.

To prevent serious physical and mental complications in African-American women with diabetes, we need a better understanding of how they meet the combined challenges of managing their diabetes and coping with everyday stressors. Correspondingly, health care professionals who care for African-American women must consider factors beyond clinical needs, especially because these factors may hinder a woman's ability to care for herself. The recognition that health behaviors do not occur in a vacuum suggests the need for more consideration of how contextual factors (e.g., race/ethnicity, social class, sex, and social, family, and personal stressors) affect the health functioning of women. Such knowledge should lead to new approaches for education, treatment, and support for African Americans with type 2 diabetes.²²

We provide here guidance on ways to integrate contextual processes into approaches for addressing the demands associated with managing type 2 diabetes. We do so by illustrating how African-American women may respond

to endemic stress by drawing on resources that buffer them from the consequences of excessive stress and ineffective coping behaviors (Figure 1). Contextual processes reflect ways in which broader social systems, subculture values, and orientations influence the family functioning. We contend that African-American women with type 2 diabetes may respond to endemic stress by engaging in stress-enhancing coping behaviors, which in turn compromise self-care through the manifestation of lowered self-regulation and heightened depressive symptoms. For clarity, we define self-regulation of diabetes as adherence to prescribed dietary, exercise, foot care, and glucose monitoring practices through setting goals, forming plans to meet those goals, and persisting in working toward those goals.⁹

Also presented in the model are ways in which endemic stress is useful in understanding how stressors, although emerging from multiple sources, have implications for everyday life experiences, which in turn affect the diabetes self-management and psychological functioning of African-American mothers. We propose that multiple demands associated with the presence of social, family, and personal stressors create endemic stress that can, in turn, compromise physical and mental health functioning, including diabetes self-regulation.^{13,23,24}

Reasons why endemic stress is useful in models for understanding how stressors affect African-American mothers with diabetes can be understood from Fried's²⁵ description of how stressors are manifested as endemic stress. These stressors are "conditions of continuous and manifold changes, threats or deprivations . . . embedded in daily life events, [that] have diverse origins in economic, political, social, physical, environmental, psychological, or physiological conditions and events." Although endemic stress may be created by stressors external to the individual (e.g., racism, discrimination, and oppression), the induced response to these stressors are experienced internally and can be manifested through self-blame, guilt, depression, and loss of self-esteem, all of which have health consequences.^{26,27}

Thus, mothers with type 2 diabetes may respond to endemic stress by engaging in negative coping that precludes self-care strategies. Studies have shown that African-American women

often respond to sexism, racism, and other forms of social oppression in a passive manner, evincing low perceptions of controllability.²⁸ Thus, they may attempt to gain control through more proximal domains of their life, such as over-performance in fulfilling their family roles. They may also engage in behavior characterized as relentless, caring, nurturing, and giving for the sake of the family. This coping pattern may have implications for health functioning. The extent to which this hypothesis can be supported, however, has not been empirically tested and warrants further investigation. In the next sections, we discuss available evidence supporting the key constructs selected, as well as the paths proposed, in our conceptual model.

Social, Family, and Personal Stressors
Racism, which would be included as a social stressor in our model (Figure 1), remains a major challenge confronting African-American families. It constitutes a primary source of personal and family stress,^{29,30} and when experienced, it may heighten physiological and psychological stress responses.³¹ Although changing norms and the Civil Rights Act made discrimination immoral and illegal and thus resulted in less overt expressions of prejudice, discrimination continues to exist and has significant effects on the lives of African Americans in general and African-American women, in particular.

African-American women continue to experience the dual oppression of racism and sexism.³²⁻³⁴ They are confronted with triple oppression associated with having to deal with life situations related to race, sex, and class.³⁵ Further, this triple jeopardy explains why a disproportionate number of African-American women are economically disadvantaged.

Contemporary forms of racial discrimination, although more subtle than overt expressions, are no less damaging to the health and well-being of African Americans.^{36,37} Because studies have shown that experiencing racial discrimination affects stress responses,³¹ including heightened depression,¹³ we propose that the link between endemic stress and maternal self-regulation of diabetes and depression will be strongest among African-American mothers experiencing relatively higher levels of racial discrimination.

Although little is known about the extent to which perceived discrimination leads to increased risk of disease,³ studies have shown that experiences with racism mobilize autonomic functioning, resulting in hypertension and elevated levels of anxiety and depression among African-American adults.³⁸ Racism creates unique stress by impeding access to health care services, fostering stress-related illnesses, and exposing employed African-American women to work-related dangers.³⁹ In addition, exposure to racism may lead some African-American women to implement exaggerated coping behaviors (e.g., the need to appear in control or to be poised at all times) to prove their competence. This response has been called the "superwoman syndrome." Unfortunately, engaging in superwoman behaviors can prevent African-American women from seeking help when they need it.⁴⁰

Historically, African-American women have been seen as resilient in the face of all odds and have been viewed as the caregivers of the family and community⁴¹ at the expense of their own needs and well-being. This view may be a result of African-American women's early internalization of the message that they should be emotionally and economically self-reliant.⁴⁰ Despite the potential benefits of overcoming extraordinary circumstances, engaging in behaviors reflective of the superwoman prototype can distract African-American women with diabetes from making the significant lifestyle changes required to manage a serious chronic illness such as diabetes.

We emphasize the behaviors associated with the superwoman prototype to underscore the link between personal and family stressors and women's health. In contemporary American society, women, regardless of race, ethnicity, and social class, take on many roles, such as mother, wife, daughter, employee, and caregiver to aging parents. Exclusive concentration on managing and balancing such multiple roles can be a major barrier to self-care.

Concern raised about role overload, unrealistic expectations, and lack of self-care by African-American women has been grounded in theoretical explanations emerging from black feminist thought. Relying on this perspective, Collins⁵ concedes that not only are African-American women socialized to be caregivers, but also

there is an expectation within African-American culture that African-American women will engage in self-sacrificing behaviors for the sake of the family. Accepting this cultural expectation and, in turn, adopting related behaviors for an African-American woman to be a “ubiquitous strong matriarch,”⁵ has implications for compromised self-care.

An African-American woman who has diabetes and assumes multiple roles within her family or community may experience role overload as she attempts to meet the demands of her illness, her self-management needs, and the community's expectations. If she decides to measure her self-worth in terms of the health and well-being of her family, or if she contributes to the community leaving limited time to take care of herself, both of which would be consistent with the superwoman syndrome, she may suffer serious consequences. One example would be considering her family's dietary needs and preferences for certain foods to be more important than her own need to establish healthful eating patterns.⁴²

Clearly, trying to manage multiple demands to perfection, but not expecting to experience additional stress or to compromise one's mental and physical well-being, may be unrealistic in the extreme. We know from earlier studies that “superwoman” coping behaviors may increase stress, compromise family functioning, and decrease personal and family satisfaction.^{43,44}

Desiring to do it all, in and of itself, need not have negative consequences, however. Whether it does may depend in large measure on whether people use active instead of avoidant coping and whether they have ample resources or protective factors available.

Active coping strategies evoke positive results because the behaviors affect the stressors directly, either through behavioral (such as action to prevent a problem) or cognitive (such as positive thinking about the stressor) means. Studies have shown that using a more direct approach, such as active problem-focused coping, to manage stressful life events, including racism, lowered blood pressure levels in African-American women.²⁸

On the other hand, avoidant coping strategies, such as distraction, denial, and unfocused anger, showed lower gains in both blood pressure regulation and psychological well-

being.²⁸ Avoidant coping often is associated with poor individual adjustment,^{45,46} and fantasizing, anger, and self-blame are associated with poorer adjustment among patients with diabetes, hypertension, and rheumatoid arthritis.⁴⁷ Moreover, anxiety, hostility, depression, self-consciousness, and vulnerability are also significantly related to poor glycemic control.⁴⁸

We propose that similar coping behavior will occasion comparable outcomes in our conceptual model (Figure 1). We propose that African-American mothers with diabetes who engage in active coping strategies will experience less depression and display greater adherence to their prescribed treatment plans than will mothers who use avoidant coping strategies.

Family Relationships

Family relationships and family processes may serve as protective factors that moderate the relationship between stressors and undesirable coping behaviors. They also may mediate the link between coping behaviors and African-American women's health. Thus, both a family's active support for dietary changes, exercise, and monitoring of blood glucose concentrations and the positive relationships among extended family members may buffer African-American women from the negative consequences of stress. Family relationships that feature high cohesion and low conflict⁴⁹ and a willingness to address rather than to avoid problems⁵⁰ are associated with greater adherence to self-care treatment plans.

In our heuristic model, we propose similar family effects on maternal mental health. Also proposed in the model is a path that acknowledges the detrimental effect of low-quality family relationships and ineffective family processes for mothers managing multiple stressors.

Social Support

Social support is a particularly salient protective factor for African-American families. Strong extended family networks serve as culturally based influences that buffer the direct and indirect effects of stressful life events on family functioning.¹³ In addition, mothers who have supportive social networks experience better psychological functioning and less role strain.⁵¹ Such support systems are particularly important to African-American mothers because they are more likely to rely on extended family for child care,

emotional support, and occasional financial support.⁵² Such support not only alleviates economic stressors and role strain, but also buffers the link between existing stressors and compromised psychological function.⁵³

For mothers with diabetes, stress reduction may enhance self-regulation by increasing time for self-care. It may also have the benefit of improving the mother's affect, which may well make others more likely to offer help. We know from Beach et al.⁵⁴ that the irritability that frequently accompanies depression and anxiety often leads to a decrease in emotional and tangible support from family members or extrafamilial support networks. Rather than interact with a hostile person, family members and others tend to disengage from the person demonstrating the negative affect, thus depriving the person of support when she may need it most. In general, support provided by family is related more strongly to physical and mental health outcomes than to the number or quality of relationships.⁵⁵

Maternal Psychological Functioning

The model also includes the hypotheses that high-quality family relationships will enhance maternal psychological resources (optimism, sense of control, and religiosity) and that maternal psychological resources will be indirectly linked to self-regulation practices and maternal depression through their impact on coping behaviors. We expect active coping strategies and a greater focus on self-care to foster higher levels of maternal psychological resources, which will, in turn, facilitate diabetes self-regulation and enhance psychological functioning. We also propose that maternal psychological functioning will feed back to influence future coping behaviors, which will affect future diabetes self-regulation and psychological functioning.

Implications

Drawing on available evidence in several disciplines, we propose a model that offers a framework to demonstrate the complexity of the life patterns of African Americans who are confronting the management of type 2 diabetes. Emphasized in our model is a set of circumstances that may explain African-American women's decreased ability to carry out such self-management.

Issues discussed in this article suggest that adherence to self-management is contingent on much more than what health care providers can observe in the clinical setting. To better understand patient outcomes and the ability to self-regulate, we must develop a greater understanding of the ways in which stressors emerging from multiple domains frame an array of contextual processes that can hinder or support a person's ability to develop and maintain appropriate goals for diabetes care.

To date, few studies have explored how social, familial, and personal stressors can affect both diabetes care and psychological functioning in the African-American population. Further, studies examining the health consequences of racism, oppression, and discrimination for African-American women are also rare. This conceptual model identifies important factors and processes that may be indirectly associated with self-regulation outcomes of African-American women with type 2 diabetes.

This model emphasizes that, along with employing traditional interventions to identify behavioral risk factors associated with metabolic control (i.e., diet, physical activity), there is a need to better understand environmental and social factors that can compromise physical and mental functioning when African-American mothers have diabetes. The model also offers a framework suggesting that several protective factors can aid African-American women in their attempt to alter their lifestyles to accommodate their needs as people with diabetes. For example, relying on positive coping styles, family relationships, and social support can all enhance an African-American woman's self-regulation by buffering the link between stressful life events and self-care.

This model also provides a framework for developing future prevention and intervention approaches by placing the treatment of diabetes in a broad ecological context and linking physical (self-regulation of diabetes) and psychological (maternal depression) health as outcome targets. Few studies have considered the co-occurrence of both physical and psychological health in stress and coping research studies of African-American women, in general, and those with type 2 diabetes, in particular. We offer suggestions for testing an empirical model that may inform the develop-

ment of culturally sensitive programs for African Americans with type 2 diabetes.

We have offered here suggestions for why health care providers should begin to gather more information about contextual factors, as well as family and individual processes, to better determine how context and process may affect diabetes care. Enlisting more family members in treatment may also help African-American women in their attempt to maintain an appropriate diabetes self-management regimen.

Although this model was developed for African Americans, we realize that it can also apply to other racial and ethnic groups with similar contextual/environmental experiences. Future research should include testing this model to identify how diabetes self-care is moderated and mediated by physical and psychological functioning.

By using this methodology, that is, by framing large bodies of research under the organizational structure of a conceptual model, we are able to glean the multiple features of African-American mothers' environment and stress-coping behaviors and conditions that affect health-promoting behaviors, both physical and psychological. We encourage health practitioners to give strong consideration to the utility of this model and recognize the interrelationship of adherence to treatment and psychological function, which may in turn have implications for care-seeking behavior and self-care. Efforts to design treatment programs and interventions should consider the multiple contexts that affect the everyday life experiences of women rearing children in combination with managing the demands associated with self-regulating a chronic illness.

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