ANXIETY AND DEPRESSION AMONG BREAST CANCER PATIENTS IN A TERTIARY HOSPITAL IN GHANA

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Abstract

Background: Breast cancer is the second most common cancer globally and the most frequent cancer among women. It is associated with significant psychological morbidity including anxiety and depression. The extent of this burden has however not been documented in the Ghanaian setting. This study aimed at determining the prevalence of anxiety and depression amongst patients with breast cancer at the Korle Bu Teaching Hospital (KBTH).

Design and Subjects: A cross-sectional study was carried out among 120 breast cancer patients using a structured questionnaire to obtain socio-demographic characteristics of patients. The hospital anxiety and depression scale (HADS) was used to assess for depression and anxiety in these patients.

Results: The overall prevalence of depression was 84.2%, while that for anxiety was 92.5%. Forty-four percent of the study participants had both anxiety and depression. There was no significant difference in depression (p=0.796) and anxiety (p=0.999) prevalence between post-menopausal (82.9% and 92.1% respectively) and pre-menopausal (86.4% and 93.2% respectively) patients. A significant difference in prevalence of depression alone (p=0.033) and depression in combination with anxiety (0.025) was found between those living with their partners and those living without their partners. Average monthly income was found to be significantly associated with anxiety alone (p=0.014) as well as anxiety and depression combination (p=0.032) but not with depression alone (p=0.101).

Conclusion: The prevalence of anxiety and depression are quite high among breast cancer patients at the Korle Bu Teaching Hospital. Anxiety was significantly associated with the average monthly income while depression was associated with the marital status of patients. The high prevalence of both anxiety and depression among breast cancer patients makes it imperative for psychotherapy to be incorporated as an integral part of the management of breast cancer patients for the entire duration of the illness but more especially during the period immediately following diagnosis

Key Words: Breast cancer, anxiety, depression, oncology unit, Ghana

Introduction

In spite of current improvements in reducing recurrence and providing cure, cancer is still associated with pain, hopelessness, fear and death. Often linked with its diagnosis and treatment are psychological stresses which may be due to the actual symptoms of the disease or to the patient's or his/her family's perception of the disease. Patients have common fears, which have been characterized by six Ds:

i) death
ii) dependency on family, spouse and physician;
iii) disfigurement - sometimes resulting in loss or changes in sexual functioning
iv) disability
v) disruption of interpersonal relationships; and
vi) discomfort or pain in later stages of illness.[1]

Depression is a mood disorder that causes a persistent feeling of sadness and loss of interest.[2] According to the "Diagnostic and Statistical Manual of Mental Disorders, 4th Edition" (DSM-IV), it may be classified into mild, moderate and severe depending on the signs/symptoms set one exhibits.[3] Anxiety, on the other hand, is an emotion characterized by feelings of tension, worried thoughts and physical changes.[4]

Depression often co-exists with pain and anxiety,[5] with anxiety and depression usually occurring in cancer patients with several biological and psychosocial stressors.[6] These two conditions may arise at different stages from suspicious findings, cancer diagnosis through treatment to survival or the need for palliative treatment.[6]

Depression in cancer patients may be multi-factorial, resulting from the following: situational stress related to the cancer diagnosis and treatment, medications (steroids, interferon, or other chemotherapeutic agents), a biologically determined depression (endogenous or major depression) not related to a precipitating event, or recurrence of a bipolar mood disorder. The first two are the most common.[1]

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Though the exact etiology of depression in cancer is unknown, several factors have been suggested. These include the emotional impact of a cancer diagnosis, side effects of treatment, the disability associated with progression of cancer and the disruption of key relationship(s).[7]

The common causes of anxiety in patients with cancer may be grouped as follows: (*a) Situational, which includes diagnosis or illness related crisis, (b) Disease related, such as poorly controlled pain and abnormal metabolic states, (c) Treatment related, such as anxiety-producing drugs and withdrawal states and (d) Exacerbation of pre-existing anxiety disorder such as phobias and generalized anxiety disorders.*[8]

Breast cancer is the second most common cancer globally and the most frequent cancer among women.[9] It is associated with significant psychological morbidity, including anxiety and depression. However, the extent of this burden has not been documented in Ghana where most patients with breast cancer present with advanced disease. This, coupled with religious and other beliefs as well as misconceptions about breast cancer which may have psychological impact, makes this study even more relevant. This study is aimed at determining the prevalence of anxiety and depression amongst patients with breast cancer at the Korle Bu Teaching Hospital.

Subjects and Methods

A descriptive cross-sectional study was carried out at the Oncology Unit of the Surgical Department of the Korle Bu Teaching Hospital. All breast cancer patients presenting at the Surgical Department either as outpatients or who were admitted between May and July 2015 were invited to participate in the study. Patients who were terminally or critically ill as well as those who did not consent to the study were excluded. A total of 120 breast cancer patients participated in the study.

A structured questionnaire was used to obtain socio-demographic characteristics of patients. The hospital anxiety and depression scale (HADS) was used to screen for depression and anxiety in these patients. The HADS is a self-report questionnaire developed to detect adverse anxiety and depressive states.[10] It has 14 questions, 7 related to anxiety and 7 to depression. Scoring for each question is from 0-3 and the total scores range from 0-21. Scores of 0-7 are interpreted as normal, 8-10 borderline or mild and 11-21 abnormal (moderate to severe). Data was captured and analyzed using SPSS version 20. Descriptive statistics (mean, standard deviation and proportions) were computed. Chi-square tests were performed to test for any association(s) between variables and the outcomes of interest (anxiety and depression).

Written informed consent was obtained from each participating individual. Information obtained during the study was kept under lock and key and was used solely for the purpose of research. Data was doubled-keyed to check for consistency.

Results

Between May and July of 2015, a total of 146 patients with confirmed breast cancer reported for management of their condition at the Oncology Unit of the Department of Surgery. Twenty-two (22) of them were either critically or terminally ill or both and were therefore excluded from the study. Of the remaining 124, 4 did not consent to being part of the study and were also excluded. A total of 120 breast cancer patients took part in this study. The ages of participants ranged from 30 to 84 years with a mean of 50.3 ± 10.9 years. Their socio-demographic characteristics are as shown in Table 1. Most of them were married (56.7%) and had attained at least primary education (85%). Over 70% of them earned less than five hundred cedis (about $131) monthly with more than 40% earning less than one hundred cedis (about $26) monthly. Of the 120 women, 76 (63.3%) were post-menopausal.

Table 1: Socio-demographic characteristics of patients

Variables	(%) N=120
Age as at last birthday (years)	
30-34	10
35-39	9.2
40-44	11.7
45-49	15
50-54	16.7
55-59	22.5
60-64	5.8
≥65	9.2
Marital status	
Never married	11.7
Currently married	56.7
Divorced/separated	19.2
Widowed	12.5
Education (Highest completed)	
None	15
Primary	15.8
*JHS/Middle School	25.8
**SHS/Vocational/Technical	15
Tertiary	28.4
Average monthly income (in Ghana Cedis)	44.2
< 100	27.5
100-499	20
500-999	8.3
≥1000	

*Junior High School, **Senior High School

A third (33.3%) of the participants reported a history of anxiety/depression prior to being diagnosed with breast cancer. Overall, the prevalence of depression was 84.2% (39.2% being mild and 45% being moderate-to-severe), while that for anxiety was 92.5% (34.2% being mild

and 58.3% being moderate-to-severe). Forty-four percent of them had both anxiety and depression. There was no significant difference in depression (p=0.796) and anxiety (p=0.999) prevalence between post-menopausal (82.9% and 92.1% respectively) and pre-menopausal (86.4% and 93.2% respectively) patients.

Table 2: Disease-related characteristics of breast cancer patients

Variable	(%) N=120
Self-reported prior history of anxiety/depression	
Yes	33.3
No	67.7
Duration following diagnosis of breast cancer (months)	
<1	8.3
1-6	35.0
7-12	20.8
13-60	32.5
>60	3.3
Depression status	
Normal	15.8
Borderline (mild)	39.2
Abnormal (moderate-to-severe)	45.0
Anxiety status	
Normal	7.5
Borderline (mild)	34.2
Abnormal (moderate-to-severe)	58.3
Both anxiety and depression	44.2

Depression and anxiety levels did not differ significantly in the various durations following diagnosis with breast cancer (Table 3), however the highest prevalence for both depression and anxiety occurred in those who had been diagnosed with breast cancer for less than a month (90% and 100% respectively) while the least prevalence was found among those who had been diagnosed for more than 5 years (50% and 75% respectively).

There was no significant association between marital status and prevalence of anxiety alone (p=0.529). However, a significant difference in prevalence of depression alone (p=0.033) and depression in combination with anxiety (0.025) was found between those living with their partners and those living without their partners. Average monthly income was found to be significantly associated with anxiety alone (p=0.014) as well as anxiety and depression combination (p=0.032) but not with depression alone (p=0.101). The highest prevalence of anxiety (98.1%) was among those with the least average monthly income, while those with the highest average income had the least prevalence (70%).

Table 3: Association between prevalence of anxiety/depression and selected variables

Selected variables	Prevalence in percentage		
	Anxiety	Depression	Anxiety and depression
Duration since diagnosis (months)			
<1	100	90	40
1-6	92.9	83.3	45.2
7-12	88	84	40
13-60	94.9	87.2	48.7
>60	75	50	25
p-value	**0.499**	**0.576**	**0.737**
Average monthly income (Cedis)			
<100	98.1	86.8	58.5
100-499	93.9	90.9	33.3
500-999	87.5	79.2	37.5
≥1000	70	60	20
p-value	**0.014**	**0.101**	**0.032**
Marital status			
Living with partner	91.2	77.9	35.3
Living without partner	94.2	92.3	55.8
p-value	**0.529**	**0.033**	**0.025**

Discussion

In this study, we found the prevalence of depression and anxiety amongst patients with breast cancer to be 84.2% and 92.5% respectively with 44.2% of these patients having both anxiety and depression. This is much higher compared to the 33.3% self-reported prevalence of anxiety/depression in these same individuals prior to their being diagnosed with breast cancer.

This high prevalence of depression among breast cancer patients is comparable to what was found by Kovacs et al, 2011 (75.8%),[11] but much higher than the findings of similar studies in other settings.[12,13,14,15] The prevalence of anxiety in this study was also much higher than was found in other studies.[11,12,13,14,15] This rather high prevalence of depression and anxiety amongst our study population could be the result of many factors, including situational stress relating to the diagnosis and treatment of the cancer. One very plausible explanation could also be the late presentation of breast cancer cases in Ghana.[16]

In Ghana, more than 50 % of patients present with locally advanced or metastatic disease.[16]

Although breast cancer is usually not painful, advanced disease could become painful, and there may be pain from metastatic disease as well.[16] The more advanced the disease, the more pain the patient is likely to have. Depression and anxiety are known to have positive correlation with the affective and sensory components of pain respectively;[13] this may account for the very high prevalence of both disorders in the study population. Advanced disease is also associated with other symptoms such as large swollen breasts that cannot be hidden as well as bleeding and offensive discharge.[17] These symptoms/signs can also heighten the levels of depression and anxiety among patients. Other symptoms of advanced disease like breathlessness, cough and headaches may also be contributing factors.

In the current study, the highest prevalence of anxiety and depression (100% and 90% respectively) was recorded among individuals who had been newly diagnosed with breast cancer (< 1 month following diagnosis). These results are consistent with previous research findings that suggest that anxiety and depression are more prevalent within the newly diagnosed cancer population.[13, 18]

Anxiety was found to be associated with the average monthly income of the patients (p=0.014). Those with the least average monthly income had the highest prevalence (98.1%) of anxiety. Depression was also found to be associated with the marital status of the patients. The highest prevalence of depression (92.3%) was among patients living without their partners while those living with their partners had relatively lower prevalence of depression (77.9%). These findings were consistent with those of Hassan et al in 2015.[12] Breast cancer diagnosis and treatment can be quite expensive and the fear of not being able to meet the financial obligations associated with the management of their conditions could be responsible for the high anxiety prevalence. Disruption of interpersonal relationship is a known trigger for depression among breast cancer patients[1] and this may be a reason for the higher depression prevalence amongst patients living alone (without partners).

Conclusion

The prevalence of anxiety and depression are quite high among breast cancer patients at the Korle Bu teaching hospital. Anxiety was significantly associated with the average monthly income while depression was associated with the marital status of patients. The prevalence of depression and anxiety have very strong deteriorative effect on the quality of life of the patient, puts a burden on the patients' social relations and, at the same time, interferes with their active coping attitude and increases the chances of the recurrence.[19]

It is therefore imperative that psychotherapy be incorporated as an integral part of the management of breast cancer patients for the entire duration but more especially during the period immediately following diagnosis. As part of holistic management, spouses of patients should be educated on their partner's condition and encouraged to provide the needed emotional support. The National Health Insurance Authority (NHIA), should consider expanding the current coverage of the scheme to include full treatment for breast cancer. This will remove the financial barrier to seeking treatment and help reduce anxiety caused by unavailability of funds.

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