Psychosocial Predictors of Depression Among Older African American Patients With Cancer

Jill B. Hamilton, PhD, Allison M. Deal, MS, LTC Angelo D. Moore, PhD, Nakia C. Best, MSN, Kayoll V. Galbraith, BSN, and Hyman Muss, MD

Depression is a significant health concern, affecting an estimated 15%–25% of all patients with cancer (Chen, Chen, & Yu, 2011; Reyes-Gibby, Anderson, Morrow, Shete, & Hassan, 2012). Depression particularly is a concern among older patients and survivors (Nelson et al., 2009; Perkins et al., 2007), those with a low socioeconomic status (Lo et al., 2010), and those with severe cancer treatment-related symptoms (Boyd et al., 2012). Generally, patients with cancer in depressed moods are less likely to participate in treatment decisions (Block, 2010) or seek out social support (Kleiboer et al., 2011) and more likely to have declines in physical functioning during treatment, drop out of treatment (Wells, Palinkas, Qiu, & Ell, 2011), and have shorter survival times (Chen et al., 2011) than those patients who are not depressed.

Compared to Caucasians, older African American patients with cancer are more likely to have advanced-stage cancers, more comorbidities, and functional limitations, placing them at higher risk for depressive moods (Zhang, Gary, & Zhu, 2012). Social factors also may increase the risk of depression among older African American patients with cancer, as they are more likely than their Caucasian counterparts to live below the poverty level, lack private health insurance, and have less than a high school education (U.S. Census Bureau, 2010). Older African Americans are more likely to be employed in the service sector (U.S. Census Bureau, 2010); therefore, they are more vulnerable to job losses and extended layoffs. Depression among older African American patients with cancer also may be influenced by a reluctance to express emotional distress to family members, engage in support groups with other cancer survivors (Gullatte, Phillips, & Gibson, 2006), and seek mental health care (Poussaint & Alexander, 2000). Regardless of ethnicity, undetected and untreated clinical depression has been linked to poor treatment adherence (Adler & Page, 2008; Fann, Fan, & Unützer, 2009) and a poor quality of life (Kroenke et al., 2010) in patients with cancer. Evidence to date suggests that, among patients with cancer, older African Americans

Purpose/Objectives: To determine whether psychosocial factors predict depression among older African American patients with cancer.

Design: A descriptive correlational study.

Setting: Outpatient oncology clinic of a National Cancer Institute–designated cancer center in the southeastern United States.

Sample: African American patients with cancer aged 50–88 years.

Methods: Fisher's exact and Wilcoxon rank-sum tests were used to evaluate differences between patients who were possibly depressed (Geriatric Depression Scale) or not. Multivariate linear regression statistics were used to identify the psychosocial factors that predicted higher depression scores. Education and gender were included as covariates.

Main Research Variables: Religiosity, emotional support, collectivism, perceived stigma, and depression.

Findings: Participants (N = 77) had a mean age of 61 years (SD = 8.4), and a majority were well-educated, insured, religiously affiliated, and currently in treatment. Participants who were in the lowest income category, not married, or male had higher depression scores. The multivariable model consisting of organized religion, emotional support, collectivism, education, and gender explained 52% (adjusted R^2) of the variation in depression scores. Stigma became insignificant in the multivariable model.

Conclusions: Psychosocial factors are important predictors of depression. Emotional support and organized religious activities may represent protective factors against depression, whereas collectivism may increase their risk.

Implications for Nursing: Nurses need to be particularly aware of the potential psychological strain for patients with collectivist values, experienced stigma, disruptions in church attendance, and lack of emotional support. In addition, the treatment plans for these patients should ensure that family members are knowledgeable about cancer, its treatment, and side effects so they are empowered to meet support needs.

Knowledge Translation: Among older African American patients with cancer, emotional support and reassurance from family and friends that they will not abandon them decreases the likelihood of depressive symptoms and minimizes the impact of stigmatizing responses, but the perception that the illness is placing a strain on the family increases the likelihood of such symptoms. Emotional support likely is a stronger predictor of depressive symptoms than religious service attendance.

report lower rates of depression than Caucasians. However, whether that finding is the result of a pattern of under-reporting depression (Zhang et al., 2012), under-diagnosing depression (Akincigil et al., 2011; DeJesus, Diaz, Gonsalves, & Carek, 2011), or protective elements within their culture (e.g., strong religious orientation, frequent church service attendance) is unclear (Reese, Thorpe, Bell, Bowie, & LaVeist, 2012).

Certain psychosocial factors (e.g., religion, collectivism) influenced by culture play a critical role in the psychological well-being of African Americans. Those psychosocial factors, generally accepted as protective within the larger African American community, may become a burden with a cancer diagnosis and place African American patients with cancer at a higher risk for depressive symptoms (Kagawa-Singer, Dadia, Yu, & Surbone, 2010). Psychosocial factors grounded in one's culture that influence psychological outcomes, such as depression, are understudied among diverse populations and are not clearly understood (Kagawa-Singer et al., 2010). Examinations of those factors and the ways they impact health are particularly useful in enhancing understanding of the behavioral responses to illness among racial and ethnic minority cancer populations (Kagawa-Singer et al., 2010). In this current article, the authors attempt to disentangle the influences of a group of cultural factors on the psychological well-being of African American patients with cancer. These findings are anticipated to facilitate the identification of subgroups of African American patients with cancer at risk for depression, contribute to the design of intervention studies, and ultimately improve culturally relevant care delivered to this underserved population.

Researchers increasingly are examining influences of religion on health outcomes among patients with cancer. However, religion has long been recognized as a psychosocial factor important to the psychological well-being of African American populations (Taylor, Chatters, & Levin, 2004). Compared to other U.S. populations, African Americans are more likely to attend church, believe in God, and pray (Sahgal & Smith, 2009). Although a strong religious orientation among African Americans is associated with increased social support (Holt et al., 2009; van Olphen et al., 2003), the greatest benefit likely is derived from church attendance, which allows for the release of emotions associated with stressful life events (Mbiti, 1999; Raboteau, 2001), resulting in the reduction of depression and stress often associated with illness (Bradshaw & Ellison, 2010; Lawler-Row & Elliott, 2009). However, severe treatment-related symptoms associated with a cancer diagnosis may restrict church attendance, and that limitation may lead to increased depressive symptoms (Deimling et al., 2006).

Collectivism, another psychosocial factor and important survival mechanism in ethnic minority populations, emphasizes interdependence and priority of the group (or family) over individual needs and goals (Almeida, Molnar, Kawachi, & Subramanian, 2009). Historically, the survival of African Americans has depended on the collective actions of extended families. White (1985) and Jones (1995) described the cooperative nature of African American slave families working together in and out of the fields to overcome the stresses and burdens of slavery. They helped each other with work roles, child care, and other domestic activities so that adequate food and clothing were obtained for the family. After slavery, in southern rural areas where African Americans supported themselves through work as sharecroppers, families and extended kinship clusters usually stayed together as they migrated from plantation to plantation in their attempts to survive (Jones, 1995). Those family clusters banded together to form a mutual aid system to help care for children and older adults and to share whatever food, clothing, or shelter they had (Jones, 1995). Collective actions among African Americans continue in response to racism and oppression, limited access to high-quality health care, limited material resources, and poor health status; African Americans engage in collective actions such as sharing material resources and providing information, encouragement, and assistance to families, friends, and neighbors when personal or health problems arise (Gutman, 1974; Stack, 1974). Therefore, collectivism should function in a protective role. However, the endorsement of collectivistic values can be a challenge to African American patients with cancer who perceive their illness as a burden or disruptive to the functioning of the immediate and extended family unit (Hamilton, Moore, Powe, Agarwal, & Martin, 2010). When patients are concerned with protecting the well-being of family members, they may be hesitant to ask for help with their cancer care and forego their own needs for mental healthcare (Yoo, Aviv, Levine, Ewing, & Au, 2010).

Stigmatizing attitudes toward cancer are believed to no longer be prevalent in the United States; however, these attitudes and beliefs still persist among some cancer populations (Else-Quest, LoConte, Schiller, & Hyde, 2009; Phelan et al., 2013) and appear particularly prevalent among African Americans (Burki, 2010; Wray et al., 2009), increasing their risk of depressive symptoms. African Americans may have existed in an environment where cancer was always perceived as the "big C" and a cancer diagnosis resulted in death (Burki, 2010; Hamilton, Moore, et al., 2010). African Americans have reported that their primary experiences with cancer were that patients with cancer were isolated and the illness was not to be discussed (Hamilton, Moore, et al., 2010; Wray et al., 2009). That fear of cancer also is linked to past experiences, where overwhelming perceptions of cancer are associated with relatives and friends who

ultimately died from the disease (Hamilton, Moore, et al., 2010). Encounters with family and friends who appear fearful may result in African American patients with cancer withdrawing from social networks, isolating themselves, and refusing to disclose illness-related information (Hamilton, Moore, et al., 2010; Heiney et al., 2011). These fears and stigmatizing behaviors contribute to depressive symptoms, particularly during a time when support is critical.

In the current study, the authors examined the contribution of religious involvement, emotional support, collectivism, and stigma to depressive symptoms among African American patients with cancer aged 50 years and older. The goals of the study were to report patterns of depressive symptoms among these patients with cancer and determine the contribution of these factors on depressive symptoms. The study's findings will advance understanding of the predictive value of psychosocial factors on psychological well-being.

Methods

Patient Population

The sample for the current study consists of older African American patients with cancer recruited from outpatient oncology clinics of a National Cancer Institute–designated cancer center. Institutional review board approval was obtained from the University of North Carolina at Chapel Hill. Patients were eligible for the study if they self-reported as African American, had a confirmed diagnosis of cancer, were 50 years of age or older, and were not severely cognitively impaired as determined with the **Short-Form Mini Mental State Examination (MMSE)**.

Participants were contacted during a scheduled clinic visit and asked to complete a survey of questionnaires focused on their social support experiences. After obtaining written or verbal consent for all interviews, participants were screened for cognitive impairment with the Short-Form MMSE. Two participants were severely cognitively impaired and not able to participate in the study. Participants were asked to complete a survey of questionnaires that were administered in a face-to-face interview format in examination rooms or via telephone. The average time to complete the series of questionnaires was 30 minutes. Participants were given a $30 gift card for each completed interview.

Measures

Demographic characteristics: Patients with cancer self-reported their age, gender, marital status, educational level, income, employment status, insurance status, and religious affiliation. Patients' type of cancer, stage of cancer, and treatment status were obtained from hospital records.

Depression: The **Geriatric Depression Scale–Short Form (GDS-SF15)** is a 15-item scale designed to screen for depression with older, medically ill populations (Yesavage et al., 1982). The scale consists of 15 yes or no questions, and a score greater than 5 indicates the possibility of depression. A score of 5 or greater has 60% sensitivity and 89% specificity for a depression diagnosis. The GDS-SF15 has been previously used in studies with hospitalized African Americans aged 50–103 years (Kane, Yochim, & Lichtenberg, 2010; Mills, Lichtenberg, Wakeman, & Scott-Okafor, 2002). The GDS-SF15 also has been used in research with African American patients with cancer aged 50–89 with a Cronbach alpha of 0.79 (Agarwal, Hamilton, Moore, & Crandell, 2010). In the current study, internal consistency (Cronbach alpha) reliability was 0.75.

Religious involvement: The **Organized Religiosity subscale** of the **Religious Involvement Scale** (Chatters, Levin, & Taylor, 1992) was included to determine the influence of organized religious participation (e.g., church attendance, church membership, frequency of participation in congregational activities). Validity for this subscale has been evaluated with a nationally representative sample of African American adults (N = 581, aged 55 years and older) through evaluations of the internal structure and relationships with exogenous variables. The internal structure of this five-item subscale was supported through factor loadings that ranged from 0.4–0.78 and relationships to exogenous variables were through a statistically significant association to gender as a predictor variable ($\beta = 0.28$) (Chatters et al., 1992). The Cronbach alpha of this subscale in a previous study of older African American patients with cancer was 0.8 (Hamilton, Crandell, Carter, & Lynn, 2010). In the current study, internal consistency (Cronbach alpha) reliability was 0.73.

Emotional support: The **Others There for Me subscale** of the **Ways of Helping Questionnaire (WHQ)** was used to measure emotional support (Hamilton, Stewart, Crandell, & Lynn, 2009). The WHQ was developed from qualitative research with African American cancer survivors. The six items in the Others There for Me subscale reflect support from the emotional presence of family members and friends—from knowing that a family member or friend will be there to share the burden of cancer, and that they will not be abandoned. Validity for the WHQ scale has been evaluated with a sample of African American cancer survivors through evaluations of its internal structure and associations with physical, psychological, and social well-being (Hamilton et al., 2009). In initial psychometric evaluations of the six-item Others There for Me subscale, the Cronbach alpha was 0.78, the internal structure was supported through factor loadings that ranged from 0.4–0.8, and statistically significant associations existed to mutuality (r = 0.51) and

the Mental Health Composite score on the SF-12® (r = 0.23) (Hamilton et al., 2009). In the current study, the internal consistency (Cronbach alpha) reliability was 0.88.

Collectivism: The **Collectivism scale** originally was developed for African American women and used in cancer screening studies to measure the importance of family in daily life (Lukwago, Kreuter, Bucholtz, Holt, & Clark, 2001). Items in the original scale were revised for the current study based on qualitative interviews with African Americans diagnosed with cancer. Higher scores on this scale are indicative of more concern with the cancer being a burden on family members. In initial psychometric evaluations of a six-item collectivism scale, the Cronbach alpha was 0.93 (Lukwago et al., 2001). In the current study, internal consistency (Cronbach alpha) reliability was 0.5.

Perceived stigma: The individual's perception of being stigmatized within their families and communities was measured using a combination of items from an **adapted internalized stigma scale** developed by Sayles et al. (2008) with additional items based on data from focus groups and interviews conducted for the current study with African American cancer survivors. The adapted scale consists of 13 questions and example items include "Family or friends think that cancer is a death sentence," "Family or friends treat me as if I were dying," and "Family or friends are afraid to approach me." Higher scores indicate a higher level of perceived stigma. In initial psychometric evaluations of the internalized stigma scale with Caucasian, Latino, and African American adults who were HIV-positive, the Cronbach alpha was 0.93 and validity was supported through statistically significant associations to shame (r = 0.58), social support (r = –0.43), and mental health (r = –0.5) (Sayles et al., 2008). In the current study, internal consistency (Cronbach alpha) reliability was 0.82.

Data Analysis

Descriptive statistics, including percentages and medians with interquartile ranges (IQR), were used to summarize demographics, clinical characteristics, and depressive symptoms of the sample. Fisher's exact tests were used to examine associations of categorical demographic and clinical characteristics with the possibility of being depressed (GDS-SF15 score greater than five points). Wilcoxon rank-sum tests evaluated the differences in GDS-SF15 scores between demographic and clinical characteristic groups as well as differences in continuous variables (e.g., the four psychosocial factors, age, time since diagnosis) between participants who were classified as possibly depressed or not. Correlations between continuous measures and GDS-SF15 scores are reported using Pearson correlation coefficients. To assess the contribution of psychosocial variables (e.g., organized religious involvement, emotional support, collectivism, stigma) with depressive symptoms, a

multivariable model was constructed controlling for education and gender. Unadjusted p values are reported and all analyses were conducted using SAS®, version 9.2.

Table 1. Demographic and Clinical Characteristics of African American Cancer Survivors (N = 77)

Variable	$\overline{X}$	SD	Range
Age (years)	61	8.4	50–88

Variable	n	%
Gender		
Women	51	66
Men	26	34
Marital status		
Married	41	53
Divorced	15	19
Never married	9	12
Widowed	8	10
Separated	3	4
Partnered	1	1
Education		
6th grade or less	3	4
7th–9th grade	2	3
10th–11th grade	10	13
High school diploma or GED	23	30
Partial college	12	16
College degree	17	22
Graduate professional training	10	13
Income ($)		
Less than 20,000	26	34
20,000–49,000	28	36
50,000 or more	23	30
Employment status		
No, quit work because of health	26	34
No, retired	23	30
Yes, full-time	15	19
Yes, part-time	7	9
Unemployed	5	6
No, looking for work	1	1
Insurance status		
Yes	63	82
No	14	18
Religious affiliation		
Baptist	48	62
Methodist	13	17
Christian	7	9
Holiness	6	8
Muslim	1	1
No religious affiliation	2	3
Type of cancer		
Breast	32	42
Lung	15	19
Hematologic	7	9
Colorectal	5	6
Prostate	3	4
Other	15	19
Tumor stage (N = 60)		
I	10	17
II	13	22
III	18	30
IV	19	32
Currently in treatment		
Yes	60	78
No	17	22

Results

The 77 African American patients with cancer who participated in this study had a mean age of 61 years and a majority were women (66%) and married (53%) (see Table 1). Participants generally were well educated, not working, insured, and religiously affiliated with Baptist churches. The most prevalent cancer diagnosis was breast cancer (42%), followed by lung (19%), hematologic (9%), and colorectal cancers (6%). Of those participants whose cancer stage was documented, 62% had advanced-stage cancers, and 78% were currently in treatment.

Using the recommended cutoff score of greater than five points as an indication of depression, 9 of the 77 participants were possibly depressed. Comparing participants' GDS-SF15 scores based on demographic and clinical characteristics, those in the lowest income category also had significantly higher raw GDS-SF15 scores than the other categories (median = 3 versus 2) (see Table 2). Participants who were unmarried and those who were men had higher GDS-SF15 scores as well. Although not statistically significant, some interesting trends existed toward depression based on being unemployed (p = 0.13) and uninsured (p = 0.12). Participants who were possibly depressed had median scores that were significantly lower for organized religious involvement (median = 6 [range = 5–7] versus 9 [range = 6.5–13], p = 0.03) and emotional support (median = 11 [range = 8–22] versus 22 [range = 20–24], p = 0.006). Slightly higher scores were found for collectivism (median = 10 [range = 8–14] versus 9 [range = 7–11.5], p = 0.18) and perceived stigma (median = 21 [range = 9.5–25] versus 10 [range = 6–16], p = 0.096) for participants who were possibly depressed compared to those who were not.

The correlation analyses showed that organized religion (r = –0.34, p = 0.003) and emotional support (r = –0.45, p < 0.0001) were moderately negatively correlated with depression, whereas collectivism (r = 0.28, p = 0.014) and stigma (r = 0.31, p = 0.006) were moderately positively associated with depression. No significant associations were observed with time since diagnosis (r = 0.17, p = 0.15) and the possibility of depression or raw GDS-SF15 scores.

Results from the multivariable analyses showed that organized religion (β = –0.1, p = 0.037), emotional support (β = –0.26, p < 0.0001), and collectivism (β = 0.25, p < 0.0001) remained significantly associated with GDS-SF15 score when controlling for education post-high school (β = –1, p = 0.021) and gender (β = 0.18, p = 0.68). Similar to the univariate analyses, increases in organized religion and emotional support scores resulted in decreases in depression scores. Conversely, increases in collectivism scores resulted in increases in depression scores. Although significant in univariate analyses, stig-

Table 2. Associations of Demographic Factors With Raw Depression Scores

Variable	Median	IQR	p
Gender			0.07
Male	3	2–5	
Female	2	1–3	
Marital status			0.04
Married	2	1–3	
Not married	2.5	2–4.5	
Education			0.2
High school graduate	2	1–3	
Not high school graduate	3	1–6	
Income ($)			0.01
Less than 20,000	3	2–5	
20,000–49,000	2	1–3	
50,000 or more	2	0–2	
Employment status			0.13
Employed	2	1–2	
Not employed	3	2–3.5	
Retired	2	1–4	
Insurance status			0.12
Yes	2	1–3	
No	3	2–5	
Religious affiliation			0.59
Baptist	2	1–4	
Other	2	1–3	
Cancer type			0.23
Breast	2	1–3	
Other	2	1–4	
Tumor stage			0.98
I	2	1–4	
II	2	1–3	
III	2	1–3	
IV	2	0–4	
Currently in treatment			0.58
Yes	2	1–3	
No	2	1–4	

IQR—interquartile range

Note. A Wilcoxon rank-sum test was used for variables with two groups, and the Kruskal-Wallis test was used for those with more than two groups.

ma was not significantly associated with GDS-SF15 scores in the multivariable model (β = 0.02, p = 0.56). This model consisting of organized religion, emotional support, collectivism, stigma, education, and gender explained 52% (adjusted R^2) of the variation in depression scores.

Discussion

The current study investigated the influence of psychosocial factors on depression in a sample of older adult African American patients receiving care at outpatient oncology clinics. The 12% rate of older African American patients scoring as possibly depressed on the GDS-SF15 in this study was lower than the 27% previously reported with other older African American patients with cancer (Agarwal et al., 2010) and also lower than the estimated 15%–25% depression rate among the general cancer population (Reyes-Gibby et al., 2012). Consistent with

other research conducted among older African American patients with cancer, the current study's authors found that social factors likely to influence higher depressive scores included low socioeconomic levels, male gender, and being unmarried (Agarwal et al., 2010).

In spite of the lower depression rates among these older African American patients with cancer, this study addresses a gap in the literature as to whether a broader range of psychosocial factors (e.g., emotional support, stigma, collectivism), in addition to religious involvement, influence the psychological well-being of this population. Studies have examined the influence of each of these factors on depression singularly; however, psychosocial factors do not operate in isolation. Therefore, the important contribution of this study is the examination of the combined influence of a group of psychosocial factors on depressive symptoms in a population of older African American patients with cancer.

A substantial body of literature shows the significant relationship of religiosity on depression (Koenig, King, & Carson, 2012). However, findings from those studies have been mixed. The current study adds to those studies supporting the inverse and significant relationship of increased religious involvement to decreased depressive symptoms, but also adds to the evidence that patients with cancer who are possibly depressed are less likely to be engaged in religious activities. Among African Americans, the importance of participation in religious activities associated with some religious institutions is that these activities allow for the expression of emotions and sharing of stressful life events with others (Raboteau, 2001), which reduces depressive symptoms and stressors associated with being sick (Bradshaw & Ellison, 2010; Lawler-Row & Elliott, 2009).

Another interesting finding of the current study relates to the importance of emotional support derived from the physical or emotional presence of others to the psychological well-being of older African American patients with cancer during treatment. Researchers have reported that older African American patients with cancer lack support (Tsigaroppoulos et al., 2009) and are less likely to seek social support as a coping strategy for cancer (Deimling et al., 2006). In the current study, emotional support from family and friends had a moderately strong, significant, and inverse relationship to depression. That finding suggests that the value of seeking out and giving support through complex and dynamic networks of family, friends, and neighbors is important to mental health (Hamilton et al., 2009). Through that type of emotional support, older African American patients with cancer are assured that regardless of their struggle, others will be there to share their burden (Hamilton, Moore, et al., 2010). That emotional presence and the conversations that occur during such encounters (e.g., positive encouragement, distracting

conversations) serve to minimize feelings of loneliness and sadness associated with functional limitations that can occur during cancer chemotherapy and radiation treatments (Graca Pereira, Figueiredo, & Fincham, 2012).

Historically, collectivism has been recognized as a value critical to the survival of African Americans (Billingsley, 1992). Extended social networks and the associated social support from such that developed out of a concern for one's fellow man functioned to enable African Americans to survive hardships through the sharing of material resources and caring for each other when sick (Carlton-LaNey, 1992; Stack, 1974). However, the findings from the current study show that a concern for the welfare for others during a diagnosis and treatment for cancer is likely an additional strain, contributing to depressive symptoms. For example, older African American patients with cancer may withhold information about their illness or even drop out of treatment out of concern for other family members or concerns related to the impact of a cancer diagnosis on the family's financial resources. Therefore, collectivism can promote negative attitudes toward emotional expression of worries and concerns, leading to anxiety, insomnia, and depression (Chu, 2012).

The current study's finding that a greater perception of stigma was associated with increased depressive symptoms is similar to that of other patients with cancer (Gonzalez & Jacobsen, 2012; LoConte, Else-Quest, Eickhoff, Hyde, & Schiller, 2008). Stigma among patients with cancer generally emphasizes guilt and self-blame (Else-Quest et al., 2009; Gonzalez & Jacobsen, 2012; Lebel et al., 2011), as well as differential treatment within one's network (Phelan et al., 2013). The current study's measure of stigma primarily captures the notion that cancer is perceived as a death sentence; that attitude results in members of patients' social networks responding with pity, inappropriate comments, or complete withdrawal of support. In spite of the educational programs and advances in cancer care, it appears that the perception of cancer being equated with death persists within the African American community (Swinney & Dobal, 2011).

To the authors' knowledge, this is the first study to examine the influences of these psychosocial factors on the psychological well-being of older adult African American patients with cancer. Although all four factors were associated with depression, the authors did not expect the direct or positive association of collectivism to depression. That finding is in contrast to other research that collectivism is a protective factor and source of social support during adverse situations. African American cancer survivors have expressed worries and fears that their illness, demand for physical care needs, and inability to maintain social roles are

burdensome for their families (Kleiboer et al., 2011). The current study lends support to the ideas that disruption to social roles and concerns for the well-being of family members are sources of distress for older African American patients with cancer.

The most important finding in this study was from the regression model examining the influence of religious involvement, emotional support, collectivism, and stigma on depression while controlling for education and gender. In a multivariate analysis, the influence of stigma became insignificant, the influence of religious involvement was weak, and the sociocultural factors with the most predictive influence on depression were emotional support and collectivism. Although the authors did not specifically ask about network members involved in social interactions associated with these sociocultural factors, the stronger influences on depression from emotional support and collectivism may involve close family and friend networks.

Limitations

One limitation of the current study was the small sample size, which restricted the number of demographic and clinical variables placed into the regression model. A second limitation was the low reliability of the Collectivism scale in this study. The scale has been used previously in research with African American cancer screening populations and also with African Americans with a confirmed cancer diagnosis. However, although the low reliability of the Collectivism scale is of concern, collectivism measured with this scale had a moderate and significant correlation to depression. Given the performance of the tool in this study and the importance of the concept to African American culture, it may be worthwhile to further examine the tool in future studies. Finally, the third limitation was the cross-sectional nature of this study, which limited the ability to make causal statements about the findings.

Implications for Nurses

As nurses develop treatment plans for older African American patients with cancer, these psychosocial factors (e.g., organized religiosity, emotional support, collectivism, stigma) and their influence on depressive symptoms should be considered. Treatment plans should be patient- and family-centered, whereby the family members are assisted to gain additional knowledge about the cancer diagnosis, treatment, side effects, and prognosis, empowering them to provide the necessary emotional support to the patient (particularly during treatment). Knowing that collectivism exists within African American culture, nurses should consider a holistic perspective of the impact that cancer treatments

have on the patient and family as a unit. Specifically, nurses need to discuss patients' feelings of being a burden among their family members, which often are associated with an increased use of resources and time commitments or restraints associated with cancer treatments. When possible, older African American patients with cancer and their family members should be referred to a social worker for assistance in locating community resources. Consideration should be placed on how a proposed treatment plan may impact the participation of older African American patients with cancer in organized religion and offer alternative clergy resources whenever possible.

Future studies should include a larger sample size, which would allow for the analysis of these psychosocial factors on depression among subgroups of African American patients with cancer. For example, whether differential influences of these factors exist among patients who are younger, less educated, newly diagnosed, receiving cancer care at community healthcare settings, and have limited financial resources would be of value to the research. A longitudinal study would allow for the causal determination of the direction of influences of these psychosocial factors on depression and whether these relationships fluctuate during the period from diagnosis through to the end treatment for cancer. Finally, to better target intervention studies to address negative stereotypes and misinformation about cancer, as well as to understand the conversations underlying the emotional support provided to older African American patients with cancer, it would be helpful to clarify the relationships of the network members involved in these social interactions.

Conclusions

The study's findings suggest that organized religion and emotional support are psychosocial factors that protect older African Americans against depression; collectivism places them at higher risk for depression regardless of education and gender. Stigma also is a risk factor for depression; however, that influence is no longer present when the patient with cancer is able to participate in organized religious activities and has emotional support from family and friends. These factors are, therefore, important to the psychological well-being of older African American patients with cancer and should be considered when developing and implementing patient centered culturally appropriate interventions.

Jill B. Hamilton, PhD, is an associate professor in the School of Nursing and Allison M. Deal, MS, is a biostatistician in the Lineberger Comprehensive Cancer Center, both at the University of North Carolina at Chapel Hill; LTC Angelo D. Moore, PhD, is a nurse scientist for the U.S. Army at Tripler Army Medical Center in Honolulu, HI; and Nakia C. Best, MSN,

and Kayoll V. Galbraith, BSN, are doctoral students in the School of Nursing and Hyman Muss, MD, is a professor in the Lineberger Comprehensive Cancer Center, all at the University of North Carolina at Chapel Hill. This research was funded, in part, by the University Cancer Research Fund of the Lineberger Comprehensive Cancer Center at the University of North Carolina at Chapel Hill. Assistance was provided by the Biostatistics Department in the Lineberger Comprehensive Cancer Center at the University of North Carolina

References

Adler, N.E., & Page, A.E.K. (Eds.). (2008). *Cancer care for the whole patient: Meeting psychosocial health needs.* Washington, DC: National Academies Press.

Agarwal, M., Hamilton, J.B., Moore, C.E., & Crandell, J.L. (2010). Predictors of depression among older African American cancer patients. *Cancer Nursing, 33,* 156–163. doi:10.1097/NCC.0b013e3181bdef76

Akincigil, A., Olfson, M., Walkup, J.T., Siegel, M.J., Kalay, E., Amin, S., . . . Crystal, S. (2011). Diagnosis and treatment of depression in older community-dwelling adults: 1992–2005. *Journal of the American Geriatric Society, 59,* 1042–1051. doi:10.1111/j.1532-5415.2011.03447.x

Almeida, J., Molnar, B.E., Kawachi, I., & Subramanian, S.V. (2009). Ethnicity and nativity status as determinants of perceived social support: Testing the concept of familism. *Social Science and Medicine, 68,* 1852–1858. doi:10.1016/j.socscimed.2009.02.029

Billingsley, A. (1992). *Climbing Jacob's ladder: The enduring legacy of African-American families.* New York, NY: Simon and Schuster.

Block, S.D. (2010). Diagnosis and treatment of depression in patients with advanced illness. *Social Psychiatry and Psychiatric Epidemiology, 19,* 103–109.

Boyd, C.A., Benarroch-Gampel, J., Sheffield, K.M., Han, Y., Kuo, Y.F., & Riall, T.S. (2012). The effect of depression on stage at diagnosis, treatment, and survival in pancreatic adenocarcinoma. *Surgery, 152,* 403–413. doi:10.1016/j.surg.2012.06.010

Bradshaw, M., & Ellison, C.G. (2010). Financial hardship and psychological distress: Exploring the buffering effects of religion. *Social Science and Medicine, 71,* 196–204.

Burki, T. (2010). Cancer and cultural differences. *Lancet Oncology, 11,* 1125–1126. doi:10.1016/S1470-2045(10)70286-2

Carlton-LaNey, I. (1992). Elderly Black farm women: A population at risk. *Social Work, 37,* 517–523.

Chatters, L.M., Levin, J.S., & Taylor, R.J. (1992). Antecedents and dimensions of religious involvement among older Black adults. *Journal of Gerontology, 47,* S269–S278. doi:10.1093/geronj/47.6.S269

Chen, M.L., Chen, M.C., & Yu, C.T. (2011). Depressive symptoms during the first chemotherapy cycle predict mortality in patients with advanced non-small cell lung cancer. *Supportive Care in Cancer, 19,* 1705–1711. doi:10.1007/s00520-010-1005-8

Chu, L.C. (2012). The effects of cultural values on mental health among the Taiwanese people: Mediating of attitudes toward emotional expression. *Asia-Pacific Journal of Public Health.* Advance online publication. doi:10.1177/1010539512443975

Deimling, G.T., Wagner, L.J., Bowman, K.F., Sterns, S., Kercher, K., & Kahana, B. (2006). Coping among older-adult, long-term cancer survivors. *Psycho-Oncology, 15,* 143–159. doi:10.1002/pon.931

DeJesus, S.A., Diaz, V.A., Gonsalves, W.C., & Carek, P.J. (2011). Identification and treatment of depression in minority populations. *International Journal of Psychiatry in Medicine, 42*(1), 69–83. doi:10.2190/PM.42.1.e

Else-Quest, N.M., LoConte, N.K., Schiller, J.H., & Hyde, J.S. (2009). Perceived stigma, self-blame, and adjustment among lung, breast and prostate cancer patients. *Psychology and Health, 24,* 949–964. doi:10.1080/08870440802074664

Fann, J.R., Fan, M.Y., & Unützer, J. (2009). Improving primary care for older adults with cancer and depression. *Journal of General Internal Medicine, 24*(Suppl. 2), S417–S424. doi:10.1007/s11606-009-0999-4

Gonzalez, B.D., & Jacobsen, P.B. (2012). Depression in lung cancer patients: The role of perceived stigma. *Psycho-Oncology, 21,* 239–246. doi:10.1002/pon.1882

Graca Pereira, M., Figueiredo, A.P., & Fincham, F.D. (2012). Anxiety, depression, traumatic stress and quality of life in colorectal cancer after different treatments: A study with Portuguese patients and their partners. *European Journal of Oncology Nursing, 16,* 227–232. doi:10.1016/j.ejon.2011.06.006

Gullatte, M.M., Phillips, J.M., & Gibson, L.M. (2006). Factors associated with delays in screening of self-detected breast changes in African-American women. *Journal of National Black Nurses' Association, 17*(1), 45–50.

Gutman, H.G. (1974). *The black family in slavery and freedom: 1750–1925.* New York, NY: Vintage.

Hamilton, J.B., Crandell, J.L., Carter, J.K., & Lynn, M.R. (2010). Reliability and validity of the perspectives of Support From God Scale. *Nursing Research, 59,* 102–109.

Hamilton, J.B., Moore, C.E., Powe, B.D., Agarwal, M., & Martin, P. (2010). Perceptions of support among older African American cancer survivors. *Oncology Nursing Forum, 37,* 484–493. doi:10.1188/10.ONF.484-493

Hamilton, J.B., Stewart, B.J., Crandell, J.L., & Lynn, M.R. (2009). Development of the Ways of Helping Questionnaire: A measure of preferred coping strategies for older African American cancer survivors. *Research in Nursing and Health, 32,* 243–259. doi:10.1002/nur.20321

Heiney, S.P., Hazlett, L.J., Weinrich, S.P., Wells, L.M., Adams, S.A., Underwood, S.M., & Parrish, R.S. (2011). Antecedents and mediators of community connection in African American women with breast cancer. *Research and Theory for Nursing Practice, 25,* 252–270. doi:10.1891/1541-6577.25.4.252

Holt, C.L., Caplan, L., Schulz, E., Blake, V., Southward, P., Buckner, A., & Lawrence, H. (2009). Role of religion in cancer coping among African Americans: A qualitative examination. *Journal of Psychosocial Oncology, 27,* 248–273. doi:10.1080/07347330902776028

Jones, J. (1995). *Labor of love, labor of sorrow.* New York, NY: Vintage.

Kagawa-Singer, M., Dadia, A.V., Yu, M.C., & Surbone, A. (2010). Cancer, culture, and health disparities: Time to chart a new course? *CA: A Cancer Journal for Clinicians, 60,* 12–39. doi:10.3322/caac.20051

Kane, K.D., Yochim, B.P., & Lichtenberg, P.A. (2010). Depressive symptoms and cognitive impairment predict all-cause mortality in long-term care residents. *Psychology and Aging, 25,* 446–452. doi:10.1037/a0019032

Kleiboer, A., Bennett, F., Hodges, L., Walker, J., Thekkumpurath, P., & Sharpe, M. (2011). The problems reported by cancer patients with major depression. *Psycho-Oncology, 20,* 62–68. doi:10.1002/pon.1708

Koenig, H.G., King, D.E., & Carson, V.B. (2012). *Handbook of religion and health.* New York, NY: Oxford University Press.

Kroenke, K., Theobald, D., Wu, J., Loza, J.K., Carpenter, J.S., & Tu, W. (2010). The association of depression and pain with health-related quality of life, disability, and health care use in cancer patients. *Journal of Pain Symptom Management, 40,* 327–341. doi:10.1016/j.jpainsymman.2009.12.023

Lawler-Row, K.A., & Elliott, J. (2009). The role of religious activity and spirituality in the health and well-being of older adults. *Journal of Health Psychology, 14*(1), 43–52. doi:10.1177/1359105308097944

Lebel, S., Castonguay, M., Mackness, G., Irish, J., Bezjak, A., & Devins, G.M. (2011). The psychosocial impact of stigma in people with head and neck or lung cancer. *Psycho-Oncology, 22,* 140–152.

Lo, C., Zimmermann, C., Rydall, A., Walsh, A., Jones, J.M., Moore, M.J., . . . Rodin, G. (2010). Longitudinal study of depressive symptoms in patients with metastatic gastrointestinal and lung cancer. *Journal of Clinical Oncology, 28,* 3084–3089. doi:10.1200/JCO.2009.26.9712

LoConte, N.K., Else-Quest, N.M., Eickhoff, J., Hyde, J., & Schiller, J.H. (2008). Assessment of guilt and shame in patients with non-small-cell lung cancer compared with patients with breast and prostate cancer. *Clinical Lung Cancer, 9,* 171–178. doi:10.3816/CLC.2008.n.026

Lukwago, S.N., Kreuter, M.W., Bucholtz, D.C., Holt, C.L., & Clark, E.M. (2001). Development and validation of brief scales to measure collectivism, religiosity, racial pride, and time orientation in urban African American women. *Family and Community Health, 24*(3), 63–71.

Mbiti, J.S. (1999). *African religions and philosophy*. Portsmouth, NH: Heinemann.

Mills, T.L., Lichtenberg, P.A., Wakeman, M.A., & Scott-Okafor, H. (2002). Correlates of rehabilitation hospital length of stay among older African-American patients. *Journal of the National Medical Association, 94,* 846–855.

Nelson, C.J., Weinberger, M.I., Balk, E., Holland, J., Breitbart, W., & Roth, A.J. (2009). The chronology of distress, anxiety, and depression in older prostate cancer patients. *Oncologist, 14,* 891–899. doi:10.1634/theoncologist.2009-0059

Perkins, E.A., Small, B.J., Balducci, L., Extermann, M., Robb, C., & Haley, W.E. (2007). Individual differences in well-being in older breast cancer survivors. *Critical Reviews in Oncololgy/Hematology, 62*(1), 74–83. doi:10.1016/j.critrevonc.2006.11.002

Phelan, S.M., Griffin, J.M., Jackson, G.L., Zafar, S.Y., Hellerstedt, W., Stahre, M., . . . van Ryn, M. (2013). Stigma, perceived blame, self-blame, and depressive symptoms in men with colorectal cancer. *Psycho-Oncology, 22,* 65–73. doi:10.1002/pon.2048

Poussaint, A.F., & Alexander, A. (2000). *Lay my burden down: Unraveling suicide and the mental health crisis among African Americans*. Boston, MA: Beacon Press.

Raboteau, A.J. (2001). *Canaan land*. New York, NY: Oxford University Press.

Reese, A.M., Thorpe, R.J., Jr., Bell, C.N., Bowie, J.V., & LaVeist, T.A. (2012). The effect of religious service attendance on race differences in depression: Findings from the EHDIC-SWB study. *Journal of Urban Health, 89,* 510–518. doi:10.1007/s11524-011-9659-1

Reyes-Gibby, C.C., Anderson, K.O., Morrow, P.K., Shete, S., & Hassan, S. (2012). Depressive symptoms and health-related quality of life in breast cancer survivors. *Journal of Women's Health, 21,* 311–318. doi:10.1089/jwh.2011.2852

Sahgal, N., & Smith, G. (2009). The Pew Forum on Religion and Public Life: A religious portrait of African-Americans. Retrieved from http://www.pewforum.org/A-Religious-Portrait-of-African-Americans.aspx

Sayles, J.N., Hays, R.D., Sarkisian, C.A., Mahajan, A.P., Spritzer, K.L., & Cunningham, W.E. (2008). Development and psychometric assessment of a multidimensional measure of internalized HIV stigma in a sample of HIV-positive adults. *AIDS and Behavior, 12,* 748–758. doi:10.1007/s10461-008-9375-3

Stack, C. (1974). *All our kin: Strategies for survival in a Black community*. New York, NY: Harper and Row.

Swinney, J.E., & Dobal, M.T. (2011). Older African American women's beliefs, attitudes, and behaviors about breast cancer. *Research in Gerontological Nursing, 4*(1), 9–18. doi:10.3928/19404921-20101207-01

Taylor, R.J., Chatters, L.M., & Levin, J. (2004). *Religion in the lives of African Americans. Social, psychological, and heatlh perspectives*. Thousand Oaks, CA: Sage.

Tsigaroppoulos, T., Mazaris, E., Chatzidarellis, E., Skolarikos, A., Varkarakis, I., & Deliveliotis, C. (2009). Problems faced by relatives caring for cancer patients at home. *International Journal of Nursing Practice, 15*(1), 1–6. doi:10.1111/j.1440-172X.2008.01725.x

U.S. Census Bureau. (2010). The Black alone population in the United States: 2010. Retrieved from http://www.census.gov/population/race/data/ppl-ba10.html

van Olphen, J., Schulz, A., Israel, B., Chatters, L., Klem, L., Parker, E., & Williams, D. (2003). Religious involvement, social support, and health among African-American women on the east side of Detroit. *Journal of General Internal Medicine, 18,* 549–557. doi:10.1046/j.1525-1497.2003.21031.x

Wells, A.A., Palinkas, L.A., Qiu, X., & Ell, K. (2011). Cancer patients' perspectives on discontinuing depression treatment: The "drop out" phenomenon. *Patient Preference and Adherence, 5,* 465–470. doi:10.2147/ppa.s24544

White, D.G. (1985). *Ar'n't I a woman?* New York, NY: W.W. Norton.

Wray, R.J., McClure, S., Vijaykumar, S., Smith, C., Ivy, A., Jupka, K., & Hess, R. (2009). Changing the conversation about prostate cancer among African Americans: Results of formative research. *Ethnicity and Health, 14*(1), 27–43. doi:10.1080/13557850802056448

Yesavage, J.A., Brink, T.L., Rose, T.L., Lum, O., Huang, V., Adey, M., & Leirer, V.O. (1982). Development and validation of a geriatric depression screening scale: A preliminary report. *Journal of Psychiatric Research, 17*(1), 37–49. doi:10.1016/0022-3956(82)90033-4

Yoo, G.J., Aviv, C., Levine, E.G., Ewing, C., & Au, A. (2010). Emotion work: Disclosing cancer. *Supportive Care in Cancer, 18,* 205–215. doi:10.1007/s00520-009-0646-y

Zhang, A.Y., Gary, F., & Zhu, H. (2012). What precipitates depression in African-American cancer patients? Triggers and stressors. *Palliative and Supportive Care,* 1–8. doi:10.1017/s1478951511000861