



RESEARCH ARTICLE

SENSE OF SELF AS A PREDICTOR OF BREAST SELF EXAMINATION AMONG UNDERGRADUATE GIRLS IN THE NORTH CENTRAL NIGERIA

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Manuscript Info

Manuscript History

Received: 20 March 2021

Final Accepted: 24 April 2021

Published: May 2021

Key words: -

BSE, Sense of self, Cancer, Girls

Abstract

Cancer is among the deadliest public health problem in the universe. The burden of cancers is a serious public health concern, especially in developing nations, including Nigeria. Evidence has shown that breast self-examination is a crucial strategy for early detection and avoidance of breast cancer. The current study aimed to investigate the variation in BSE practice among undergraduate girls in North-central Nigeria based on their sense of self. A cross-sectional survey design was adopted. The population comprised undergraduates in tertiary institutions in the North Central States of Nigeria. Two hundred and sixty-nine female undergraduates participated in the study. The participant completed a self-report measure including the Sense of Self Scale (SOSS) and a BSE practice questionnaire. The result revealed that most of the respondents (78.4%) had never practiced BSE, while only (21.6%) had practiced BSE. Also, it was found that the sense of self statistically significantly predicted BSE practice. The study concluded that a sense of self is a predictor of BSE practice and recommends that an understanding of self-enhancement strategy be adopted.

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Introduction: -

Cancer is among the deadliest public health problem in the universe. The burden of cancers is a serious public health concern, especially in developing nations, including Nigeria (Eguzo & Camazine, 2013). Cancer is a high-cost disease that requires a considerable amount of financial and human resources for prevention, diagnosis, and treatment (Oluka et al., 2014). Cancer has become a significant source of morbidity and mortality globally (Jedy-Agba et al., 2012). The burden of cancer in Nigeria is appreciable, with about 100,000 new cancer cases reported each year (Awodele et al., 2011). Cervical, prostate, liver, and breast cancers are the most common types of cancers ravaging Nigerian adults (Nwogu et al., 2011).

Breast cancer is the number one diagnosed cancer in women (Ayala de la Peña et al., 2019; Fu et al., 2016; Ghoncheh et al., 2016; Ibrahim et al., 2020; Labrèche et al., 2020; Laksono et al., 2017; Nwankwo, 2018; Ogunkorode et al., 2017; Rojas & Stuckey, 2016; Watkins, 2019; L. Yang et al., 2020) and represent the most common causes of female cancer-related mortality in Nigeria (Asuzu et al., 2018; Dodo et al., 2016; Gershon et al., 2019; Hanson et al., 2019; Olufemi et al., 2017; Rahman et al., 2014; Twahir et al., 2019; Williams et al., 2015).

Research has indicated a significant increase in breast cancer prevalence in Nigeria (Azubuike et al., 2018; Ighodaro & Akhigbe, 2016; Mohammed et al., 2018; Okobia et al., 2006; Salako et al., 2016). For instance, (Chidebe &

Orjiakor, 2019) stated that about 80% of Nigerian women are diagnosed with advanced breast cancer. Perhaps, breast cancer is rare among young girls. However, early detection of breast cancer presents an opportunity for effective management and control of the disease. Thus, the attitude of self-examination is essential in young girls for early detection.

A do-it-yourself strategy that is effective in monitoring breast cancer in women is self-examination. These simple breast cancer screening tests involve regular palpation of the breast meant to familiarize women with the breast's normal appearance and feel. BSE is an inexpensive, simple, suitable and straightforward approach to reducing death risk associated with breast cancer (Kang et al., 2020; Khiyali et al., 2017; Oladimeji et al., 2015; Shallo & Boru, 2019; Tuyen et al., 2019). Oladimeji et al. (2015) noted that BSE is a culturally acceptable, religious friendly and cost-free breast cancer screening strategy, especially in low-income settings. Indeed, it offers women the best opportunity for reducing breast cancer deaths (Tewabe & Mekuria, 2019) and research suggests that BSE can reveal about 95% of all breast cancers in the primary stage (Myint et al., 2020).

In Nigeria, breast self-examination has been widely researched across geopolitical zones. For example, South-east (Agwu et al., 2013; Casmir et al., 2015; Okolie, 2012), South-south (Adika et al., 2012; Tobin & Okeowo, 2014), South-west (Balogun & Owoaje, 2007; Hanson et al., 2019; Usman et al., 2020), North-west (Gwarzo et al., 2009; Sani & Yau, 2018), and North-east (Haruna et al., 2017). Consequently, evidence of BSE practice is scarce in the North-central, thus justifying studying the region. However, breast self-examination literature suggests that Nigerian women are mostly aware of the purpose and importance of BSE. Conversely, BSE practice is low among the girls in Nigeria (Akande et al., 2005; Alabi et al., 2018; Ibitoye & Thupayegale-Tshwenegae, 2019; Ifechukwude, 2019). This means that women are not fully utilizing the opportunity of BSE practice in the fight against breast cancer. For instance, a recent study (Usman et al., 2020) reported that many girls have knowledge of breast cancer and BSE but are unable to practice BSE primarily due to procedural skills.

Furthermore, research has established several factors accounting for the variations in BSE practice among women in Nigeria. For instance, educational background, exposure to breast cancer, occupation, BSE knowledge, fear of finding lumps, age, BSE procedure experience, beliefs of not being at risk, and parental influence have been seen to predict BSE practice among women in Nigeria. (Amoran & Toyobo, 2015; Azuogu et al., 2019; Idowu, 2019; Madubogwu et al., 2017; Nwaneri et al., 2016; Ojewusi et al., 2016). One factor that has not received much attention in BSE motivation is the sense of self, thus, justifying the current study.

Sense of self is a social psychological construct that refers to the totality of an individual's perception of the self. Sense of self is the relevance we attach to our behaviors, roles, and attributes (Ylvisaker, 2006). Individuals' sense of self comprises self-esteem, self-worth, identity, self-image, and how they feel about themselves.

Over the years, efforts are made by governments and non-governmental bodies to create awareness on the need for the female population to examine their breast for early detection of breast cancer regularly. We observed that a lot of women had lost one or both breasts as a result of cancer. This ugly trend is on the increase in the world and contributes to the primary cause of mortality among women. Reports have shown that early detection of breast cancer is a key to tackling this ugly phenomenon. BSE has remained one of the primary methods of detecting breast cancer onset, despite the awareness and campaigns for breast self-examination by relevant authorities, individuals, and non-profits. It is observed that young girls rarely engage in breast self-examination. The purpose of the study is to examine the sense of self as a factor that can predict breast self-examination among undergraduate girls.

Hypothesis

For this study's purpose, it is hypothesized that a sense of self would significantly predict BSE practice among the participants.

Method: -

In this study, a cross-sectional survey design was adopted. The population comprised undergraduates in tertiary institutions in the North Central States of Nigeria. Female undergraduates within the age range of 18 - 30 years were randomly selected from three large public tertiary institutions in Kogi and Benue State as the study participants. They were mainly pooled from the female hostel.

Procedure: -

Three hundred and thirty students were approached in their various lodges between January and March 2021. All female undergraduates met the inclusion criteria. Hence, they were all qualified for the study and were asked to take part in the study aimed to understand the motivational factors behind BSE practice fully. Those who consented were handed the study instrument. In all, 292 questionnaires were distributed and retrieved on the spot. However, out of the 292 questionnaires given to the respondents, 23 copies were improperly filled and discarded. Thus, only the adequately filled copies (i.e., 269) were subjected to statistical analysis.

Measures: -

Sense of self was measured using a modified version of the Sense of Self Scale (SOSS) initially developed by Flury and Ickes (2007). The instrument was designed to assess a weak and robust sense of self. The reliability of the scale was determined from a trial study. The Cronbach's alpha coefficients indicated an acceptable level of internal consistency reliability of the instrument, which exceeded the cutoff rules-of-the thumb of .70 as recommended for study purposes (Kaplan & Saccuzzo, 2013).

BSE was measured with a developed questionnaire intended to ascertain respondent's BSE behavior. The instrument was validated, and reliability was obtained. Cronbach alpha .76 was recorded on the questionnaire.

Result: -**Table 1: -** Table showing the frequency score of the BSE practice.

	Frequency	Percent
Practiced BSE	58	21.6
Never Practiced BSE	211	78.4
Total	269	100

The table above shows that 21.6% of the respondents practice BSE while most of the participants representing 78.4%, never practiced BSE.

Table 2: - Table showing the linear regression result on the sense of self effect on BSE.**Linear regression result for BSE**

	B	95% CI for B		SEB	β	R^2	t	Sig
		LL	UL					
Model						.557		
Constant	1.234	1.167	1.302	.034			36.001	.000
Sense of Self	.722	.644	.799	.039	.747		18.375	.000

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

Linear regression was performed to predict BSE practice based on a sense of self. The linear regression analysis established a statistically significant understanding of self on BSE, $F(1, 267) = 33.625$, $p < 0.05$. The adjusted R^2 indicating that sense of self accounted for 55.7% of the variation in BSE practice.

Discussion: -

The study aimed to examine the role of a sense of self on the practice of breast self-examination among undergraduate girls in the North Central States of Nigeria. The percentage score revealed that 21.6% of the respondents had practiced BSE while most of the participants representing 78.4%, never practiced BSE, which means that most girls do not examine their breasts for cancer purposes. The result is consistent with previous studies (e.g., Akande et al., 2005; Alabi et al., 2018; Ifechukwude, 2019). The studies showed that the practice of BSE among Nigerian girls is on the low side. For instance, it was found that many girls are aware of breast cancer and the importance of regular BSE practice. However, the lack of adequate BSE procedure restricts most girls from

engaging in their breasts' self-examining (Usman et al., 2020). The current result corroborates the former studies' findings by revealing low BSE practice among the undergraduate girls in the North-central region of Nigeria.

Furthermore, it was hypothesized that a sense of self would significantly predict BSE practice among the respondents. The linear regression model conducted on the data revealed that sense of self statistically significantly predicted breast self-examination practice among the respondents at $F(1, 267) = 33.625, p < 0.05$. The adjusted R^2 indicated that sense of self contributed 55.7% of BSE practice variation among the respondents. The result demonstrates that a girl's perception of the self is a determinant variable in a girl's breast examination response. The finding corroborates Yang et al. (2010), who found that a sense of self-security was an essential motivator for women participating in BSE training. The result is explained in regards to the importance of a sense of self, which, in turn, can increase self-control (Kim et al., 2019). Thus, raising the possibility of engaging in a healthy lifestyle, including BSE practice.

Practical implication

The present study contributes to the breast cancer prevention literature by identifying the sense of self as a scarcely explored variable that could account for BSE practice variance among young girls in Nigeria. Perhaps, to the best of our knowledge, no study has been dedicated to investigating the association between the sense of self and BSE practice. Thus, the current revelation could provide valuable data to the National Cancer Control Plan (NCCP 2018-2022) and other relevant cancer prevention societies to fight against the spread of cancer.

Conclusion:-

This study investigated the sense of self as a scarcely explored variable that could account for BSE practice variance among young girls. The study concludes that the sense of self is an essential determinant of BSE practice among girls. Perhaps, the study's assumption was affirmed. However, the study encountered some limitations that needed to be reported. For instance, the sampling method and data sourcing pose limitations that could negatively affect the result's generalization. Nevertheless, the study recommends that a sense of self-enhancement strategies be considered while encouraging regular BSE practice. Also, a robust BSE enlightenment campaign is adopted in the tertiary institution's weekly event.

Funding

The study was funded by the Tertiary Education Trust Fund (TetFund)

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