

Evaluation of Prevalence of Depression and Anxiety among Breast Cancer Patients

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Abstract

Background: People who have previously used psychiatric services may be particularly vulnerable and at greater risk of mortality following a cancer diagnosis. The present study assessed depression and anxiety among breast cancer patients.

Materials and Method: The present study was conducted on 64 women with breast cancer. The Patient Health Questionnaire-2 (PHQ-2) and the Generalized Anxiety Disorder-2 (GAD-2) questionnaire were produced as ultra-brief screening instruments for depression and anxiety in all patients.

Results: Age group <40 years had 12, 40-60 years had 20 and >60 years had 32 patients. The difference was significant ($P < 0.05$). Maximum patients were of stage III (30) followed by stage II (18), stage IV (10) and stage I (6). Treatment given was mastectomy in 46 patients and onectomy in 18 patients. The difference was significant ($P < 0.05$). PHQ- 2 with score >3 was observed in 12 and GAD- 2 with score >3 was seen in 15 patients. The difference found to be significant in breast cancer patients with or without depression and anxiety ($P < 0.05$).

Conclusion: Authors found that breast cancer patients had higher level of depression and anxiety level.

Keywords: Anxiety, Breast cancer, depression.

Introduction

Breast cancer is the most common cancer type among females worldwide, as 1 in 8 women will be diagnosed with the disease in their lifetime. The problems experienced by survivors include physical symptoms, psychological reactions and existential concerns, which potentially disrupt their well-being. The overall prevalence of depression in oncology patients remains unclear and according to previous studies the prevalence is reported to be between 0% and 58%.¹

People who have previously used psychiatric services may be particularly vulnerable and at greater risk of mortality following a cancer diagnosis.¹ However, the mental health needs of people with cancer, with or without a prior psychiatric history, are often given little attention during and after cancer treatment, which is primarily focused on monitoring physical health symptoms and side effects.³ Advances in the earlier detection of cancer and improved cancer treatments means that people are now living longer with cancer, presenting a significant global challenge. The total number of people who are alive within 5 years of a cancer diagnosis was estimated to be 43.8 million in 2018 for 36 cancers across 185 countries. Studies have shown that prevalence of psychological distress among breast cancer patients is high and they are at higher risk of developing severe anxiety, depression and patients mood disorders. Depression and anxiety are the two most common psychiatric co-morbidities encountered

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in breast cancer patients.⁴The present study assessed depression and anxiety among breast cancer patients.

Materials and Method

The present study was conducted at Krishna Institute of Medical Sciences Deemed to be University, Karad, Maharashtra, India. It comprised of 64 women with breast cancer. Ethical approval was obtained from institute prior to the study. All patients were informed regarding the study and written consent was obtained.

General information such as name, age etc. was recorded. A thorough clinical examination was done. The Patient Health Questionnaire-2 (PHQ-2) and the Generalized Anxiety Disorder-2 (GAD-2) questionnaire were produced as ultra-brief screening instruments for depression and anxiety in all patients. In both questionnaires, each question requires respondents to rate on a four-point scale ranging from “0 = not at all” to “3 = nearly every day”. PHQ-2 and GAD-2 total scores are calculated by adding the two questions score, resulting in a range from 0 to 6 for each questionnaire, with higher score indicative of higher mental health disorder. According to receiver-operating characteristic curve analysis, the optimal cutpoint is ≥ 3 on both the PHQ-2 and GAD-2 scales. Results thus obtained were subjected to statistical analysis. P value less than 0.05 was considered significant.

Results

Table I Distribution of patients

Age group (Years)	Number	P value
<40	12	0.01
40-60	20	
>60	32	

Table I shows that age group <40 years had 12, 40-60 years had 20 and >60 years had 32 patients. The difference was significant ($P < 0.05$).

Table II Assessment of parameters

Parameters	Number	P value
Stage of cancer		
I	6	0.01
II	18	
III	30	
IV	10	

Parameters	Number	P value
Treatment		
Mastectomy	46	0.02
Ongectomy	18	

Table II shows that maximum patients were of stage III (30) followed by stage II (18), stage IV (10) and stage I (6). Treatment given was mastectomy in 46 patients and onectomy in 18 patients. The difference was significant ($P < 0.05$).

Table III Prevalence of Depression and Anxiety in Patients

Scale	Number	P value
PHQ-2		
≥ 3 (presence of depression)	12	0.01
< 3 (absence of depression)	52	
GAD-2		
≥ 3 (presence of anxiety)	15	0.04
< 3 (absence of anxiety)	49	

Table III, shows that PHQ- 2 with score >3 was observed in 12 and GAD- 2 with score >3 was seen in 15 patients. The difference found to be significant in breast cancer patients with or without depression and anxiety ($P < 0.05$).

Discussion

Breast cancer is the most frequently diagnosed cancer and the leading cause of cancer death in females worldwide, accounting for 23% (1.38 million) of the total new cancer cases and 14% (458,400) of the total cancer deaths in 2008.⁵ In Asia, breast cancer incidence peaks among women at the age of 40 year whereas in the United States and Europe, it peaks among women at the age of 60 year. In India pre-menopausal patients constitute about 50% of all patients.⁶ The present study assessed depression and anxiety among breast cancer patients.

We found that out of 64 patients, age group <40 years had 12, 40-60 years had 20 and >60 years had 32 patients. Srivastava et al⁷ found prevalence of anxiety and depression among the breast cancer patients was 37.0% (n=74) and 28.0% (n=56) respectively. We found strong association of anxiety with age group ($p=0.014$), educational level, monthly income ($p=0.001$) and financial support. However, marital status, monthly

income, accompanying person and financial support were significantly associated with depression. Binary logistic regression analysis shows age younger than 50 years old, those earned less income, illiterate or low level of education, being single and receiving less financial support are more likely to have anxiety. For depression, those earned less income, being single and receiving less financial support are more likely to have depression. At the 12 month follow-up, 184 breast cancer patients were re-interviewed. We found significant improvement after 12 month follow-up in both anxiety and depression level (mean anxiety level improved from 11.14 ± 4.23 to 8.64 ± 3.63 and mean depression score improved from 6.87 ± 3.11 to 5.13 ± 4.51).

We found that maximum patients were of stage III (30) followed by stage II (18), stage IV (10) and stage I (6). Treatment given was mastectomy in 46 patients and oncoectomy in 18 patients.

PHQ- 2 with score >3 was observed in 12 and GAD-2 with score >3 was seen in 15 patients. The difference found to be significant in breast cancer patients with or without depression and anxiety ($P < 0.05$).

Tsaraset al⁸ found the mean age of the patients was 53.25 years, 69.7% of the patients underwent mastectomy and 30.3% oncoectomy. Chemotherapy received 46.1% of patients as adjuvant therapy, 15.8% radiotherapy and 38.2% received both chemotherapy and radiotherapy. A large percentage found to be classified as depressed (38.2%) and anxious (32.2%) and factors that found to be associated were age, marital status, educational level, stage of cancer from univariate analyses and place of residence, religion, symptoms burden from multivariate analysis (for depression and anxiety).

Depression and anxiety are the two most common psychiatric co-morbidities encountered in breast cancer patients. Breast cancer patient may experience depression and/or anxiety at any stage of their illness from pre-diagnosis to the terminal phase of the illness. Studies in the Western countries have shown that the prevalence of depression ranges from 1% to 56%, whereas the prevalence of depression from Asian studies is between 12.5% and 31%.⁹

Maasset al¹⁰ demonstrated in a very large sample of cancer patients that the prevalence of depression among breast cancer survivors was about 32.8%. It has also been reported that 40% of the patients who experience disease recurrence would suffer from anxiety and depression.

Conclusion

Authors found that breast cancer patients had higher level of depression and anxiety level.

Conflicts of Interest: The author declare that there is no conflict of interest regarding the publication of this paper.

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References

1. Ahmet Alacacioglu, Eda Ulger, Umut Varol, et al. Depression, anxiety and sexual satisfaction in breast cancer patients and their partners-izmir oncology group study. *Asian Pac J Cancer Pre* 2014; 15:10631-6.
2. Pandey M, Sarita GP, Devi N, Thomas BC, Hussain BM, et al. Distress, anxiety and depression in cancer patients undergoing chemotherapy. *World J SurgOncol* 2006; 4:68.
3. Chintamani, Gogne A, Khandelwal R, Tandon M, Jain S, et al. The correlation of anxiety and depression levels with response to neoadjuvant chemotherapy in patients with breast cancer. *JRSM Short Rep* 2011; 2:15.
4. Zigmond AS, Snaith RP. The Hospital and Anxiety Depression Scale. *Acta Psychiatry Scandinavia* 1983; 67:361-370.
5. Herrmann C. International experiences with the Hospital Anxiety and Depression Scale: a review of validation data and clinical results. *Journal of Psychosomatic Research* 1993; 42:17-41.
6. Moorey S, Gree S, Watson M, et al. The factor structure and factor stability of the Hospital Anxiety and Depression Scale in patients with cancer. *British Journal of Cancer* 1991; 158: 255-259.
7. Ibbotson T, Maguire P, Selby T, et al. (1994) Screening for anxiety and depression in cancer patients: the effects of disease and treatment. *European J of Cancer* 1994; 30:37- 40.
8. Srivastava V, Ansari MA, Kumar A, Shah AG, Meena RK, Sevach P, Singh OP. Study of anxiety and depression among breast cancer patients from North India. *Clinical Psychiatry*. 2016;2(1):4.

9. Tsaras K, Papathanasiou IV, Mitsi D, Veneti A, Kelesi M, Zyga S, Fradelos EC. Assessment of depression and anxiety in breast cancer patients: Prevalence and associated factors. *Asian Pacific journal of cancer prevention: APJCP*. 2018; 19(6):1661.
10. Maass SWMC, Roorda C, Berendsen AJ, Verhaak PFM, de Bock GH. The prevalence of long-term symptoms of depression and anxiety after breast cancer treatment: A systematic review. *Maturitas* 2015; 82: 100–8.