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PSYCHOSOCIAL BARRIERS TO THE UPTAKE OF BREAST CANCER SCREENING AMONG WOMEN IN SELECTED HEALTHCARE SETTINGS IN OYO STATE, NIGERIA

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ABSTRACT
Breast screening is vital in cancer prevention. However, poor participation in breast cancer screening has been linked with diverse psychosocial barriers. Hence, this study assessed the psycho-social barriers in the uptake of breast cancer screening among women of reproductive age. A descriptive, cross-sectional research design was utilized. A multistage sampling technique was utilized to select a sample of 308 women attending children outpatient clinic in the selected hospitals to complete a validated semi-structured questionnaire (r = 0.88). Data were analyzed using descriptive statistics of mean, frequency and percentage and inferential statistics of chi square at 5% level of significance. The mean age of respondents was 32.3 ±5.5 years, majority were married(94.7%), Christians(62.5%). Only one-third of respondents (32.1%) experienced psycho-social barriers with many experiencing fear of diagnosis (68.7%), displeasure with breast examination (97.4%), language barriers (65.2%), and lack of social support (91.4%).The study revealed a significant level of psychosocial barriers in screening for breast cancer. Therefore, healthcare professionals can ameliorate these psycho-social barriers by assessing and providing psychosocial interventions which addresses the issue and improves screening uptake. Also, there is need for focused individualized approach to care, where each woman's unique needs and barriers are assessed and prioritized for intervention.

Keywords: *Psychosocial barriers, educational status, breast cancer screening, women, family type*

INTRODUCTION
Globally, cancer is the second leading cause of death, surpassed only by cardiovascular diseases (Sung, et al., 2020; Rabiu, et al., 2023)**.** The global cancer burden is projected to rise from 19.2 million in 2020 to 21.6 million by 2030 (Global Cancer Observatory , 2025) and the rise is projected to be accounted more by the rates in developing countries (Sung et al*.,* 2020) In women worldwide, breast cancer is the most common malignancy (Ghoncheh, et al., 2016; WHO, 2025, WHO, 2025) with 2.2 million cases reported in 2020 and 685,000 deaths, making it the leading cause of death among women (WHO, 2025). It is estimated that one in every 12 women will have breast cancer during her lifetime (WHO, 2025) with the highest incidence being in those of 45–65 years old, when hormonal changes occur in the pre- and post-menopause period (WHO, 2024). In Africa, breast cancer is the second cause of death among women,

representing 27.7% of the total cancer burden with an average of 186,598 new cases and 85,787 deaths closely followed by cervical cancer accounting for 19.6% of the total cancer cases Bahnassy, et al., 2020). Similarly, Western Africa has been reported to have the highest cancer burden when incidence and mortality rate were taken into consideration with breast cancer being the leading cause of death in women when compared with cervical cancer (Azubuike, et al., 2018).

Within the sub-region, Nigeria was reported to have the highest breast cancer incidence rate of 50.5 per 100,000 women and the second highest in the Sub-Saharan Africa region (Azubuike, et al., 2018; Ferlay, et al., 2015). To ensure the high rate of breast cancer-related morbidity and mortality are reduced, there is a need to scale up breast cancer screening uptake among women. In high-income countries, mortality from breast cancer has been on the decline due to improved treatments and early detection through organized screening programs (Edwards, et al., 2014; Ponce-Chazarri, et al, 2023). Even though the survival rate for breast cancer at 5 years is averagely 89.2% overall, the stage at which it is diagnosed has a great influence, varying from 98% to 24% survival depending on whether it is diagnosed at stage I or stage IV, respectively (Spanish Society of Medical Oncology, 2024). In USA, women at risk of breast cancer are required to undergo annual screening mammography starting at age 45 years and continuing up to age 54 years, after which they can transit to screening every 2 years or continue screening annually (Smith, et al. 2016; Olasehinde, et al., 2017). It is also recommended that women between 40 and 44 years of age should have the opportunity to begin annual screening, (Smith et al., 2016). In Europe, however, a breast cancer screening program consists of performing a mammography every 2 years on the asymptomatic women aged between 50 and 69 years old (Saz-Parkinson, et al., 2020).

However, with the limited applicability of mammography-based screening programs in developing countries like Nigeria due to challenges of poor infrastructure, breast self-examination (BSE) and clinical breast examination (CBE) have been recommended as a screening modality that find usefulness in early detection of breast cancer, limiting morbidity and mortality (Olasehinde, *et al*. 2017). CBE is now provided in Nigeria either solely (where mammography is unavailable) or to complement mammography (where it is in short supply) (Olasehinde, *et al*. 2017) and they have been shown to reduce mortality by 9% to 15% in other climes like Europe (Saz-Parkinson, et al, 2020).

Despite the availability and proven effectiveness of the screening intervention, breast cancer is still reported as the most common cause of cancer related deaths in Nigeria accounting for 18.1% of all cancer deaths (Sung, *et al.,* 2020; Rabiu, et al., 2023). Reducing this rate depends largely on women's participation in breast cancer screening in Nigeria, in general, and Ibadan in particular. However, several barriers have been implicated in the uptake of breast cancer screenings among women (Hudson, et al, 2016; Gianino, *et al.* 2018). Psycho-social barriers stands out among the barriers that have been reported by previous studies (Erhabor, *et al.* 2018; Wondimagegnehu,et al, 2019; Iddrisu, et al., 2020; Roux, *et al.* 2022). Yet, only few studies in Nigeria have been undertaken to unravel the role of psycho-social factors in the uptake of breast cancer screening (Iddrisu, et al., 2020; Babatunde, & Sunday, 2017; Sanchez, et al 2019; Elewonibi, & BeLue, 2019). Accelerating the uptake of these screenings would require identifying the specific psycho-social barriers influencing the non-utilization of these screening services and providing requisites programs and plans to overcome the barriers (Marcu, et al, 2022; Alatrash, 2020; Tabár , *et al* 2021) necessary to the achievement of sustainable development goal 3, which seeks to ensure healthy lives and promote the well-being of all at all ages by the year 2030 (United Nation, 2015). Hence, this study which examined the psychosocial barriers to the uptake of breast cancer screening among women in selected healthcare settings in Oyo State**.**

Hypotheses:

1. There is no significant association between Psychological Barriers to breast cancer screening and Family type of the women.
2. There is no significant association between social barriers to breast cancer screening and educational status of the women

MATERIALS AND METHODS

A cross-sectional descriptive study design was used. The research was conducted in the Jericho Nursing Home, Adeoyo Teaching Hospital, and Oni and Sons Memorial Hospital, Ibadan, Nigeria between September and October, 2022. Drawing a sample population of 308 women out of 900, based on Taro Yamane's sample size formula, from three selected state hospitals in Ibadan, Oyo State, southwest Nigeria (Adeoyo Maternity Teaching Hospital, Oni & Sons Memorial Hospital, and Jericho Nursing Home), using a multi-phase sampling technique involving four stages. At stage one, a simple random sampling technique was done and Oyo Central Senatorial zone was selected out of three (3) senatorial zone (Oyo North, Oyo Central and Oyo South senatorial zones) by balloting yes or no. A zone that picked YES was used for the study. This helped to reduce bias and give each zone an equal chance of being selected. For stage two (2), a simple random sampling technique was used to select three Local Government Areas (Ibadan North, Ibadan North West and Ibadan South west local Government) out of 5 LGAs in the zone by balloting yes or no. A LGA that picked YES was used for the study. This helped to reduce bias and give each LGA an equal chance of being selected. At stage three, one hospital from each of the LGAs were selected purposively and this was based on their having Children Outpatient Departments and likely to have a steady flow of eligible respondents (women attending clinics). For Ibadan North: Adeoyo State Teaching Hospital; Ibadan North West: Jericho Nursing Home; Ibadan South-West: Oni & Sons Memorial Hospital were selected. At stage four, 308 women attending Children Outpatient Departments of the selected hospitals were selected using simple random sampling technique by balloting YES or No (Adeoyo State Teaching Hospital: 88; Jericho nursing home: 113; Oni & Sons Memorial Hospital: 107). A woman that picked YES was used for the study. This helped to reduce bias and give each woman an equal chance of being selected. Respondents also met the inclusion criteria which included: (1) Women who gave their consent to participate in the study, (2) women whose children are not critically ill and (3) women attending the children outpatient departments. Data were collected using validated instrument, a self-structured questionnaire of 33 items developed from literature review to assess the psychosocial barriers. Section A collected data on demographic characteristics and it consisted of 9 items, Section B investigated psychological issues associated with screening for breast cancer and it had 8 items while section D explored the perceived social barriers to uptake of breast cancer screening and it had 16 items. Items were designed to extract categorical responses of "Yes" and "No" carrying scores of "1" and "0" respectively. To test the instrument's reliability, however, 31 women were chosen at random, at the Children's Outpatient Department of the University College Hospital (UCH), Ibadan, Oyo State for a pre-test. The Cronbach Alpha reliability test was conducted using this setting because it shared characteristics similar to those of the primary study population setting. A reliability index of 0.88 was accepted as indicating good reliability of the instrument for data collection. Out of a sample size of 308 recruited for the study, only 305 were correctly and completely filled and were adequate for the final analysis. Data entry, and coding were done using the Statistical Package for the Social Science (SPSS) version 23.0 and analysis were done using descriptive statistics of frequencies, percentages, and mean; to summarize the characteristics of the study participants and the study variables, while the 'chi-square test' was employed to investigate the relationship between categorical variables and presented hypotheses at 5% level of significance. Items were structured and designed to extract data using categorical options of "Yes" and "No", carrying points of "1" and "0", respectively. The maximum obtainable score from the 47 test items (psychological barriers: 16; Social barriers: 31) testing psycho-social barriers is therefore 47 (47×1), while the minimum obtainable score is 0 (47×0). The total score was dichotomized at cut-off point of mean psycho-social barriers±SD.

Respondents with the mean score and above were categorized as not limited by psycho-social issues in the uptake of breast cancer screening and a score less than mean score was categorized otherwise.

Ethical approval was obtained from the Human Research and Ethics Committee (REC) of the Oyo State Ministry of Health, Ibadan (Approval No AD13/479/44294). Ethical principles were observed.

RESULTS

Table 1: shows the distribution of the socio-demographic characteristics of the respondents. The respondents' mean±SD age was 32.3±5.5 years. Majority were married (94.7%), and were of Christian faith (62.5%) and had tertiary level education (51.8%).

Table 1: Socio-Demographic Characteristics

Items	Frequency(n)	Percentage (%)
Age (years)		
21-30	121	39.8
31-40	164	53.9
41 and above	19	6.3
Mean ±SD = 32.3 ±5.5		
Marital Status		
Single	13	4.3
Married	288	94.7
Divorced	3	1.0
Religion		
Christianity	190	62.5
Islam	114	37.5
Education		
No formal	1	0.3
Primary	9	3.0
Secondary	136	44.9
Tertiary	157	51.8
Ethnicity		
Yoruba	287	94.4
Igbo	10	3.3
Hausa	3	1.0
Others	4	1.3
Occupation		
Trading/Business	100	33.0
Civil/Public	66	21.8
Self-employed	70	23.0
Unemployed/Student	19	6.3
Artisan	40	13.2
Housewife	5	1.7
Others	3	1.0
Parity		
None	18	6.0
1-2	202	67.1
3-4	80	26.6
5 and above	1	0.3
Family setting		
Monogamous	269	89.4
Polygamous	29	9.6
Others	3	1.0
Average monthly income (#)		
Below 30,000	143	50.9
30,000-59,0000	86	30.6
60,000-500,000	52	18.5

Table 2 shows psychological barriers to uptake of breast cancer screening. More than half of the respondents (72.3%) indicated that fear of the unknown discouraged them from screening for breast cancer. Overall, 98(32.1%) of the women complained of psychological barriers in the uptake of screening for breast cancer.

Table 2: Psychological barriers in the uptake of screening for breast cancer

Statements	Frequency (%) Yes	No
I cannot utilize breast cancer screening due to worries and threats about my future	44(14.5)	259(85.5)
Lack of privacy is a factor affecting breast cancer screening in women of child bearing age	44(14.5)	260(85.5)
Fear of the unknown is associated with screening for breast cancer.	219(72.3)	84(27.7)
Fear of discovering that I have breast cancer makes me not to practice any form of its screening procedure.	108(35.5)	196(64.5)
Fear of exposure to radiation will discourage me from utilization of breast cancer screening	24(7.9)	280(92.1)
Asking me to go for breast cancer screening will reduce my level of emotional well-being	83(27.3)	221(72.7)
For me to go for breast cancer screening, I will face challenges of depression and anxiety	97(31.9)	207(68.1)
I will feel demoralized if I am asked to go for breast cancer screening.	57(18.7)	248(81.3)

Table 3 shows the summary of the social barriers in the uptake of breast cancer screening. Almost all the women (97.4%) revealed that they do not like someone touching their breast, while more than half of the women (68.7%) has fear of the possibility of breast cancer diagnosis, a higher number of women (91.4%) lack social support, lack of health insurance (71.5%), language barriers (65.2%) Overall, 98(32.1%) of the women indicated experiencing social barriers in the uptake of breast cancer screening.

Table 3: Social barriers to uptake of Breast Cancer screening

Statements	Frequency (%) Yes	No
Our society's behavior and negative perception discourages me from breast cancer screening.	37(12.3)	265(87.7)
My culture viewed women who expose their breast for screening as promiscuous women.	4(1.3)	301(98.7)
Social stigma around breast cancer can prevent women from seeking screening	25(8.2)	280(91.8)
Fear of breast cancer diagnosis is a common social barrier to screening	206(68.7)	94(31.3)
Lack of social support from family and friends discourage women to undergo breast cancer screening	278(91.4)	26(8.6)
Access to healthcare facilities is a critical factor in breast cancer screening uptake	253(83.0)	52(17.0)
Most women do not like someone touching their breast	296(97.4)	8(2.6)
Most women especially in rural areas might not want to go for breast cancer screening due to language barriers	199(65.2)	106(34.8)
My religious belief does not support breast cancer screening	11(3.6)	294(96.4)
Women who have access to mass media communication are more likely to practice breast cancer screening exercise	266(87.2)	39(12.8)
My tribe believes that breast cancer screening is not necessary since we drink herbal medications for preventing breast cancer	8(2.6)	297(97.4)
For me to do breast cancer screening in front of a male doctor is embarrassing	62(20.3)	243(79.7)

Healthcare provider recommendations can significantly influence a woman's decision to undergo breast cancer screening	281(92.1)	24(7.9)
I do not have family history of breast cancer so going for screening is not necessary	47(15.4)	258(84.6)
Breast cancer screening is time consuming	22(7.2)	279(92.7)
Lack of health insurance is a significant social barrier to breast cancer screening	218(71.5)	87(28.5)

Table 4 shows that 98(32.1%) of the women had social barriers associated with screening for breast cancer.

Table 4: Psycho-social barriers associated with screening for breast cancer n=305

Item	Frequency (F)	Percentage (%)
Positive psychosocial barriers	98	32.1
Negative psychosocial barriers	207	67.9

Table 5 shows the summary that there was no significant association between the women's family type and psychological barriers in the uptake of breast cancer screening (X^2 = 4.3; p = 0.117) nor was there association between the women's educational status and social barriers to breast cancer screening (X^2 = 5.93; p = 0.083).

Table 5: Socio-demographics and barriers to breast cancer screening n=305

Variable	Family	No f(%)	Yes f(%)	Df	χ2	P
Psychological barriers	Monogamous	188(91.6)	81(84.4)	3	4.3	0.117
	Polygamous	16(7.8)	13(13.5)			
	Others	1(0.5)	2(1.1)			
Educational status						
Social barriers	No formal	0 (0.0)	1 (1.0)	3	5.93	0.083
	Primary	6 (2.9)	3 (3.1)			
	Secondary	85(41.3)	51(52.6)			
	Tertiary	115(55.8)	42(43.3)			

Key: f=frequency, %=percentage, Df=degree of freedom, p=P-value, †=likelihood ratio.
Decision rule: p < 0.05 = significant, > 0.05 = not significant

DISCUSSION

Breast cancer constitutes a higher percentage of women's morbidity and mortality, and psychological barriers have prevented many women from breast cancer screening measures. Findings from the study reveals that one-third of the women had psychosocial barriers preventing them from screening from breast cancer, some of which are language barrier, anxiety, depression, fear of breast cancer diagnosis, displeasure with touching of breast. The explanation for this is not hard to find as most respondents mean age indicated they were young women in their reproductive age who tend to shy away from expressing their views on how they feel because of the opinion of others. In line with this, studies conducted among women in their reproductive age reported similar barriers (Babatunde, & Sunday, 2017; Sanchez et al, 2019; Elewonibi, & BeLue, 2019). It is imperative to say that if attention is not paid on assessing the psychosocial barriers among reproductive women, many will not be screened, and early identification of breast cancer and prompt treatment will not be possible which will affect their health. Also, social media was seen to be a facilitating factor to screening for breast cancer as described by the women. In our 21st century where most people have access to social media providing psychoeducation on breast cancer screening, its benefits using social or mass media

will go a long way in promoting the uptake of breast cancer screening which will reduce the incidence of the disease and its mortality. This is supported by a study done on breast cancer screening practices among women in South west Nigeria which reported that mass media was one of the major sources of information on breast cancer screening (Babatunde, & Sunday, 2017). Furthermore, there is a need for an exploratory study to further understand the extent of the barriers among the women. Language was seen in this study as a major barrier in the uptake of breast cancer screening. This implies that sensitization of these groups of women should be done in local acceptable languages or use of a professional language interpreter during their visit to the health clinics/hospitals in order to promote understanding of the implication of not screening for breast cancer thereby enhancing uptake and mitigating detrimental health challenges.

Worries, threats about future, fear of the unknown, fear of discovering breast cancer, challenges of depression, anxiety and fear of radiation, this corroborates other findings which reported psychological barriers (Iddrisu, et al, 2020; Ohaeri, & Aderigbigbe, 2019). When a respondent is not psychologically stable, she may not be encouraged to participate in breast screening exercise, leading to several health challenges which can subsequently interfere with their health. A study reported that the majority of women who receive a breast cancer diagnosis after screening always confront obstacles that have an impact on every aspect of their lives, both physically and psychologically like depression (Joyce, & Richard, 2019). Other studies reported same findings that women with breast cancer after screening become hopeless, tearful, ashamed, and discouraged because of society's behavior and discrimination towards breast cancer patients (Wondimagegnehu et al, 2019; Agha, & Tarar, 2019; de Kruif, et al, 2020).

Self-efficacy, beliefs, and social influence are some examples of variables that may affect women's decision to get screened for breast cancer in other to maintain good health status. The perceived social barriers reported by the respondents were indicated to have been limited by the society's behavior and negative perception, culture that views women who carry out breast cancer screening as promiscuous, the dislike of someone touching their breast and lack of family support, all of which discourages women from breast cancer screening. This is in line with similar study, (Naidu, et al., 2021; Getachew, et al. 2020) which stated that respondents experienced similar social barriers. Highest endorsed reason for none uptake of breast cancer screening being that women do not like someone touching their breast and that culture sees women who carry out breast cancer screening as promiscuous women. There should be more health education in our primary health clinics, hospitals, radios, televisions, social media jingles and campaigns to women in other to disabuse social misconceptions among them.

With regards to the study hypotheses, findings revealed no significant associations between women's educational status and social issues associated with breast cancer screening just as there was no significant relationship between women's family type and psychological barriers in the uptake of breast cancer screening. This was in variance with the finding of (Yuniar, et al, 2020) in which it was reported that education, marital status (married women), urban or semi-urban residence, employment, higher socioeconomic status, income levels, cost of screening, and accessibility to health insurance predicted uptake of breast cancer screening. However, this does not negate the need to promote education or sensitization of the society on the need to screen for breast cancer and its impact on individual's health as some studies have shown education is key in predicting the uptake of breast cancer screening.

Conclusions

The findings of this study reveal the diverse psychosocial barriers that impairs the uptake of breast cancer screening among reproductive women ranging from fear, depression, lack of family support, and language barrier amongst others. Therefore, psychosocial interventions like cognitive behavioral therapy, psychoeducational programs, peer support groups, or counselling services be carried out to facilitate the uptake of breast cancer screening. This can be achieved by using social media platforms in reaching out to women even among those without good access to healthcare. This would promote screening and reduce incidence of breast cancer.

Also, there is need for focused individualized approach to care, where each woman's unique needs and barriers to breast cancer screening are assessed and prioritized.

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Conflict of Interest
No conflict of interest between authors
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REFERENCES

Agha, N., & Tarar, M. (2019). Battling breast cancer: women's narratives of struggle, family support and survival from rural Sindh, Pakistan. *Pakistan Journal of Women's Studies: Alam-e-Niswan, 26(1),* 21-40

Alatrash, M. (2020). Prevalence, perceived benefits, and perceived barriers regarding breast cancer screening among three Arab American women subgroups. *Journal of Transcultural Nursing, 31(3),* 242-249. Doi: 10.1177/0969141320921210.

Azubuike, S., Muirhead, C., Hayes, L., & McNally, R. (2018). Rising global burden of breast cancer: the case of sub-Saharan Africa (with emphasis on Nigeria) and implications for regional development: a review. *World Journal of Surgical Oncology, 16*, 63. Available at: https://doi.org/10.1186/s12957-018-1345-2.

Babatunde, O., & Sunday, A. (2017). Breast Cancer Screening Practices among Women in Akure South Local Government Area of Ondo State. *International Journal of Collaborative Research on Internal Medicine & Public Health, 9(4)*, 651-662.

Bahnassy, A, Abdellateif, M, Zekri, A. (2020). Cancer in Africa: Is It a Genetic or Environmental Health Problem?. *Front. Oncology.* Available at: 10:604214.10.3389/fonc.2020.604214.

de Kruif, A., Chrifou, R., Langeslag, G., Sondaal, A., Franssen, M., Kampman, E., et al. (2020), Perceptions of non-Western immigrant women on having breast cancer and their experiences with treatment-related changes in body weight and lifestyle: A qualitative study. *PLoS One, 15(7),* article number e0235662. Doi: 10.1371/journal.pone.0235662.

Edwards, B., Noone, A., & Mariotto, A. (2014). Annual Report to the Nation on the status of cancer, 1975-2010, featuring prevalence of comorbidity and impact on survival among persons with lung, colorectal, breast, or prostate cancer. *Cancer, 120*, 1290-1314. Doi: 10.1002/cncr.28509.

Elewonibi, B., & BeLue, R. (2019). The influence of socio-cultural factors on breast cancer screening behaviors in Lagos, Nigeria. *Ethnicity & Health, 24(5)*, 544–559. Available at: https://doi.org/10.1080/13557858.2017.1348489.

Erhabor, O., Abdulrahaman, Y., Retsky, M., Forget, P., Vaidya, J., Bello, O., Adias, T., Dagana, A., Egenti, B., Mainasara, A., Sahabi, S., Rilwanu, T., Ahmed, Y., Hassan, M., Ajayi, I., Okara, G., Lori, J., & Ibiang, L. (2016). Breast Cancer in Nigeria Diagnosis Management and Challenges, Author House UK. ISBN: 978-1-5049-9677-8(e).

Fasina, B., Ibimiluyi, F., Iretor-Oscar, O., & Ayodele, C. (2020). Psycho-Social Variables and Women's Susceptibility to Breast Cancer Screening in Southwest. Nigeria. *Euro Afro Studies International Journal (EASIJ.COM), 4(1),* 15–27. Available at: www.doi.org/10.5281/zenodo.3782539

Ferlay, J., Soerjomataram, I., Dikshit, R., Eser, S., Mathers, C., Rebelo, M., et al. (2015). Cancer incidence and mortality worldwide: sources, methods and major patterns in GLOBOCAN 2012. *International Journal of Cancer, 136(5)*, E359–E386. Available at: https://doi.org/10.1002/ijc.29210

Getachew, S., Tesfaw, A., Kaba, M., Wienke, A., Taylor, L., Kantelhardt, E., et al. (2020). Perceived barriers to early diagnosis of breast Cancer in south and southwestern Ethiopia: a qualitative study. *BMC Women's Health, 20,* 1-8. Doi: 10.1186/s12905-020-00909-7.

Ghoncheh, M., Momenimovahed, Z., & Salehiniya, H. (2016). Epidemiology, incidence and mortality of breast cancer in Asia. *Asian Pacific Journal of Cancer Preview, 17(S3*), 47-52.

Gianino, M., Lenzi, J., Bonaudo, M., Fantini, M., Siliquini, R., Ricciardi, W., et al. (2018). Organized screening programmes for breast and cervical cancer in 17 EU countries: trajectories of attendance rates. *BMC Public Health, 18(1)*, 1–13. Doi: 10.1186/s12889-018-6155-5.

Global Cancer Observatory (2025). Cancer Today, Available at: http://gco.iarc.fr/today/home. [Accessed: 16 March, 2025)

Hudson, S., Brazil, D., The, W., Dufy, S., & Myles, J. (2016). Effectiveness of timed and non-timed second appointments in improving uptake in breast cancer screening. *Journal of Medical Screen, 23*, 160–3. Doi: 0.1177/0969141315624937.

Iddrisu, M., Aziato, L., & Dedey, F. (2020). Psychological and physical effects of breast cancer diagnosis and treatment on young Ghanaian women: a qualitative study. *BMC Psychiatry, 20,* 353. Available at: https://doi.org/10.1186/s12888-020-02760-4

Joyce, W., & Richard, J. (2019). Psychosocial Factors Associated with Breast Cancer Patients. (A. Paul, Ed.). *Journal of Social Work Education and Practice. IV(2),* 12-16. ISSN: 2456-2068.

Marcu, A., Marke, L., Armes, J., Whitaker, K., & Ream, E. (2022). Adapting a breast cancer early presentation intervention for Black women: A focus group study with women of Black African and Black Caribbean descent in the United Kingdom. *European Journal of Cancer Care,* article number e13652. Doi: 10.1111/ecc.13652.

Naidu, C., Wiseman, N., & Harris, N. (2021). Factors associated with low screening participation and late presentation of cancer amongst women in the Pacific Island countries and territories: A systematic review. *Asian Pacific Journal of Cancer Prevention: APJCP, 22(5)*, 1451.

Ohaeri, B., & Aderigbigbe, M. (2019). Knowledge and use of breast self-examination and mammogram among women of reproductive age in Oyo State Secretariat, Ibadan, Oyo State, Nigeria. *European Journal of Midwifery, 3(7)*, 1-7. Doi: 10.18332/ejm/105858.

Olasehinde, O., Boutin-Foster, C., Alatise, O., Adisa, A., Lawal, O., Akinkuolie, A., et al. (2017). Developing a Breast Cancer Screening Program in Nigeria: Evaluating Current Practices, Perceptions, and Possible Barriers. *American Society of Clinical Oncology, 3(5)*, 490-496. Doi: 10.1200/JGO.2016.007641.

Ponce-Chazarri, L., Ponce-Blandón, J., Immordino, P., Giordano, A., & Morales, F. (2023). Barriers to Breast Cancer-Screening Adherence in Vulnerable Populations. *Cancer, 15*, 604. Available at: https://doi.org/ 10.3390/cancers15030604.

Rabiu, I., Isah, J., & Muhammad, A. (2023). Insights into the Rising Cases of Cancer in Nigeria'. *International Journal of Cell Science & Molecular Biology, 7(3),* article number 555712. Available at: 10.19080/IJCSMB.2023.07.555712.

Roux, A., Cholerton, R., Sicsic, J., Moumjid, N., French, D., Giorgi Rossi, P., et al. (2022). Study protocol comparing the ethical, psychological and socio-economic impact of personalized breast cancer screening to that of standard screening in the "My Personal Breast Screening"(MyPeBS) randomized clinical trial. *BMC cancer, 22(1)*, 507. Doi: 10.1186/s12885-022-09484-6.

Sanchez, L., Fernandez, N., Calle, A., Ladera, V., Casado, I., & Sahagun, A. (2019). Long-term treatment for emotional distress in women with breast cancer. *European Journal of Oncology Nursing, 42,* 126-133. Doi: 10.1016/j.ejon.2019.09.002.

Saz-Parkinson, Z., Monteagudo-Piqueras, O., Granados-Ortega, J., Martínez-Mondéjar, E., & Labrador-Cañadas, M.V. (2020). European Commission Initiative on Breast Cancer": Recomendaciones Seleccionadas De Cribado De Cáncer De Mama De Las Guías Europeas. *Rev. Esp. Salud Pública, 94*, e1–e10.

Smith, R., Andrews, K., Brooks, D., DeSantis, C., Fedewa, S., Lortet-Tieulent, J., et al. (2016). Cancer screening in the United States, 2016: A review of current American Cancer Society guidelines and current issues in cancer screening. *CA: A Cancer Journal for Clinicians, 66(2),* 96-114. Available at: https://doi.org/10.3322/caac.21336.

Spanish Society of Medical Oncology (SEOM). (2024). Breast Cancer. Available at: https://seom.org/info-sobre-el-cancer/cancer de-mama. (Accessed: 20 Nov, 2024).

Sung, H., Ferlay, J., Siegel, R.L., Laversanne, M., Soerjomataram, I., Jemal, A., et al. (2021). CA Global Cancer Statistics 2020: GLOBOCAN estimates of incidence and mortality worldwide for 36 cancers in 185 countries. *A Cancer Journal for Clinicians, 71(3).* [Online]. Available at: DOI: https://doi.org/10.3322/caac.21660

Tabár, L., Chen, T., Yen, A., Dean, P., Smith, R., Jonsson, H., et al. (2021). Early detection of breast cancer rectifies inequality of breast cancer outcomes. *Journal of Medical Screen, 28,* 34–8. Doi: 10.1177/0969141320921210.

United Nations. (2015). Transforming our world: The 2030 agenda for sustainable development, Available at: https://sdgs.un.org/publications/transforming-our-world-2030-agenda-sustainable-development-17981 . (Accessed on 1 February, 2026).

Wondimagegnehu, A., Abebe, W., Abraha, A., & Teferra, S. (2019), Depression and social support among breast cancer patients in Addis Ababa, Ethiopia. *BMC Cancer, 19.(1)*, 836. doi: 10.1186/s12885-019-6007-4.

World Health Organization (WHO). (2025). Cancer. Available at: https://www.who.int/news-room/fact-sheets/detail/cancer. (Accessed: 12 Feb 2025).

World Health Organization (WHO) (2025). The Global Breast Cancer Initiative. Available at: https://www.who.int/initiatives/global-breast-cancer-intiative. (Accessed on 17 July, 2025).

World Health Organization (WHO) (2025). Breast cancer. https://www.who.int/news-room/fact-sheets/details/breast-cancer

World Health Organization (WHO) (2024). Breast Cancer. Available at: https://www.who.int/news-room/fact-sheets/details/breast-cancer. (Accessed: 27 Oct, 2024).

Yuniar, P., Robinson, S., Moorin, R., & Norman, R. (2020). Economic Evaluation of Breast Cancer Early Detection Strategies in Asia: A Systematic Review. *Value in Health Regional Issues. 21(c),* 252–263. Available at: https://doi.org/10.1016/j.vhri.2020.01.003

https://doi.org/10.1007/s10823-023-09483-5