Journal Homepage: -www.journalijar.com

INTERNATIONAL JOURNAL OF ADVANCED RESEARCH (IJAR)

Article DOI:10.21474/IJAR01/13631
DOI URL: http://dx.doi.org/10.21474/IJAR01/13631

RESEARCH ARTICLE

Correlation Between Body Appreciation and Female Breast Self-Examination

Ekpa Joseph
Department of Physical and Health Education Kogi State College of Education, Ankpa.

Manuscript Info

Manuscript History
Received: 31 August 2021
Final Accepted: 30 September 2021
Published: October 2021

Key words: -
Body Appreciation, BSE, Females, Cancer

Abstract

For many decades, cancer has remained a ubiquitous part of public health concern that has assumed a public health problem across the globe. Perhaps, several actions have been documented that attempt to provide a solution to the increasing spread of the disease. Breast self-examination is a cancer curbing strategy that has received enormous research attention in recent years. Nevertheless, many factors have been implicated in the BSE variance. Numerous studies have suggested that body appreciation is positively correlated with health behaviors and health care practice. The current study examined the relationship between body appreciation and BSE practice, using a sample of women (N = 248) in Kogi State, Nigeria. Linear regression resultsestablisheda positive correlation between body appreciation and BSE practice ($p < .0.05$). This result informs knowledge regarding determinants of BSE behavior among the female. The research concludes with a discussion of the practical implications and recommendations.

Introduction:-

Over the years, cancer has become a ubiquitous part of public health concern that has been designated an emergency public health problem in every society. Eguzo and Camazine (2013) contend that the trend of cancer poses a challenging public health apprehension in lower-income countries. Despite the health burden associated with cancer, the cost of diagnosis and management of the disease is considerably high and above the income of many cancer patients in developing nations (Oluka et al., 2014). Cancer incidence has generally been linked to increased mortality and morbidity worldwide(Jedy-Agba et al., 2012). Awodele et al. (2011) noted that with about one hundred thousand cases of cancer being reported in Nigeria annually, cancer incidence in Nigeria is considerably high. Accordingly, Nwogu et al. (2011)said that the most common known cancer incidence in Nigeria is cervical, prostate, liver, and breast cancers.

Extensive literature abounds that suggest that the most commonly diagnosed cancer among women in Nigeria is breast cancer (Adejumo et al., 2018; Adetifa & Ojikutu, 2010; Azubuike et al., 2018; Baba & Hincal, 2018; Beaumont & Nwankwo, 2018; Ebenezer & Lougue, 2018; Ighodaro & Akhigbe, 2016; Nwankwo, 2018; Ogunkorode et al., 2017; Okoye, 2020; Onwuchuluba et al., 2018; Salako et al., 2016). For example, Chidebe and Orjiakor (2019) stated that about 80% of Nigerian women are diagnosed with advanced breast cancer. Additionally, research in Nigeria has linked breast cancer to increased mortality among women(Asuzu et al., 2018; Gershon et al., 2019; Hanson et al., 2019; Rahman et al., 2014; Twahir et al., 2019; Olufemi et al., 2017;Dodo et al., 2016; Williams et al., 2015). This position suggests continued research relating to prevention and cure. Perhaps, early

Corresponding Author:- Ekpa Joseph
Address:- Department of Physical and Health Education Kogi State College of Education, Ankpa.

detection of breast cancer presents an opportunity for effective management and control of the disease. Thus, the most common method of identifying the onset of cancer in the breast is self-examination.

The concept of breast self-examination denotes a do-it-yourself strategy that effectively monitors breast cancer in women(Ojotu & Attai, 2021). The idea is for women to constantly palpate the breast to screen for irregular shape or bump. Palpation of the breast is a simple physical, accessible, and suitable examination of the breast aimed to acquaint females with the breast's normal appearance and feel. This method has been found effective in reducing the incidence of late diagnosis (Kang et al., 2020; Shallo & Boru, 2019;Khiyali et al., 2017; Oladimeji et al., 2015; Tuyen et al., 2019). Some studies suggest that the process of breast self-examination is acceptable across all cultures and religions (Oladimeji et al.,2015). Perhaps, the method provides an easy step for women to use their fingers to feel their breast frequently to feel for breast pains, lumps, nipples discharge, change in shape or size, including a feature that poses a concern for the person. Indeed, the self-breast exam has contributed significantly to discovering breast cancer by individuals, either intentional or by accidental examination (Sultania et al., 2017). Also, it has contributed to the discovery of a significant percentage of breast cancer in the primary stage (Myint et al., 2020). It has led toa decrease in cancer death in women (Tewabe & Mekuria, 2019).

Extensive literature in Nigeria has been dedicated to self-breast exams among women of all ages. However, findings from BSE literature suggest that most women in Nigeria are conversant with the practice of self-exam. Equally, it is documented that despite the awareness and knowledge of self-examination, many women, including the younger ones, do not engage in the practice (Akande et al., 2005; Alabi et al., 2018; Ibitoye & Thupayegale-Tshwenegae, 2019; Ifechukwude, 2019).Thus, this revelation entails that breast self-exam awareness has not produced the desired result regardless of the considerable research in BSE practice. Perhaps, understanding the probable correlates of self-exam behavior provides data relevant in mitigating the scourge of late diagnosis of breast cancer.

Several studies have explored the various variables that could explain the variations in female breast self-exam in Nigeria. Accordingly, variables including age, educational background, exposure to breast cancer, religious belief, sense of self, breast size dissatisfaction and self-exam knowledge, fear of finding lumps, self-exam procedural skill, parental influence have been associated with breast self-exam behavior among the female population (Amoran & Toyobo, 2015; Azuogu et al., 2019; Nwaneri et al., 2016;Idowu, 2019; Madubogwu et al., 2017; Ojewusi et al., 2016; Ojotu & Attai, 2021; Okolie & Ugwu, 2021). Consequently, an essential psychological variable that has not received much attention in breast self-examination literature is body appreciation.

Research in recent years has emphasized the negative dimensions of body image and the need to understand and investigate positive body image effectively. Body appreciation is one of the essential dimensions of body image (Baceviciene & Jankauskiene, 2020). Body appreciation is defined as respecting and appreciating the body's features and function. Tylka and Wood-Barcalow (2015)noted that body appreciation is acceptance, positive attitudes and respect toward the body, avoiding labeled beauty standards, and appreciating the functionality and health of the body

Insinuations suggest that individuals with high body appreciation have a favorable perception of their body, assume control of its unique features, and disagree with widely propagated appearance ideals. Previous research on body appreciation reports positive associations with self-esteem and life satisfaction(O'Neill et al., 2018). Moreover, health behavior such as seeking medical attention and regular physical activity is related to higher body appreciation levels(Andrew et al., 2016). As such, body appreciation is considered a potential protective factor for both physical and mental health. The current study intends to investigate the association between body appreciation and women's motivation to examine their breasts for cancer purposes.

Hypothesis

For this study's purpose, it is hypothesized that body appreciation would significantly correlate with BSE practice among women.

Method:-

The present study was conducted in Kogi state Nigeria between July and September 2021. The population constitutesfemalesbetween the ages of 25 and 40 years who are enrolled in tertiary institutions in the state. The samples were randomly chosen from different departments in four tertiary institutions across the study parameter. The researcher employed and trained assistants from the selected institutions. They were instrumental in inviting the

prospective participants to participate in the study. In all, 296 female students consented to partake in the study. However, 27 of them were excluded based on age range. Those who met the age criteria (269) were briefed of the study's purpose and informed that participation was voluntary. In total, 269 questionnaires were distributed and retrieved on the spot. However, out of the 269 questionnaires given to the respondents, 21 copies were wrongly filled and discarded. Thus, only the satisfactorily filled copies (i.e., 248) were subjected to statistical analysis.

Measures:-

Body appreciation was assessed using the Body Appreciation Scale-2 (BAS) developed by (Tylka & Wood-Barcalow, 2015). The 10-item scale measures individual's perception, acceptance, and positive attitudes towards their bodies. The items in the scale are scored in a 5-point Likert-like form, ranging from 1 (never) to 5 (always). The items are summed, resulting in a score between 5 and 50. Higher scores indicate higher body appreciation. In the present study, a Cronbach alpha .87 was recorded for the scale.

BSE was assessed with a developed questionnaire intended to ascertain respondent's BSE behavior. Items were summed with higher average scores, indicating more frequency of BSE practice. The scale was validated after a pilot study, and a Cronbach alpha .76 was recorded on the questionnaire.

Result:-

It was assumed in this study that body appreciation would significantly correlate with BSE practice among women. Thus, a linear regression was performed to determine the effect of body appreciation on BSE practice. The result established a statistically significant correlation between body appreciation and BSE, $F (1, 246) = 43.635$, $p < 0.05$. The adjusted R^2 indicated that body appreciation accounted for 45.8% of females' BSE practice variation.

Table 1:- Table showing a simple linear regression result on the correlation between body appreciation andBSE.

	95% CI for B							
	B	LL	UL	SEB	β	R^2 t	Sig	
Model						.458		
Constant	1.32	1.17		1.31	.044		36.01	.000
Body Appreciation	.721	.634		.798	.038	18.35	.000	

Note. B = Unstandardized regression coefficient; LL = Lower Limit; UL = Upper Limit; CI = Confident Interval; SEB = Standardized error of the coefficient; β = Standardized coefficient; R^2 = Coefficient of determination, ΔR = Adjusted R^2. *P<.000.

Discussion:-

The study aimed to explore the role of body appreciation on the practice of breast self-examination among females in Nigeria. An assumption was made that body appreciation would significantly correlate with BSE behavior among the female population in Nigeria. The linear regression analysis conducted on the data revealed that body appreciation statistically significantly correlated with breast self-examination practice among the respondents at $F (1, 246) = 43.635$, $p < 0.05$. The adjusted R^2showed that body appreciation contributed 45.8% of the variance in BSE practice among the respondents. The result demonstrates that females' perception, acceptance, and favorable attitude towards their bodies positively determined their BSE practice engagement. Perhaps, research has suggested that males and females who are appreciative towards their bodies might be keener to engage in health promotive behaviors(Sundgot-Borgen et al., 2021). Similarly, studies have correlated health behavior, including seeking medical attention with higher body appreciation levels (Andrew et al., 2016; Homan & Tylka, 2014). The result could be further understood in the description of body appreciation as an essential instigator of women participating in BSE training(Yang et al., 2010).Conversely, research has demonstrated that women with higher body appreciation are less likely to avoid health care (Cook et al., 2020).

The result of the study provides novel information on the potentiality of body appreciation as a determining variable in female's wiliness to self-examine their breast for cancer. Relatedly, O'Neill et al. (2018)found a positive relationship between body appreciation and health-related quality of life. Perhaps, the result adds a new dimension

to our knowledge of BSE behavior among young women. Based on the findings, one might suggest that females characterized with low levels of body appreciation might beat higher risk of not personally screening their breast for cancer. Thus, females in this category may benefit from being identified for BSEadvice.

Study strengths and limitations

The present study contributes to the breast cancer prevention literature by providing novel information on the association between body appreciation and breast self-examination in Nigeria's sample of young females. Perhaps, to the best of our knowledge, no study has been dedicated to investigating the association between body appreciation and BSE practice. Indeed, the current data might be relevant to the National Cancer Control Plan (NCCP 2018-2022) and other relevant cancer prevention societies in the fight against the spread of cancer. Perhaps, some limitations must be considered when interpreting the result. For example, self-report of body appreciation and BSE are important limitations. Moreover, due to the cross-sectional study design, the study is not able to discuss cause-effect.

Conclusion:-

This study investigated the correlation between body appreciation and BSE behavior. Body appreciation was found to be associated with female's appreciation of their body. Thus, the study concludes that body appreciation is an essential determinant of BSE practice among women. Perhaps, the study's assumption was supported. However, the study suggests that the inclusion of body image topics early in the educational landscape of Nigeria might play asignificant role in promoting body appreciation and lowering body dissatisfaction among young women. Also, BSE practice should be considered essential for student'shealth and well-being.

References:-

1. Adejumo, P., Aniagwu, T., Oluwatosin, A., Fagbenle, O., Ajayi, O., Ogungbade, D., Oluwamotemi, A., Olatoye-Wahab, F., Oni, A., Olajide, O., Adedokun, B., Ogundiran, T., & Olopade, O. (2018). Knowledge of Genetic Counseling Among Patients With Breast Cancer and Their Relatives at a Nigerian Teaching Hospital. Journal of Global Oncology, 4. https://doi.org/10.1200/JGO.17.00158
2. Adetifa, F., & Ojikutu, R. (2010). Prevalence and trends in breast cancer in Lagos state, Nigeria. African Research Review, 3(5). https://doi.org/10.4314/afrrev.v3i5.51137
3. Akande, T. M., Osagbemi, G., Kayode, F. O., Akande, T. M., & Osagbemi, G. K. (2005). Knowledge, Attitude and Practice of Breast Self-Examination among Female Secondary School Students in Ilorin, Nigeria. European Journal of Scientific Research (Vol. 10). https://www.researchgate.net/publication/234063945
4. Alabi, M. A., Abubakar, A., Olowokere, T., Okeyode, A. A., Mustapha, K., & Ayoola, S. A. (2018). Knowledge, Attitude, and Practice of Breast Self-examination among Female Teachers from Selected Secondary Schools in Ogbomosho, Oyo State. Nigerian Journal of Experimental and Clinical Biosciences, 6(1), 8–12. https://doi.org/10.4103/njecp.njecp_4_18
5. Amoran, O., & Toyobo, O. (2015). Predictors of breast self-examination as cancer prevention practice among women of reproductive age-group in a rural town in Nigeria. Nigerian Medical Journal, 56(3). https://doi.org/10.4103/0300-1652.160362
6. Andrew, R., Tiggemann, M., & Clark, L. (2016). Positive body image and young women's health: Implications for sun protection, cancer screening, weight loss and alcohol consumption behaviours. Journal of Health Psychology, 21(1). https://doi.org/10.1177/1359105314520814
7. Asuzu, C., Akin-Odanye, E., Ntekim, A., Ogundiran, A., Asuzu, M., Henry, M., Watson, M., & Adedokun, A. (2018). Improving Information and Support for Metastatic Breast Cancer in Nigeria. Journal of Global Oncology, 4(Supplement 2). https://doi.org/10.1200/jgo.18.24700
8. Awodele, O., Adeyomoye, A. A., Awodele, D. F., Fayankinnu, V. B., & Dolapo, D. C. (2011). Cancer distribution pattern in south-western Nigeria. In Tanzania Journal of Health Research (Vol. 13, Issue 2). https://doi.org/10.4314/thrb.v13i2.55226
9. Azubuike, S. O., 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. In World Journal of Surgical Oncology (Vol. 16, Issue 1). https://doi.org/10.1186/s12957-018-1345-2
10. Azuogu, B. N., Ogaranya, I. O., Ogenyi, A. I., Enemor, D. O., Nwafor, M. A., & Ossai, E. N. (2019). Predictors of practice of breast self-examination: A study among female undergraduates of ebonyi state university, Abakaliki, Nigeria. Nigerian Journal of Clinical Practice, 22(3), 361–369. https://doi.org/10.4103/njcp.njcp_482_18

11. Baba, I. A., & Hincal, E. (2018). Cancer Incidence in Nigeria and Border Countries. Malaysian Journal of Medical and Biological Research, 5(1). https://doi.org/10.18034/mjmbr.v5i1.442
12. Baceviciene, M., & Jankauskiene, R. (2020). Associations between body appreciation and disordered eating in a large sample of adolescents. Nutrients, 12(3). https://doi.org/10.3390/nu12030752
13. Beaumont, C. E., & Nwankwo, E. (2018). Promoting Early Diagnosis of Breast Cancer in Nigeria Using Materials Designed to Cross Communication Barriers of Fear, Taboo and Literacy Between Health Care Teams and the Community at Risk From Breast Cancer. Journal of Global Oncology, 4(Supplement 2). https://doi.org/10.1200/jgo.18.58300
14. Chidebe, R. C. W., & Orjiakor, T. C. (2019). Introducing a mobile app for cancer care in Nigeria: Integrating the needs of advanced breast cancer patients. The Breast, 48. https://doi.org/10.1016/s0960-9776(19)30730-1
15. Cook, M., Ramseyer Winter, V., & O'Neill, E. A. (2020). Body Appreciation and Health Care Avoidance: A Brief Report. Health and Social Work, 45(1). https://doi.org/10.1093/hsw/hlz036
16. Dodo, A. M., Sykes, P., & Powell, C. (2016). Exploring the barriers to breast and cervical cancer screening in Nigeria: A narrative review. In African Journal of Reproductive Health (Vol. 20, Issue 4). https://doi.org/10.29063/ajrh2016/v20i4.9
17. Ebenezer O, R., & Lougue, S. (2018). Socio Economic Determinants of Breast Cancer Revalence in Southwestern, Nigeria. Asian Journal of Epidemiology, 12(1). https://doi.org/10.3923/aje.2019.9.16
18. Eguzo, K., & Camazine, B. (2013). Beyond limitations: Practical strategies for improving cancer care in nigeria. Asian Pacific Journal of Cancer Prevention, 14(5). https://doi.org/10.7314/APJCP.2013.14.5.3363
19. Gershon, N., Berchenko, Y., Hall, P. S., & Goldstein, D. A. (2019). Cost effectiveness and affordability of trastuzumab in sub-Saharan Africa for early stage HER2-positive breast cancer. Cost Effectiveness and Resource Allocation, 17(1). https://doi.org/10.1186/s12962-019-0174-7
20. Hanson, V. F., El-Kader, R. G. A., & Ilesanmi, R. E. (2019). Practice and Barriers of Breast Self-Examination Among Women in a Rural Community in South Western, Nigeria. International Journal of Studies in Nursing, 4(3). https://doi.org/10.20849/ijsn.v4i3.588
21. Homan, K. J., & Tylka, T. L. (2014). Appearance-based exercise motivation moderates the relationship between exercise frequency and positive body image. Body Image, 11(2). https://doi.org/10.1016/j.bodyim.2014.01.003
22. Ibitoye, O. F., & Thupayegale-Tshwenegae, G. (2019). The Impact of Education on Knowledge Attitude and Practice of Breast Self-Examination Among Adolescents Girls at the Fiwasaye Girls Grammar School Akure, Nigeria. Journal of Cancer Education. https://doi.org/10.1007/s13187-019-01595-2
23. Idowu, A. (2019). Breast cancer awareness, knowledge and screening practice among women resident in an urban local government area of Oyo State, Nigeria. Journal of Cancer Policy, 20. https://doi.org/10.1016/j.jcpo.2018.11.001
24. Ifechukwude, O. M. (2019). Educational Intervention on Breast Self-Examination among Senior Secondary School Girls in Ibadan North East Area of Oyo State, Nigeria. Texila International Journal of Public Health, 7(4). https://doi.org/10.21522/tijph.2013.07.04.art002
25. Ighodaro, E. O., & Akhigbe, A. O. (2016). Knowledge of breast cancer screening methods and the practice of breast self-examination among female nursing students in a nigerian teaching hospital. East African Medical Journal, 93(11).
26. Jedy-Agba, E., Curado, M. P., Ogunbiyi, O., Oga, E., Fabowale, T., Igbinoba, F., Osubor, G., Otu, T., Kumai, H., Koechlin, A., Osinubi, P., Dakum, P., Blattner, W., & Adebamowo, C. A. (2012). Cancer incidence in Nigeria: A report from population-based cancer registries. Cancer Epidemiology, 36(5). https://doi.org/10.1016/j.canep.2012.04.007
27. Kang, S. R., Shin, H., Lee, J. M., & Kim, S. J. (2020). Effects of smartphone application education combined with hands-on practice in breast self-examination on junior nursing students in South Korea. Japan Journal of Nursing Science, 17(3). https://doi.org/10.1111/jjns.12318
28. Khiyali, Z., Aliyan, F., Kashfi, S. H., Mansourian, M., & Jeihooni, A. K. (2017). Educational intervention on breast self-examination behavior in women referred to health centers: Application of health belief model. Asian Pacific Journal of Cancer Prevention, 18(10). https://doi.org/10.22034/APJCP.2017.18.10.2833
29. Madubogwu, C. I., Egwuonwu, A. O., Madubogwu, N. U., & Njelita, I. A. (2017). Breast cancer screening practices amongst female tertiary health worker in Nnewi. Journal of Cancer Research and Therapeutics, 13(2). https://doi.org/10.4103/0973-1482.188433
30. Myint, N. M. M., Nursalam, N., & Has, E. M. M. (2020). The effectiveness of health education intervention to promote breast self-examination practice: A systematic review. International Journal of Psychosocial Rehabilitation, 24(9).

31. Nwaneri, A. C., Osuala, E. O., Okoronkwo, I., Okpala, P. U., & Emesowum, A. C. (2016). Relationships between Demographic Variables and Breast Self-Examination among Women in a Rural Community South East of Nigeria. Health, 08(01), 98–104. https://doi.org/10.4236/health.2016.81012
32. Nwankwo, E. (2018). MetaPink Program: Simplifying the Breast Cancer Journey for Patients With Advanced Stage Breast Cancer in Nigeria. Journal of Global Oncology, 4(Supplement 2). https://doi.org/10.1200/jgo.18.38600
33. Nwogu, C., Ezeome, E., Mahoney, M., Okoye, I., & Michalek, A. (2011). Regional Cancer Control in South-Eastern Nigeria: A Proposal Emanating from a UICC-sponsored Workshop. West African Journal of Medicine, 29(6). https://doi.org/10.4314/wajm.v29i6.68278
34. O'Neill, E. A., Ramseyer Winter, V., & Pevehouse, D. (2018). Exploring body appreciation and women's health-related quality of life: The moderating role of age. Journal of Health Psychology, 23(14). https://doi.org/10.1177/1359105316675212
35. Ogunkorode, A., Holtslander, L., Anonson, J., & Maree, J. (2017). Promoting early detection of breast cancer and care strategies for Nigeria. African Journal of Reproductive Health, 21(2). https://doi.org/10.29063/ajrh2017/v21i2.3
36. Ojewusi, A. A., Obembe, T., Arulogun, O. S., & Olugbayela, T. (2016). Breast cancer awareness, attitude and screening practices in Nigeria: A systematic review. Clinical Reviews and Opinions, 7(2). https://doi.org/10.5897/cro16.0101
37. Ojotu, B. N., & Attai, S. N. (2021). Sense of self as a predictor of breast self examination among undergraduate girls in the north central Nigeria. Int. J. Adv. Res, 9(05), 584–590. https://doi.org/10.21474/IJAR01/12879
38. Okolie, I., & Ugwu, K. T. (2021). Factors influencing girls attitude towards breast self-examination. Int. J. Adv. Res, 9(04), 501–505. https://doi.org/10.21474/IJAR01/12719
39. Okoye, J. (2020). High prevalence of triple-negative breast cancer and poor survival outcome in Nigeria: A call for further molecular subtyping of triple-negative breast cancer. Annals of Tropical Pathology, 11(1). https://doi.org/10.4103/atp.atp_36_19
40. Oladimeji, K. E., Tsoka-Gwegweni, J. M., Igbodekwe, F. C., Twomey, M., Akolo, C., Balarabe, H. S., Atilola, O., Jegede, O., & Oladimeji, O. (2015). Knowledge and beliefs of breast self-examination and breast cancer among market women in Ibadan, South West, Nigeria. PLoS ONE, 10(11). https://doi.org/10.1371/journal.pone.0140904
41. Olufemi, O., Omowumni, S., Ajoke, O., & Olufemi, A. (2017). Knowledge and Awareness of Breast Cancer and Screening Methods among Female Undergraduate Students in a Semi-Urban College Of Culture and Humanities, Nigeria. International Journal of Caring Sciences, 10(1).
42. Oluka, O. C., Shi, Y. Y., Nie, S. F., & Sun, Y. (2014). Boosting cancer survival in Nigeria: Self-management strategies. Asian Pacific Journal of Cancer Prevention, 15(1). https://doi.org/10.7314/APJCP.2014.15.1.335
43. Onwuchuluba, E., Isa, J., Ogbonna, B. O., Soremekun, R., Amagba, C., & Idoko, L. (2018).Prevalence of cancer among women in a tertiary teaching hospital in Lagos Southwest Nigeria: A pharmacoepidemiological and evidence based survey. Value in Health, 21. https://doi.org/10.1016/j.jval.2018.09.294
44. Rahman, G. A. debis., Olatoke, S. A. degboyeg., Agodirin, S. O. layid., & Adeniji, K. A. debanj. (2014). Socio-demographic and clinical profile of immuno-histochemically confirmed breast cancer in a resource limited country. The Pan African Medical Journal, 17. https://doi.org/10.11604/pamj.2014.17.182.2257
45. Salako, O., Robert, A. A., Okunade, K. S., Olatunji, A., Fakolade, A., Isibor, V., & Falode, D. (2016). Utilization of cancer information system for breast cancer control in Lagos, Nigeria. Pan African Medical Journal, 24. https://doi.org/10.11604/pamj.2016.24.323.9632
46. Shallo, S. A., & Boru, J. D. (2019). Breast self-examination practice and associated factors among female healthcare workers in West Shoa Zone, Western Ethiopia 2019: A cross-sectional study. BMC Research Notes, 12(1). https://doi.org/10.1186/s13104-019-4676-3
47. Sultania, M., Kataria, K., Srivastava, A., Misra, M. C., Parshad, R., Dhar, A., Hari, S., & Thulkar, S. (2017). Validation of Different Techniques in Physical Examination of Breast. Indian Journal of Surgery, 79(3). https://doi.org/10.1007/s12262-016-1470-5
48. Sundgot-Borgen, C., Sundgot-Borgen, J., Bratland-Sanda, S., Kolle, E., Torstveit, M. K., Svantorp-Tveiten, K. M. E., & Mathisen, T. F. (2021). Body appreciation and body appearance pressure in Norwegian university students comparing exercise science students and other students. BMC Public Health, 21(1). https://doi.org/10.1186/s12889-021-10550-0
49. Tewabe, T., & Mekuria, Z. (2019). Knowledge and practice of breast self-examination among undergraduate students in bahir dar university, north-west ethiopia, 2016: A cross-sectional study. Journal of Public Health in Africa, 10(1). https://doi.org/10.4081/jphia.2019.805

50. Tuyen, D. Q., Dung, T. V., Dong, H. Van, Kien, T. T., & Huong, T. T. (2019). Breast Self-Examination: Knowledge and Practice Among Female Textile Workers in Vietnam. Cancer Control, 26(1). https://doi.org/10.1177/1073274819862788
51. Twahir, M., Oyesegun, R. A., Yarney, J., Gachii, A., Edusa, C., Nwogu, C., Mangutha, G., Anderson, P., Benjamin, E., Müller, B., & Ngoh, C. (2019). Access to care and financial burden for patients with breast cancer in Ghana, Kenya, and Nigeria. Journal of Clinical Oncology, 37(15_suppl). https://doi.org/10.1200/jco.2019.37.15_suppl.6562
52. Tylka, T. L., & Wood-Barcalow, N. L. (2015a). The body appreciation scale-2: Item refinement and psychometric evaluation. Body Image, 12(1). https://doi.org/10.1016/j.bodyim.2014.09.006
53. Tylka, T. L., & Wood-Barcalow, N. L. (2015b). What is and what is not positive body image? Conceptual foundations and construct definition. Body Image, 14. https://doi.org/10.1016/j.bodyim.2015.04.001
54. Williams, K., Adebayo Idowu, P., Ademola Balogun, J., & Ishola Oluwaranti, A. (2015). Breast cancer risk prediction using data mining classification techniques. Transactions on Networks and Communications, 3(2). https://doi.org/10.14738/tnc.32.662
55. Yang, R. J., Huang, L. H., Hsieh, Y. S., Chung, U. L., Huang, C. S., & Bih, H. D. (2010). Motivations and reasons for women attending a Breast Self-Examination training program: A qualitative study. BMC Women's Health, 10. https://doi.org/10.1186/1472-6874-10-23.