Examining Depression among Breast Cancer Patients in Nigeria: A Scoping Review

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ABSTRACT

Background: Depression is a significant mental health issue that hinders the recovery of breast cancer patients. The comorbidity of depressive disorders and breast cancer is a complex medical condition. This study aims to examine depression among breast cancer patients in Nigeria.

Methods: A scoping review approach was used to explore four databases: Google Scholar, PubMed, Medline, and Scopus. Relevant search terms were used, resulting in 50 records. After removing the articles that did not meet the eligibility requirements, 12 records were included in the study.

Results: Depression is commonly experienced by Nigerian breast cancer patients and they are likely to have a lower quality of life, which hinders the recovery process. Psychological interventions such as CBT, psychoeducation, rational emotive behavioral intervention, mHealth and cognitive restructuring were effective in reducing depressive symptoms among Nigerian breast cancer patients.

Conclusion: Depression is a major mental health problem among breast cancer patients in Nigeria. CBT, psychoeducation, mHealth, rational emotive behavioral therapy and cognitive restructuring interventions have been found to be effective psychological methods for treating depression in this patient group. Further studies are needed in the northern parts of the country, as most of the reviewed studies were conducted in the southern parts.

INTRODUCTION

Cancer is one of the most common life-threatening conditions worldwide, and it can significantly impact a person's life. It affects vital body components like the lungs, breasts, prostate, cervix, bones, blood, liver, and large intestine. Cancer is also a major cause of morbidity.[1,2] The number of cancer cases worldwide was estimated to be 18.1 million in 2020, with 9.3 million cases in men and 8.8 million in women.[3] In Nigeria, the prevalence of cancer was estimated to be 124,815 cases, resulting in 78,899 deaths.[4] Nigeria's population represents almost one-fifth of Africa's population, and literature shows that the country bears a significant burden of cancer in the continent.[3,5] This can be attributed to low per capita income, the emigration of healthcare professionals, and a deteriorating healthcare system.[6]

A common form of cancer among women worldwide, particularly in Nigeria, is breast cancer. Globally, breast cancer accounted for 25.8% of new cancer cases diagnosed in 2020 and ranks first in terms of prevalence among other types of cancer.[4] In Nigeria, breast cancer is the most common cancer.[4] The mortality rate for breast cancer in Nigeria is high, with 15% of cancer deaths among females attributed to breast cancer.[7] The high death rate associated with breast cancer may be due to the complex relationship between depression and breast cancer.[8] Factors such as environmental and cultural influences, poor health-

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seeking behavior among patients, and the use of herbal treatments have been suggested as contributing to depression among cancer patients.[9] Cancer patients often worry excessively after being diagnosed, mistakenly believing that breast cancer cannot be medically treated and that it inevitably leads to death. This belief triggers depressive symptoms among patients.[8] When depressive symptoms occur in cancer patients, the burden on caregivers increases, the patients' quality of life decreases, hospital stays are prolonged, adherence to prescribed medication decreases, and mortality rates increase.[10]

Studies have been conducted by researchers in Nigeria and Africa on breast cancer patients. A study by Esiaka[11] used a systematic review to examine the factors that affect patients' health outcomes after a cancer diagnosis in Nigeria. The study identified and analyzed the factors that either hinder or facilitate breast cancer survival in Nigeria, including treatment options, self-care and management, available pharmacists, and the desire to live. However, it is important to note that the focus and methodology of the Esiaka study are different from the current study. Taking an African perspective, Muliira[12] conducted an integrative literature review to explore the quality of life among female cancer survivors in Africa. The study found that age, education, income, residence, and employment, among other factors, can impact the quality of life of cancer survivors. However, it should be noted that Muliira used a different approach, an integrative review, to examine female cancer survivors in Africa, which differs from the approach used in the current study.

To date, no scoping review has been carried out to examine depressive symptoms among breast cancer patients in the context of Nigeria. Therefore, there is a need to conduct a scoping literature review to uncover the extent and range of empirical findings on severe complications of comorbidity in breast cancer patients with depression in Nigeria. This review is important because it is expected to reveal the breadth and depth of empirical literature regarding the experiences of cancer patients with depression in Nigeria. This study would be valuable for public health practitioners, mental health counselors, and clinical psychologists as it highlights the gaps in the literature concerning the experiences of breast cancer patients with depression and efforts made to provide psychological treatments in Nigeria.

Research Questions
1. Does depression occur among breast cancer patients in Nigeria?
2. What are the psychological interventions used in treating depressed breast cancer patients in Nigeria?

METHODS
An initial literature search was conducted on Google Scholar, PubMed, Medline, and Scopus databases, to locate studies on depression among breast cancer survivors in Nigeria. This study aims to examine the current literature on the experiences of depression among breast cancer patients using a scoping review approach. The Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-SCR) were adopted for this review.[13] It is important to note that this review was not registered as a study protocol.

Including Criteria
The studies included in this review had to meet the following criteria: the article had to be published in Nigeria or involve the Nigerian population, it had to focus on the experiences of depression among breast cancer patients, and it had to be published in English. There were no restrictions on the publication dates of the articles selected for inclusion. Studies that only discussed breast cancer without including depression were excluded, as were studies that were not peer-reviewed articles. Opinion papers, commentaries, and letters to editors were also excluded from the review.

Search and Information Sources
The literature search for this study began in April 2023, and it was limited to the databases of Scopus, PubMed, Medline, and Google Scholar. The researchers developed specific keywords to investigate different types of depression experienced by patients. In relation to breast cancer, additional search terms such as cancer of the breast, breast carcinoma, malignant tumor of the breast, and mammary carcinoma were utilized. Other terms used in the search included the prevalence or incidence of depression among breast cancer patients in Nigeria, therapeutic treatments for depression associated with breast cancer, and psychological interventions for breast cancer in Nigeria.

Study Selection
Two reviewers conducted the study selection. One reviewer, AN, was responsible for filtering the records and removing any duplicates based on the established criteria for inclusion, using title and abstract selection. In case of any confusion, the second reviewer, CE, was consulted to resolve it.

Data Extraction
Data extracted from the literature include the authors' surnames and years, sample sizes of the participants, main objectives of the studies, research designs, and results.

RESULTS

In Figure 1, 50 articles were identified in the database. The articles were screened, and 12 duplicates were removed. Then, the articles were assessed based on their titles, leading to the exclusion of 18 articles. These articles underwent further screening at the abstract and content stage, resulting in the removal of 8 more articles. Finally, after the screening process, 12 articles were selected for this scoping review.
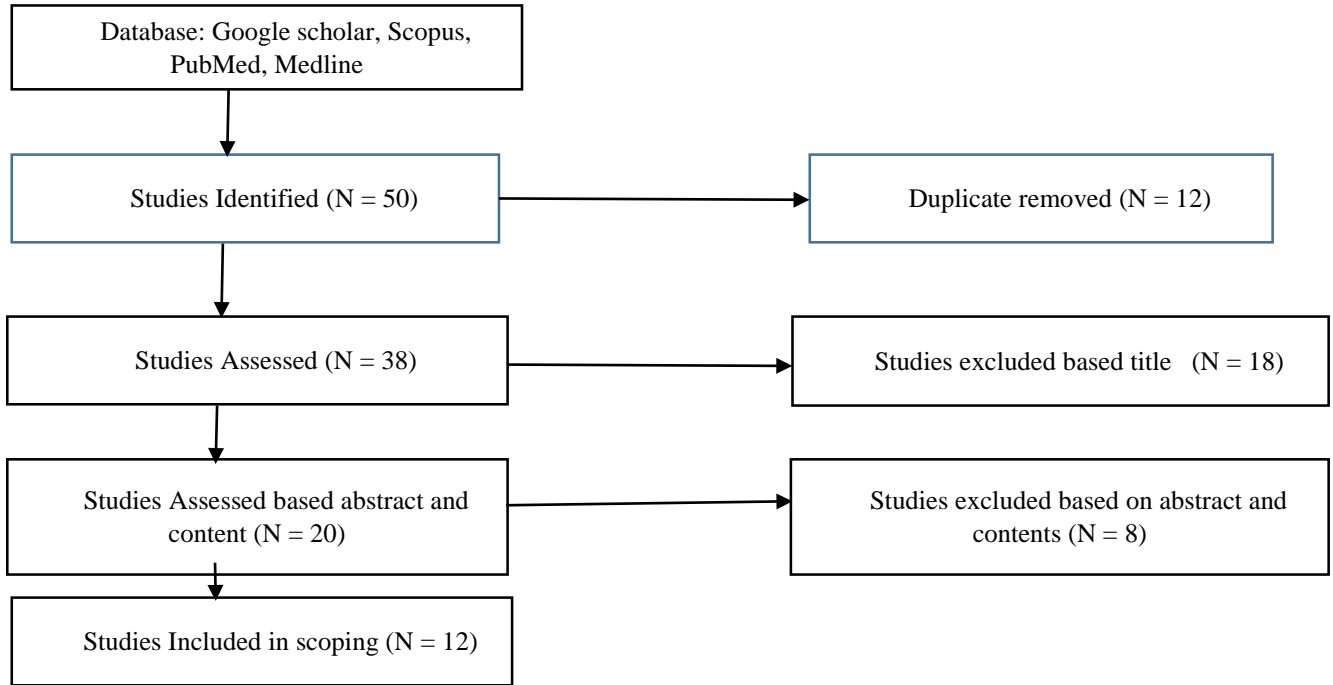
Figure 1. PRISMA Flow diagram on studies' selection

Prevalence of depression among breast cancer patients in Nigeria

Table 1 presents the characteristics of articles extracted from the literature on the prevalence of depression among breast cancer patients in Nigeria. The data in table 1 reveals that a total of 7 studies were investigated.[8,14-19] The minimum sample size was 33,[14] while the maximum sample size was 222.[17] Research on the prevalence of depression among breast cancer patients in Nigeria began in 1998.[16] However, researchers did not show significant interest until more than a decade later. From 2011 onwards, researchers regained interest and conducted more studies. The most recent research on breast cancer and depression was published in 2023.[17] Most of these studies were conducted in South-west Nigeria,[14-18] while two were carried out in North-central Nigeria.[8,19] In terms of research design, five of the selected articles[8,14-16,18] used a descriptive survey research design, one study[17] employed a comparative cross-sectional design, and one study[19] used a qualitative approach. The tools used for data collection in these selected articles were questionnaires and interviews.

Data from Table 1 show the occurrence of depressive disorders among breast cancer patients in Nigeria. The empirical evidence from Table 1 estimates the prevalence of depressive disorders among breast cancer patients to range from 30% to 34.3%.[17] Other reports indicate that there are numerous breast cancer patients in Nigeria who suffer from depression.[8,18] These patients with major depression had lower quality of life scores compared to their counterparts with minimal depressive disorders.[15,17] This finding suggests that depression is commonly experienced by Nigerian breast cancer patients and that they are likely to have a lower quality of life, which hinders the recovery process.

Psychological interventions for treating depression associated with Breast cancer patients in Nigeria.

In Table 2, we present the characteristics of articles extracted from selected literature on psychological interventions for treating depression in breast cancer patients in Nigeria. The table includes 5 studies that were analyzed.[20-24] The minimum sample size of breast cancer patients was 13,[20] while the maximum sample size was 38.[23] Research on psychological interventions for treating depression in breast cancer patients in Nigeria began in 2015,[20] with the most recent research published in 2022.[22] Five of the studies were conducted in the Southern region of Nigeria.[20-24] In terms of study design, four articles

Table 1. Characteristics of the studies that examined the occurrence of depressive symptoms and associated pains in Nigerian breast cancer patients.

Authors	Sample	Study Center	Objectives	Method	Tools	Results
Aruah and Eze[8]	177	Abuja	To determine the prevalence of major depressive disorders in outpatients with cancers.	Descriptive study	Mini International NeuroPsychiatric Interview	Depressive disorders were linked with the presence of disturbing pain at the stage of breast cancer disease. The prevalence of depression was high.
Akin-Odanye, Asuzu, and Popoola[14]	33	Lagos	To examine occurrences and indicators of depressive symptoms among breast cancer patients being treated with chemotherapy.	Descriptive study	Becks Depression Inventory II (BDI-II	Cancer patients had depressive symptoms. Being informed about breast cancer and cancer stage contributed to patients' depression.
NuHu *et al.* [15]	210	Ibadan	To assess the QOL and its determinants among participants with cancer.	Descriptive survey	WHO Quality of Life-BREF	Thirty percent of the participants were depressed which correlated with low quality of life.
Ohaeri *et al.*[16]	106	Ibadan	To examine the psychosocial concerns of Nigerian women affected by breast cancer and cervical cancer.	Descriptive study	General Health Questionnaire (GHQ-12) and Frankfurter Befindlichkeitskala (FBS)	Depression due to patients' cancer condition was the commonest worries they had.
Suleiman *et al.* [17]	222	Ogbom osho, Oyo	An assessment of the quality of life and depression of breast cancer patients.	Comparative cross-sectional design	Socio-demographic and clinical variable questionnaire. Patients Health Questionnaire (PHQ-9), and WHO Quality of Life-BREF	About 34.3% of patients had severe depression. Breast cancer patients suffering from severe depression had lower mean scores in all aspects of quality of life than those without.
Popoola and Adewuja [18]	124	Lagos	To assess the rate and correlates of depressive disorders among breast cancer survivors.	Descriptive study	Mini International Neuropsychiatric Interview	Patients with breast cancer experienced a high rate of depression associated with their illness.
Jonah *et al.*[19]	22	Gombe	To assess the physical, financial, emotional and social impacts of breast cancer on women.	Qualitative transcendental phenomenologic al study	Face-to face unstructured interview and the patients' hospital records	Breast cancer was associated with extreme pains which led to crying.

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used an experimental design[20,21,23,24], while one article used a qualitative design.[22] All of the articles reviewed for psychological intervention employed questionnaires, with only Onyechi *et al.*[21] combining questionnaires and structured interview scale.

Furthermore, the results of these studies, as shown in Table 2, indicate that depression experienced by cancer patients in Nigeria can be treated with various interventions such as, cognitive restructuring[20], REHCT,[21] mHealth[22], psychoeducation[23], and CBT.[24] Asuzu *et al.*[20] found that cognitive restructuring effectively reduced the severity of depression in Nigerian female breast cancer patients. REHCT was also found to be effective in improving the overall mental health of patients with breast cancer.[21] In addition, mHealth was found to be acceptable and useful as it provided psychological and informational support to breast cancer patients.[22] CBT was discovered to be a significantly useful intervention for treating depression among Nigerian breast cancer patients.[24] Despite the effectiveness of psychoeducation in treating depression, Onyedibe *et al.*[23] revealed that no difference was found between breast cancer patients who underwent psychoeducation intervention and those in the control group.

Table 2. Characteristics of the studies that examined the psychological interventions used in treating these patients in Nigeria.

Authors	Sample	Study Center	Objectives	Method	Tools	Results
Asuzu, Akin-Odanye, and Philip[20]	17 (13 breast cancer patients)	Lagos	To examine the feasibility and acceptability of a cognitive restructuring intervention for female cancer patients and its impact on depression outcomes.	Experimental study	Beck Depression Inventory II (BDI-II)	Cognitive restructuring was shown to be of benefit in reducing depression severity among breast cancer patients.
Onyechi *et al.* [21]	84 (20 breast cancer patients)	Anambra, Enugu, and Imo	To examine the efficacy of a rational emotive hospice care therapy (REHCT) on the problematic assumptions, death anxiety, and psychological distress among cancer patients and their family caregivers.	Pre-posttest randomized control group study.	Self-report questionnaires and structured interview scale	REHCT was found effective in improving the mental health symptoms of cancer patients, including breast cancer patients.
Akingbade *et al.*[22]	32	Lagos	To examine the feasibility and usefulness of mHealth psychoeducation support intervention among women with breast cancer undergoing chemotherapy.	A qualitative study	Face-to-face focus group discussions	mHealth psychoeducational support intervention was acceptable to the study participants as it offered them psychological and information support.
Onyedibe *et al.* [23]	38	Lagos	To examine the efficacy of an 8-week group psychoeducation on anxiety, depression, and self-esteem in breast cancer patients.	Experimental study	Hospital Anxiety and Depression Scale (HADS), and Self-Esteem Scale (SES)	The breast cancer patients in the treatment and control groups did not significantly differ in mean depression level after the intervention.
Onyedibe *et al.*[24]	31	Lagos	This 12-week group CBT program for breast cancer patients evaluated its effectiveness in reducing anxiety and depression.	Randomized controlled pre-test post-test design	Hospital Anxiety and Depression Scale (HADS)	CBT was effective in decreasing depression among breast cancer patients.

DISCUSSION

This scoping review has shown that depression is one of the psychological problems experienced by patients with breast cancer in Nigeria. This is supported by the literature, which indicates a high prevalence of depressive disorders among breast cancer patients in Nigeria. One possible reason for this is that the majority of Nigerians believe that breast cancer is incurable. As a result, patients diagnosed with breast cancer may feel that their lives are over and experience constant depression. The lack of medical aids, poverty, and shortage of experienced mental health professionals and clinical psychologists in Nigerian hospitals also contribute to the depressive disorders among breast cancer patients. This finding is consistent with global systematic literature reviews, which have found that depression is the most common psychological disorder among breast cancer patients.[25-27] Insufficient social support from families and relevant organizations has been linked to this depression.[28]

The review also found that psychological interventions such as CBT, cognitive restructuring, psychoeducation, rational emotive behavioral therapy, and mHealth are effective in reducing depressive symptoms among breast cancer patients in Nigeria. These interventions worked by changing negative thinking and beliefs that negatively impact patients' health, leading to positive and healthy living. CBT strategies also includes cognitive restructuring, coping skills, and problem-solving therapies, which aim to correct maladaptive thoughts and promote coping abilities in stressful conditions.[29] Breast cancer patients who were exposed to CBT and cognitive restructuring perceived breast cancer ailment perceived symptoms of breast cancer as less life threatening.[13, 19] Psychoeducation combines elements of CBT and education to provide patients with essential knowledge about the disease and interventions that can enhance mental health.[30] Although there was no significant difference between psychoeducation and treatment-as-usual care, this intervention has been proven effective for depressed cancer patients in Nigeria.[23]

Rational emotive behavioral intervention delivered within hospice care and family counseling settings has also been shown to reduce psychological distress symptoms in cancer patients, including breast cancer patients in Nigeria.[21, 31] These findings align with global meta-analyses and reviews, which have found that psychosocial interventions such as cognitive intervention, meditation, and psychological education are effective in reducing negative emotions and enhancing mental health in breast cancer patients.[32] In addition, a review conducted by Barrera[33] revealed that psychotherapeutic interventions, such as cognitive-behavioral psychotherapy, supportive-expressive group therapy, problem-solving therapy, cognitive-existential therapy, supportive therapy, and mindfulness-based reduction, are effective in treating breast cancer patients with co-morbid depression. Furthermore, a randomized controlled trial study conducted by Dowlatabad[34] revealed that group positive psychotherapy is significantly effective in reducing depressive symptoms and enhancing the happiness of breast cancer patients. However, despite the effectiveness of these intervention programs being established abroad, they have not been utilized in Nigeria for the treatment of depressed breast cancer patients.

The findings of this study have practical implications for public health workers and therapists. It highlights the high prevalence of depression among Nigerian breast cancer patients and the need for psychological interventions to enhance their mental health. The Nigerian environment may contribute to depressive symptoms in breast cancer patients due to lack of hope or trust in healthcare services and misinformation. Offering counseling services and psychological interventions to terminally-ill patients in the Nigerian psycho-oncological milieu can help them cope with family stress and grief associated with terminal illnesses and end-of-life crises.[30, 35]

The strength of this review is that it is the first of its kind to explore the comorbidity of breast cancer and depressive disorders among Nigerian patients using a scoping review technique. However, there are limitations to this study. The search was limited to four databases and excluded articles published in non-peer-reviewed sources and other languages. Additionally, most of the articles reviewed were conducted in the southern part of the country, so generalizing the findings should be done with caution. Future research should focus on the comorbidity of depressive disorders and breast cancer patients in the northern part of the country.

CONCLUSION

Depression is a prevalent mental health issue among breast cancer patients in Nigeria. Many patients experience severe and moderate depressive disorders due to their beliefs and the spread of unverified information. This study found that depressive disorders among breast cancer patients can be effectively treated using psychological interventions. Specifically, CBT, cognitive restructuring, and psychoeducation have been shown to be effective in alleviating symptoms of depression in Nigerian breast cancer patients. Therefore, it is recommended that breast cancer patients be screened for depressive disorders, and those with moderate to

severe depression should receive treatment using CBT and psychoeducation approaches. This will help promote recovery and improve their mental health and well-being.

ETHICAL CONSIDERATIONS
None applicable for this study.

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