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Exploration of Depressive Symptoms in African American Cancer Patients

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Abstract

Background—Accurately assessing depression in African American cancer patients is difficult because of the similarities of physical symptoms observed in cancer and depression.

Aim—To identify universal and distinctive depressive symptoms in African American cancer patients.

Methods—Seventy-four cancer patients (34 depressed and 23 nondepressed African Americans, and 17 depressed Whites) were interviewed. Qualitative and quantitative analyses were conducted.

Results—Compared to nondepressed African Americans, depressed African Americans reported irritability, social isolation, insomnia, fatigue, and crying ($p < .05$) more frequently over time. Compared to depressed Whites, they reported sadness, frustration, and intrusive thoughts less frequently ($p < .05$), but insomnia and fatigue more frequently ($p < .05$) during cancer treatment. There was little racial difference at the time of interview.

Conclusion—Depressed African American cancer patients may benefit from more culturally sensitive depression measures that consider symptoms of irritability, social isolation, and altered expressions of depressive mood.

Keywords

depression; cancer; race; health disparity; diagnosis

Depression significantly predicts cancer death (Onitilo et al., 2006). Although African Americans have the highest cancer death rates among all racial/ethnic groups in the US (American Cancer Society, 2013), research about their depression status is limited, with

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mixed results (Agarwal et al., 2010; Zhang & Cooper, 2010). The literature suggests that depressed African Americans complain predominantly about physical symptoms and have guarded emotional disclosure during clinical encounters (Ghods et al., 2008). Cancer and depression produce similar physical symptoms (e.g., insomnia). This results in difficulties in differentiating depression from cancer and under-recognition of depression in cancer patients (Pasquini & Biondi, 2007). Detecting depression can be more challenging for African American cancer patients if they primarily report physical symptoms when feeling distressed. Because African Americans bear a greater burden of cancer morbidity and mortality, it is imperative to understand their depressive experiences, particularly how their physical symptoms relate to depression. This expanded knowledge helps improve the early detection and treatment of depression and their quality of life and survival.

Accurately assessing depression among African American cancer patients is difficult, partly because standard depression measures were developed from predominantly White populations and have not been fully validated for African Americans. For example, the Beck Depression Inventory (BDI-II) was validated in a sample of 500 subjects that included only 21 (4%) African Americans (Beck et al., 1996). Psychometric tests of the Center for Epidemiologic Studies-Depression Scale (CES-D) applied to African Americans mainly include the factor analysis and internal consistency reliability test. Validity tests using the diagnostic interview as a gold standard for case identification was missing (Long Foley et al., 2002).

This lack of culturally validated measures of African American cancer patients' depression demands qualitative investigation. It can be hypothesized that African American cancer patients experience depression differently and tend to report more physical and less affective symptoms than White cancer patients when feeling depressed. However, assessing this hypothesis requires an in-depth understanding of patients' symptom experiences. Therefore, guided by the phenomenology theory (Speziale & Carpenter, 2003), we used open-ended interviews with African Americans patients to inquire about their experiences with cancer-related stressors. We compared their experiences according to depression status and race to address this question: What are the common and distinct depressive symptoms of African American cancer patients?

Methods

The study was implemented at a large medical center in Northeast Ohio between 2006 and 2009, following the Institutional Review Board's approval. Purposeful sampling was designed to recruit 40 depressed and 20 nondepressed African American cancer patients for a comparison by depression status, and 20 depressed White cancer patients for a comparison by race. Current knowledge of cancer-related stress is mainly generated from White cancer patients and is well-documented. Hence, the inclusion of nondepressed White cancer patients was not needed. Depressed patients without a cancer diagnosis were also excluded because their experience is unrelated to cancer. Subject eligibility included a diagnosis of early-stage breast or prostate cancer within the past three years and six months after treatment completion. Patients with depression prior to cancer diagnoses were eligible: depressive symptoms and severity can be affected by cancer experience, regardless of

causes. The hospital tumor registry was used to identify eligible patients. Trained researchers contacted identified patients through a letter and made a follow-up phone call to introduce the study and to screen for depression, using the CES-D Scale. Demographic and medical information were collected during this contact and verified with medical records. Seventy-five eligible and consenting patients were recruited.

Because existing depression measures lack cultural validation, we identified the patients' depressive status based on consistency between the screening instrument CES-D (cutoff 16), and one other depression measure, either the 17-item Hamilton Rating Scale for Depression (HRSD; cutoff 8), the Beck Depression Inventory-II (BDI-II; cutoff 14), or the interviewers' observational ratings (e.g., mildly, moderately, severely depressed, or not depressed; cutoff mildly). Five patients did not meet this criterion; four exceeded the CES-D cutoff score alone, but not the HRSD, BDI-II, nor the observational ratings; another patient scored 9 on the CES-D but exceeded cutoffs on both the HRSD and the observational ratings. The researchers reviewed these patients' transcripts and reached consensus that four patients had a false-positive CES-D score and the fifth had a false-negative CES-D score. This process resulted in a total of 74 participants, including 34 depressed and 23 nondepressed African Americans and 17 depressed Whites.

The interviews occurred at the participants' homes or preferred private locations. Three professionals (two African Americans and one White) independently conducted the interviews. They were licensed psychiatric nurses or social workers with master's or doctoral degrees. All research personnel completed a mandatory training session on crisis management, referrals for further evaluation, and cultural competency. The interviewers were matched with study participants on racial/ethnic status to ensure culturally and linguistically appropriate sensitivity during data collection.

Written consent was obtained at the beginning of each interview, followed by the administration of standard depression measures and an open-ended interview. At the beginning of the interview, participants were asked whether the word "depression" was acceptable and, if not, what words they would use to describe cancer-related stress. Self-identified "preferred proxy words" (PPW) such as "feeling down" or "low" were used to explore cancer-related stress. An interview guide was employed and included these questions: "Can we talk about what your experience is like when you are feeling depressed (or PPW)?" "Do you feel depressed (or PPW) sometimes now? Are there changes in the symptoms that you talked about?" These questions explored two time periods: initial cancer diagnosis and treatment (past) and follow-up care (present). Interviews were audiotaped and transcribed. The study investigators reviewed 40% of the taped interviews to safeguard against interview deviation. Subjects received a \$30 remuneration.

A transcriptionist transcribed all audiotapes. Two experienced coders developed a codebook based on several initial transcripts and then coded each transcript independently using ATLAS.ti 5.2 software. The researchers met biweekly to discuss merging codes, reconcile differences, and check coding consistency. The two sets of codes were merged into a single file that provided an exhaustive grouping of transcripts by themes. Two researchers read the transcripts in each code to verify coding against the original content. The final codes were

converted to an SPSS database as nominal variables, with “1” indicating the presence and “0” indicating the absence of a code. The Fisher's exact test was performed to compare three study groups on the frequency (occurrence) of each code.

Results

Table 1 shows that the nondepressed African Americans were significantly older than others (mean age = 67; $p = .05$). The three study groups did not differ significantly in gender, marital status, education, employment, income, and treatment (surgery, radiation, and chemotherapy), despite cross-group variations. The depressed African Americans reported significantly more comorbid disorders, medication therapy, and pain in the previous week than the nondepressed African Americans ($p = .01$).

Table 2 displays that, compared to the nondepressed at both past and present times, depressed African Americans more frequently reported crying ($p = .01$; $p = .01$), feeling irritable ($p = .01$; $p = .05$), and social isolation ($p = .01$; $p = .01$). They reported sleep disturbance ($p = .001$; $p = .01$) and fatigue ($p = .01$) at present and attributed these symptoms more frequently to a physical condition such as pain ($p = .05$; $p = .05$). There was no significant group difference in attributing these problems to stress, depression, or worries. Moreover, in the present time period, depressed African Americans reported a loss of interest ($p = .01$), unable to get going, or wanting to stay in bed ($p = .05$) more frequently.

A comparison between depressed African Americans and depressed Whites yielded fewer statistically significant results (see Table 3), which were all related to past experiences, except for one that was related to the present. When recalling past experiences, the depressed Whites more frequently reported feeling sad, frustrated, or having intrusive thoughts ($p = .05$), but less frequently reported sleep disturbance ($p = .01$) and fatigue due to a physical condition ($p = .05$) than the depressed African Americans. More Whites than African Americans reported fear or uncertainty at the present ($p = .05$). The data suggested some group differences without reaching statistical significance. For example, depressed African Americans more frequently reported irritability in the past (21%) and social isolation (18%) over time. They more often reported “feeling down,” “blue,” or “gloomy” (15%), but less often reported “feeling sad” (15%) at the present. Eighteen percent more depressed African Americans than Whites reported suicidal thoughts in the past. We did not find meaningful group differences in depressive symptoms of hopelessness, loss of pleasure or interest, and low self-esteem. To decipher meanings of reported symptoms unique to depressed African Americans, their narratives were examined and presented in four major categories:

1. Articulating the source of physical problems

The depressed African Americans not only frequently reported insomnia and fatigue but also were able to differentiate between a physical and psychological source of physical symptoms. For example, a patient said, “I didn't feel like I had the energy to do the things that I normally did, and that's just part of it [radiation].” Another patient stated, “I'm not sleeping because I can get irritable....After a while I'm tired and need to sleep, but the hot flashes wake me up.”

2. Irritability

African American patients mentioned feeling “irritable” and associated it with physical problems. A female patient commented, “I’m in a lot of pain – it makes you irritable and you push people away....Nobody wants to be around someone that’s achy and crabby and then kind of sarcastic and mean all at once.” A male patient added, “When I’m in pain, I can’t sleep, which will make you crabby.” Others described what irritability feels like: “My mood is I feel down. I don’t want anyone around me. You know like – I snap.” “I was very quiet and when I would say something, it was short...and I didn’t care if it was cutting.”

3. Social isolation

Social isolation was expressed as avoiding conversation, wanting to be left alone, or withdrawal from social interaction. Many associated it with feeling irritable. A patient said, “I’m unable to talk to anyone. That is the reason I feel isolated....I don’t want anyone around me. I may snap at my daughter or my son or my little grandson.” Another patient explained, “The least little things that never used to bother me, bother me now; I just want to get away. I have to be by myself.” Some simply stated, “You don’t want to be around people. You are just not interested.”

4. Altered expression of affect

Some depressed African Americans preferred the expressions “down,” “blue,” or “gloomy” to “depression.” A female patient stated, “I don’t think I thought so much about ‘depressed,’ as like it is ‘blue.’ I wouldn’t have said the word ‘depressed.’” Another patient said, “[I feel] low....It is like a drop of energy just drained out [of] you and you try not to think about it, but it is there.” They also recalled moments of crying: “I cry a lot,” “Sometimes I can’t stop tears.” Some cried during the interviews.

Discussion

In this study, depressed African Americans reported more physical problems and fewer affective symptoms (i.e., feeling sad, fearful, or frustrated) than depressed Whites in the past. The racial difference was largely absent at the present time, likely because symptom severity and variability were reduced during cancer survival, the sample size was small, or the interview focused more on the past experiences. By comparison with nondepressed African Americans, depressed African Americans reported more symptoms over time including irritability, social isolation, and altered mood expressions (e.g., crying, feeling “down”). This symptom experience may have been associated with more comorbid disorders that they endured.

When reporting irritability, African American cancer patients frequently attributed this mood state to their physical health (e.g., insomnia and fatigue). Craig et al. (2008) defined irritability as a mood state characterized by “expressions of negative emotions” during interpersonal encounters. Our findings suggest that this irritable feeling is associated with physical well-being status. If irritability indicates physical stress and an under-recognized risk for depression, assessing irritability as responses to physical health problems could help detect depression in these patients. The significant difference in irritability between

depressed and nondepressed African Americans supports this impression. However, comparisons with depressed Whites did not reach statistical significance. Perhaps this is due to a greater similarity of sickness in the two depressed groups and a smaller sample of the Whites. Research with adequate sample sizes for the examination of ethnic/racial difference in the experience of irritability is needed.

Increased irritability can heighten a patient's vulnerability to cancer-related stress and maladaptive coping (Mauas et al., 2014). The participants revealed that irritable feelings led to “shutting down” – social isolation – to avoid triggers of emotional outburst. The process by which physiological and psychological stressors interact to produce downward mood spirals has yet to be studied. However, the observed adverse impact of irritability on social relations is alarming. Social support is a major protective factor for African Americans (Brown, 2008). Social isolation can reduce support and worsen psychological stress and mood, hence increasing the risk for depression (Shim et al., 2012). Depressive symptoms in social domains have not been well examined (Brenne et al., 2013). These symptoms should be carefully evaluated when assessing depression in African American cancer patients.

We found that worsening physical conditions affect manifestation of depressive mood. Some depressed African Americans described mood in words that are associated with physical energy, for example, feeling “down,” and in a physical form such as crying. This affective expression is different from those described as “depressed” or “sad,” with clearer psychological connotations. These findings suggest that some African American cancer patients have altered expressions for depressive mood, which require more research attention.

In summary, for an adequate assessment of depression, African American cancer patients should be evaluated for both common and distinctive symptoms of depression, including altered expressions of mood (e.g., crying, feeling “low” rather than “depressed”), irritability, and social isolation. It is possible that greater disease burdens trigger irritability that can induce depression through mediation of social isolation (Ahrén-Moonga et al., 2011). Bio-behavioral mechanisms of this pathway should be investigated (Wichers & Maes, 2002). The fact that over 20% of African American cancer patients reported suicidal thoughts in this study suggests urgency for further research.

This study has limitations. The data were based on self-reports and are susceptible to recall bias, especially because the time since cancer diagnosis may affect perceptions of past experiences. The small sample size has a low statistical power and excludes multivariate statistical analysis. Some racial differences (i.e., 18-21% for irritability and social isolation in the past) have a medium effect size and may be found statistically significant in a larger sample. Study findings could have been attributed to demographic and socioeconomic differences. For instance, more depressed African Americans lived alone (unmarried). Although their social isolation was expressed as “wanting to be left alone” rather than “feeling lonely,” the impact of living alone or the lack of social support needs to be further examined. Female dominance in the White group might bias study findings, as men and women report depression differently. African Americans' relatively lower education may

also confound ethnic/cultural differences. These issues limit the generalizability of the study findings.

Nonetheless, the findings have significant implications for clinical care and research. They underscore under-recognized symptoms and alert clinicians to social isolation and withdrawal as possible symptoms of undiagnosed depression in this population. The distinctive symptoms identified from depressed African American cancer patients require further investigation on a larger scale. These patients may well benefit from a culturally sensitive assessment approach for better detection, diagnose, and treatment of depression.

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Table 1

Sample Demographics

Variable	Nondepressed African Americans (n=23): G1	Depressed African Americans (n=34): G2	Depressed Whites (n=17): G3	Group difference
Age	67 (±10)	60 (±9)	58 (±10)	G1>G2, 3 *
Gender				
Female	11 (48%)	18 (53%)	12 (71%)	
Marital status				
Married	12 (52%)	10 (29%)	10 (59%)	
Single	4 (17%)	10 (29%)	3 (18%)	
Other	7 (30%)	14 (41%)	4 (24%)	
Education				
High school	7 (30%)	12 (36%)	3 (18%)	
Some college	12 (52%)	17 (52%)	6 (35%)	
College	4 (17%)	4 (12%)	8 (47%)	
Employment				
Full-time	6 (26%)	8 (25%)	9 (53%)	
Half-time	2 (9%)	4 (13%)	2 (12%)	
Unemployed	15 (65%)	20 (63%)	6 (35%)	
Household income				
<\$15000	7 (30%)	10 (29%)	1 (6%)	
<\$25000	4 (17%)	4 (12%)	0	
<\$50,000	5 (22%)	6 (18%)	4 (24%)	
\$50,000	6 (26%)	3 (9%)	7 (41%)	
Unknown	1 (4%)	11 (32%)	5 (29%)	
Had surgery	16 (70%)	19 (56%)	14 (82%)	
Had radiation	11 (48%)	24 (71%)	12 (71%)	
Had chemotherapy	6 (26%)	11 (32%)	7 (41%)	
Number of diseases	2.1 (±2)	5.3 (±3.8)	3.4 (±2.2)	G2>G1 **
Number of medications	1.8 (±1.9)	5.9 (±6.5)	3.0 (±2.9)	G2>G1 **
Pain over 7 days	2.1 (±2)	5.6 (±2.9)	4.1 (±2.9)	G2>G1 **
CES-D	7.1 (±1.7)	29.6 (±1.4)	25.5 (±2)	G2, G3>G1 **
HRSD -17	4 (±1.5)	17.4 (±1.2)	15.2 (±1.7)	G2, G3>G1 **
BDI-II	3.2 (±2.6)	19.3 (±2.1)	23.9 (±3)	G2, G3>G1 **
Observational ratings				G2, G3>G1 **
Not depressed	20 (87%)	2 (5.9%)	0	
Mildly	3 (13%)	10 (29.4%)	3 (17.6%)	
Moderately to severely	0	22 (64.7%)	14 (82.4%)	

* $p < .05$ ** $p < .01$.

Table 2

Thematic Difference in African American Cancer Patients

Emerging Themes	Depressed % (n)	Nondepressed % (n)	p
During survivorship period (present)			
<i>Affective</i>			
Shed tears or cried	32.4 (11)	0	.002
Loss of interest	26.5 (9)	0	.008
Irritable towards others	29.4 (10)	4.3 (1)	.037
<i>Social</i>			
Isolation from others	52.9 (18)	0	.001
<i>Physical & psychomotor</i>			
Cannot get going or doing anything	32.4 (11)	4.3 (1)	.018
Want to stay in bed	20.6 (7)	0	.034
Cannot sleep (including following 2 codes)	32.4 (11)	0	.002
Cannot sleep due to physical condition or meds	20.6 (7)	0	.034
Cannot sleep due to worries	11.8 (4)	4.3 (1)	.638
Feel tired or fatigued (including following 2 codes)	35.3 (12)	4.3 (1)	.009
Fatigue due to physical condition/meds	26.5 (9)	4.3 (1)	.038
Fatigue due to depression or stress	17.6 (6)	0	.071
During initial cancer treatment (past)			
<i>Affective</i>			
Shed tears or cried	50 (17)	17.4 (4)	.014
Irritable towards others	26.5 (9)	0	.008
<i>Social</i>			
Isolation from others	52.9 (18)	13 (3)	.002
<i>Physical & psychomotor</i>			
Cannot sleep (including following 2 codes)	67.6 (23)	8.7 (2)	.001
Cannot sleep due to physical condition/meds	35.3 (12)	0	.001
Cannot sleep due to worries	32.4 (11)	8.7 (2)	.054
Fatigue due to physical condition/meds	26.5 (9)	4.3 (1)	.038
Fatigue due to depression or stress	8.8 (3)	0	.265

Table 3

Thematic Difference by Race

Emerging Themes	Depressed African Americans % (n)	Depressed Whites % (n)	Difference %	p
During survivorship period (present)				
<i>Affective</i>				
Fear of unknown or uncertainty	0	17.6 (3)	-18	.033
Feeling sad	14.7 (5)	29.4 (5)	-15	.270
Feeling down, blue or gloomy	14.7 (5)	0	15	.156
Irritable towards others	29.4 (10)	17.6 (3)	12	.502
Loss of pleasure	17.6 (6)	11.8 (2)	5.8	.459
Loss of interest	26.5 (9)	29.4 (5)	-2.9	.537
Feeling hopeless	14.7 (5)	5.9 (1)	8.8	.337
Low self-esteem	32.4 (11)	29.4 (5)	3	.548
Shed tears or cried	32.4 (11)	29.4 (5)	3	.548
<i>Social</i>				
Isolation from others	52.9 (18)	35.3 (6)	18	.372
<i>Physical & psychomotor</i>				
Cannot sleep (including following 2 codes)	32.4 (11)	17.6 (3)	15	.334
Cannot sleep due to physical condition/meds	20.6 (7)	5.9 (1)	15	.242
Cannot sleep due to worries	11.8 (4)	29.4 (5)	-18	.140
During initial cancer treatment (past)				
<i>Affective</i>				
Feeling sad	2.9 (1)	23.5 (4)	-21	.037
Feeling frustrated	0	17.6 (3)	-18	.033
Irritable towards others	26.5 (9)	5.9 (1)	21	.135
Loss of pleasure	17.6 (6)	11.8 (2)	5.8	.459
Feeling hopeless	8.8 (3)	5.9 (1)	2.9	.593
Low self-esteem	14.7 (5)	17.6 (3)	-2.9	.541
Shed tears or cried	50 (17)	41.2 (7)	8.8	.767
<i>Social</i>				
Isolation from others	52.9 (18)	35.3 (6)	18	.372
<i>Physical & psychomotor</i>				
Cannot sleep (including following 2 codes)	67.6 (23)	23.5 (4)	44	.006
Cannot sleep due to physical condition/meds	35.3 (12)	11.8 (2)	24	.102
Cannot sleep due to worries	32.4 (11)	11.8 (2)	21	.175
Fatigue due to physical condition/meds	26.5 (9)	0	27	.021
Fatigue due to depression	8.8 (3)	5.9 (1)	3	1.00
<i>Cognitive</i>				
Intrusive thoughts	8.8 (3)	35.3 (6)	-27	.045
Have suicidal thoughts	23.5 (8)	5.9 (1)	18	.241