



SELF-EFFICACY OF BREAST SELF-EXAMINATION AMONG FEMALE ADOLESCENTS

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ABSTRACT: *Self-efficacy refers to an individual's ability to perform a task confidently and successfully. Self-efficacy of breast self-examination is key to early detection of any abnormality that could lead to breast cancer. Evidence has shown a correlation between self-efficacy of breast self-examination and performance of breast self-examination. Self-efficacy of breast self-examination could be determined by performance accomplishments, vicarious experience (learning from people or observing breast self-examination being done), verbal persuasion (encouragement received from someone to perform breast self-examination), and physiological/emotional states (emotional reactions to performing breast self-examination). Female adolescents should be educated to acquire self-efficacy to perform breast self-examination since adolescence is a critical period for developing lifelong habits, attitudes, forming health-related lifestyles, and behaviours for the future. Breast self-examination performed monthly at the right time using the right techniques will aid in the early detection of breast cancer. Consistent breast self-examinations are the best protection in detecting early breast cancers.*

KEYWORDS: Breast self-examination, Female adolescents, Performance accomplishment, Physiological/emotional state, Verbal persuasion, Vicarious experience.



INTRODUCTION

Breast self-examination (BSE) is a simple but effective way of detecting early signs of breast lumps or changes that may lead to breast cancer. It is important to regularly perform breast self-examinations at the right time using the correct techniques. Failure to do so may lead to delayed detection of breast abnormalities and ultimately result in a late diagnosis of breast cancer with a poor prognosis (Rivera-Franco & Leon-Rodriguez, 2018; Pippin & Boyd, 2023). However, this relates to a lack of self-efficacy in performing breast self-examination, especially among female adolescents. Studies have shown that female adolescents lack self-efficacy in performing breast self-examination and that breast self-examination could also provoke anxiety if a false positive cancer diagnosis were to occur, leaving them with no confidence to perform breast self-examination (Assaf, 2022). It is important to improve the self-efficacy of breast self-examination, especially among female adolescents. According to Bashirian, et al., (2021), and Sarker, et al., (2022), this will enable female adolescents to learn the correct techniques for performing BSE. Regular practice of BSE will enhance their self-efficacy as they become more familiar with it as they grow into adulthood.

Breast cancer is the most common type of cancer, leading to high rates of illness and death among women. Breast self-examination is a valuable technique for reducing the risk of late breast cancer diagnosis. Studies have shown that this method is effective in reducing the incidence of late-stage breast cancer diagnosis (Kang, et al., 2020; Shallo & Boru, 2019; Tuyen, et al., 2019). Breast self-examination is acceptable across all cultures and religions. As such, the method provides an easy step for females to use their fingers to feel their breasts regularly to feel for breast pains, lumps, nipple discharge, and changes in shape or size. Undeniably, breast self-examination has significantly contributed to the discovery of breast cancer, either through intentional or accidental examination (Sultania, et al., 2017). It has also led to the detection of a significant percentage of breast cancer in the early stages (Myint, et al., 2020).

According to the World Health Organization, WHO (2023), breast cancer affects women of all ages in every country worldwide. Approximately half of all cases occur in women who have no known risk factors other than their gender and age. Regrettably, breast cancer also results in more loss of disability-adjusted life years (DALYs) in women than any other type of cancer. According to data from the Global Cancer Observatory (GLOBOCAN, 2020), breast cancer was the most common cancer in Africa, accounting for 16.6% of new cases. In Nigeria, breast cancer ranked as the most prevalent cancer, with 26,310 new cases (37%) and 11,564 deaths (16.4%) in 2020. The 5-year prevalence across all ages was 52,562, with a total of 186,5988 cases and a cumulative risk of 4.32.

Consequently, in February 2023, WHO (2023) released a new Global Breast Cancer Initiative Framework (GBCIF) to save 2.5 million lives from breast cancer by 2040, which could be accomplished by adopting the pillars of health promotion for early detection, and timely diagnosis which should focus on early detection programmes for breast cancer. Breast self-examination has been recommended as a means for early detection of breast cancer. Many women's first indication of breast cancer is a new lump found during a breast self-examination.

Regular breast self-examination is a vital do-it-yourself (DIY) technique that can effectively monitor breast cancer in women (Ojotu & Attai, 2021). Monthly, females should feel their breasts to check for any abnormalities, such as lumps, changes in shape or size of the breast, or dimpling of the nipple. This has been proven to be useful in reducing the risk of late breast



cancer diagnosis (Kang, et al., 2020; Shallo & Boru, 2019; Tuyen, Dung, et al., 2019). A review of the literature by Abaribe, et al., (2023), and Ogunmodede, et al., (2022) revealed that much research had been carried out among older women in Nigeria, although a few have also conducted studies using female adolescents (Azuonwu & Uka-Nnodim, 2022; Akpo, et al., 2021; Amosu, et al., 2021; Usman, et al., 2020).

However, findings from the literature indicate that most Nigerian women do not regularly perform breast self-examination. Polishwala and Patankar (2023) revealed that only around 34% of all women who perform BSE are unaware of the correct age to begin BSE, the frequency of performance, its correlation with the menstrual cycle, and the steps necessary to perform BSE. This might be attributed to a lack of self-efficacy in performing breast self-examination.

The performance of breast self-examination requires some degree of self-efficacy. Anggraini and Gerhanawati (2021) affirmed that self-efficacy is important to change behaviour. They recommended that awareness to perform breast self-examination should begin in adolescent years because, by the time they are adults, they would have acquired enough self-efficacy to carry out breast self-examination properly. Therefore, female adolescent breast health needs more focus to detect early breast abnormality. Anggraini and Gerhanawati (2021) emphasized that there is a correlation between female self-efficacy and their ability to perform breast self-examination (BSE) for disease prevention regularly. The study suggested that a female's belief in her ability to achieve a desired outcome can impact her commitment to practicing preventative measures.

In addition, Mekuria, et al., (2020) established that there is a strong link between self-efficacy of breast self-examination and the likelihood of performing breast self-examination, revealing that a lack of confidence to perform BSE has contributed to low breast self-examination performance. Recent research suggests that improving self-confidence in performing breast self-examination (BSE) can lead to increased frequency of BSE and prevent adverse consequences of advanced breast cancer stages (Mohanmmmed & Arulappan, 2023). In line with this, a study by Putri, et al., (2023) found a correlation between self-efficacy and BSE behaviour (p-value = 0.026; 0.021) with PR values of 2.5 and 2.6 (CI 95%: 1.074–5.641; 1.100–6.293). The study concluded that women with high levels of self-efficacy are three times more likely to perform BSE compared to women with low levels of self-efficacy.

Self-efficacy (SE), as described by Bandura (1997), is an individual's belief in his or her capacity or ability to execute behaviours necessary to produce specific performance attainments. Self-efficacy symbolizes one's ability to carry out a task confidently, and in this case, breast self-examination. Self-efficacy could be influenced, improved, or determined by four (4) main sources: performance Accomplishment (previous successes and failure experiences on similar tasks); Vicarious Experience (observation of the behaviour and consequences of similar models in similar situations); Verbal Persuasion (encouraging or discouraging message from others); and Physiological/Emotional States/Arousal (arousal that can be interpreted as enthusiasm or anxiety).

Emphasis on improving the self-efficacy of performing breast self-examination is a basic consideration for female adolescents, making them the target population to receive health education on breast health and related issues, to enable them to develop positive habits like breast self-examination, since adolescence is a critical period for developing lifelong habits



and attitudes and forming health-related lifestyles, and behaviours in the future (Omrani, et al., 2019). This is so because the better health habits one has in adolescence, the better one's health will be in adulthood. In other words, healthy habits, in particular, breast self-examination, may have profound and long-term effects on the health of female adolescents. Given that breast cancer is a fast-growing public health problem, the self-efficacy of breast self-examination should be formed in adolescence.

Adolescence Self-Efficacy

Adolescence is a period of uncertainty and change that can be challenging to navigate without the necessary skills, but more importantly, the belief in oneself. Building positive self-efficacy during adolescence is crucial as they explore their strengths and weaknesses while working towards lifelong goals. Self-efficacy serves as the foundation for motivation, satisfaction, health, and accomplishment. Adolescents need to feel that there is a benefit to their actions; otherwise, they will have little incentive to pursue those actions. Self-efficacy is also a key factor in an individual's life choices. People tend to make choices that align with their beliefs about their abilities. Efficacy beliefs influence an individual's expectations of the outcome. Adolescents engage in activities they believe will yield positive results and avoid those they think will have negative consequences.

Self-Efficacy Theory

Self-efficacy refers to an individual's belief in their capacity to perform specific behaviours to achieve certain goals (Bandura, 1997; 1986). It reflects confidence in one's ability to control their motivation, behaviour, and social environment. These self-assessments affect various aspects of one's experiences. According to the self-efficacy theory, individuals may engage in activities until they perceive themselves as skilled or competent in those activities.

Sources/Determinants of Self-Efficacy

Bandura's self-efficacy theory proposed that self-efficacy beliefs are developed and increased primarily through four major processes and sources of information (Omrani, et al., 2019; Bandura, 1982) as found in Figure 1. These are: (a) past performance accomplishments and successful mastery experiences, (b) vicarious learning experiences through observing the performance of role models and modelling them, (c) verbal persuasion such as social influences in response to one's abilities and encouragement from others, and (d) physiological/emotional states such as anxiety and other negative psychological states (Bandura, 1982). These sources/determinants are truly essential in understanding how self-efficacy beliefs develop and are the foundation of how self-efficacy impacts behaviour and performance.

Past Performance Accomplishments

Although flexible, self-efficacy usually comes from sources based primarily on past performance experiences (Lane, et al., 2002). Past performance accomplishments tend to be the most powerful and dependable predictors of self-efficacy beliefs (Bandura, 1977; 1982). Research evidence showed that high self-efficacy beliefs from past experiences of success and mastery, and low self-efficacy based on poor experiences also generalize across different contexts and situations (Lane, et al., 2002; Niles & Sowa, 1992; Sterrett, 1998). Performance accomplishment/personal assessment information that is based on an individual's



accomplishments shows that previous successes raise mastery expectations, while repeated failures lower them.

Vicarious Experience

Many self-efficacy beliefs are also developed by learning from other people's experiences. Observing others perform successfully can improve people's beliefs in their capabilities to perform in similar ways and helps to encourage their efforts (Bandura, 1977). People often compare themselves to others and become convinced that if someone else like them can do it, so can they. The clearer the outcomes and the more determination expended in the face of obstacles by the model, the more likely the observer will be to model that behaviour in the future. Since observing others is not a direct reflection of how someone will do personally, its effect can be weaker than the other sources (Bandura, 1977). As a result, it is beneficial for people to observe the successes of others to help enhance their confidence in their abilities to succeed.

Verbal Persuasion

A person's self-efficacy can also be increased when encouraged by others they could complete a task, especially regarding mastery in difficult situations. Guidance, encouragement, and positive suggestions from others can assist in correcting performance in areas needing improvement, which are producing unsuccessful results (Bandura, 1977). In response, people must utilize verbal support and encouragement from others, to be motivated to create new opportunities to observe their success.

Physiological/Emotional States

Physiological/emotional states are another source of information that can impact self-efficacy (Bandura, 1977). People often rely to some extent on their emotional reactions to situations or tasks, to help determine if they can cope and be successful at it. High negative emotional arousal often debilitates performance, whereas positive emotional arousal can raise performance. Negative emotional arousals/states are stressful reactions that often lead to fear and cause people to doubt their competency (Bandura, 1977). Positive emotional arousal and anxiety towards a task can lead people to be more motivated to perform successfully and increase feelings of satisfaction from the task. It is essential, therefore, that techniques to reduce negative emotions and increase positive emotions be used to raise self-efficacy.

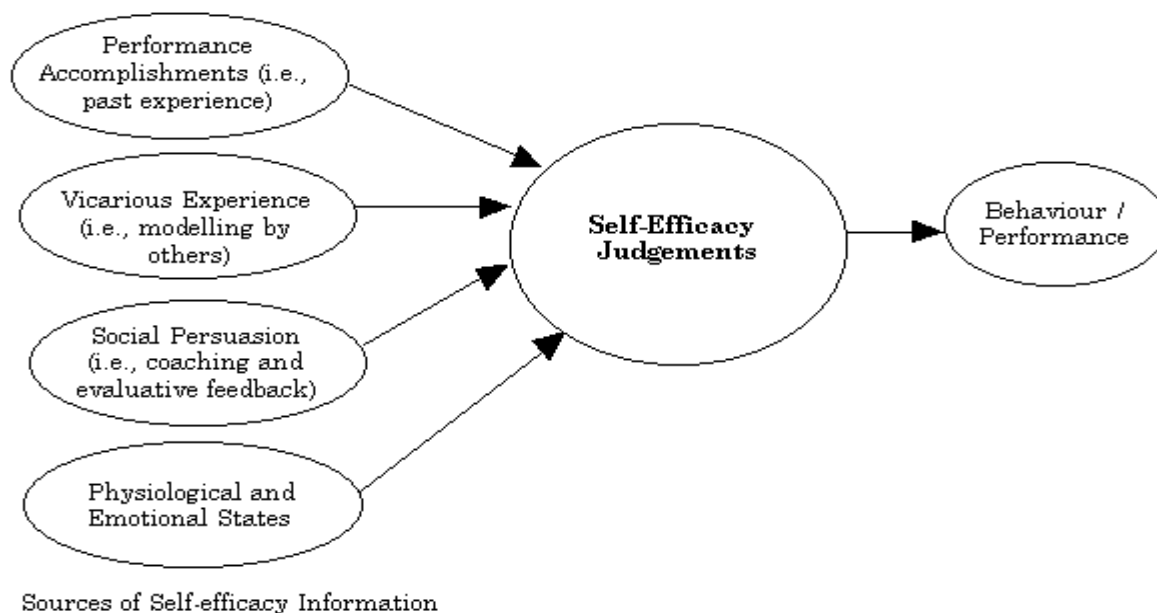


Figure 1: Theoretical framework of self-efficacy theory

Breast Self-Examination Self-Efficacy (BSE-SE) Conceptual Framework

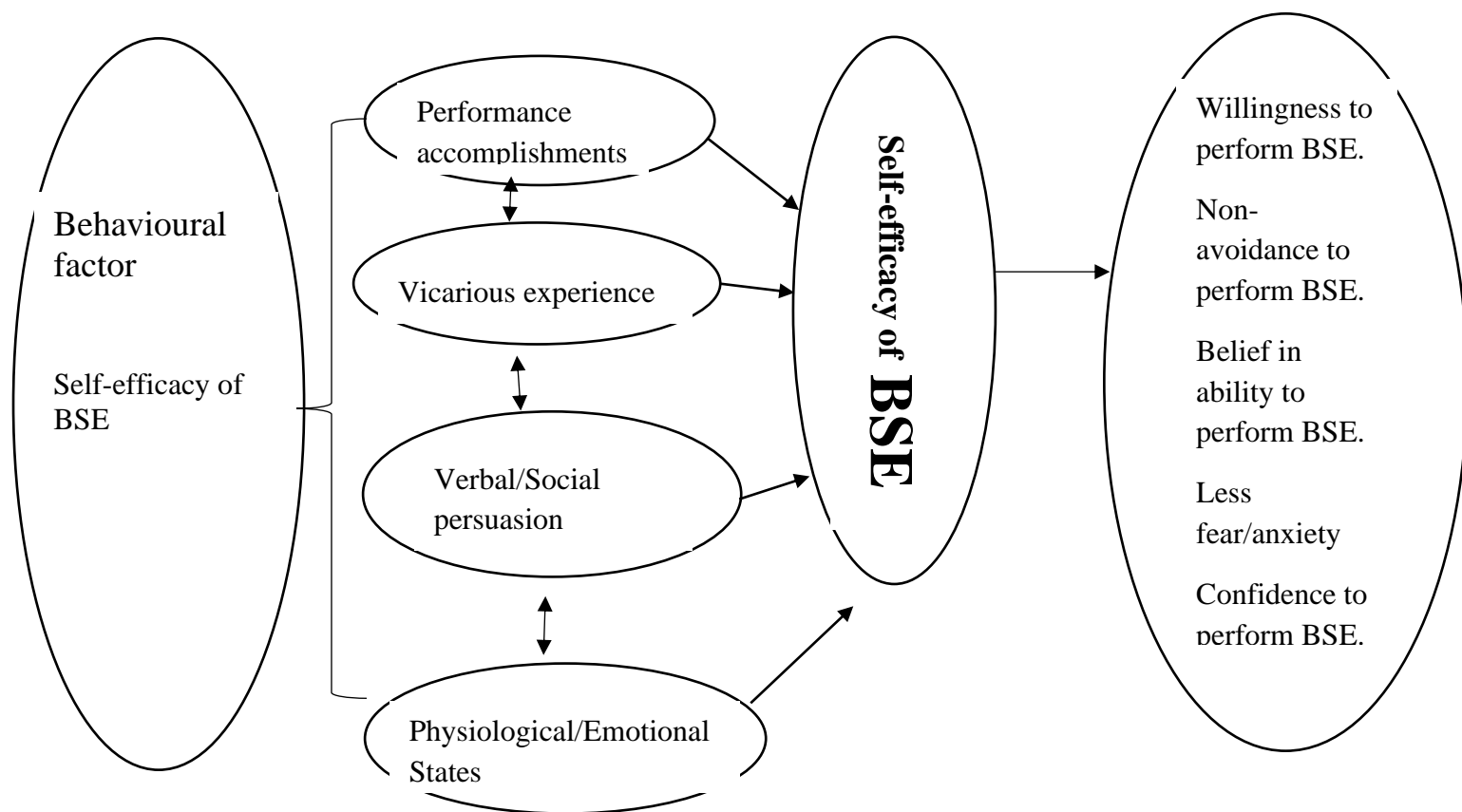


Figure 2: Conceptual framework showing self-efficacy of breast self-examination



Self-efficacy theory is a behavioural theory (Bandura, 1977) which has its main sources or determinants as performance accomplishments, vicarious experience, verbal/social persuasion, and physiological emotional states. When an individual acquires self-efficacy to perform breast self-examination, it will be manifested as a willingness to perform breast self-examination, non-avoidance to perform breast self-examination, belief in an individual's ability to perform breast self-examination, less fear/anxiety, and confidence to perform breast self-examination.

Role of Nurses in Promoting Self-Efficacy of Breast Self-Examination

Nurses play a pivotal role in making female adolescents acquire self-efficacy for performing breast self-examination. The nurses play the following roles: assessment, demonstration, reinforcement and follow-up. They also serve as educators to let the female adolescents know the following:

i. The Benefits of Performing Breast Self-Examination

Allows women to become familiar with the normal look and feel of their breasts, early detection of breast lumps or abnormalities, increased awareness of breast health, tracking changes over time, timely medical attention, improved chances of successful treatment, and promoting breast health education. Other benefits include increased confidence to perform BSE, improved adherence, early detection of breast abnormality and empowerment

ii. The Appropriate Time/ Frequency for Performing Breast Self-Examination

Time: Post-Menstrual Phase: After your menstrual period ends (5–7 days of the menstrual cycle). Frequency: Monthly. Consistency: Specific time in your menstrual cycle.

iii. The Steps in Carrying Out Breast Self-Examination (Look and Feel)

Positioning (Look): Stand before a mirror with your upper body exposed. Observe your breasts for any visual changes in size, shape, or skin texture, and check for any visible lumps or irregularities.

Inspection (Look): Raise your arms and inspect the breasts again, paying attention to any changes in the contour or appearance of the breasts.

Palpation (Feel): Lying Down: Lie down and place a pillow or folded towel under the right shoulder, with the right arm behind the head. Using the left hand, gently explore the right breast with the three pads of the fingers, moving in small circular motions, covering the entire breast area from the collarbone to the bra line and from the armpit to the breastbone. Apply different levels of pressure—light, medium, and firm—to feel different layers of breast tissue. Repeat the same circular motion technique using the right hand to examine the left breast using the pad of the three middle fingers. Examine the nipple and armpit checking for any discharge, changes in shape, or inversion. Feel the armpit area for any enlarged lymph nodes or lumps.

iv. The Signs of Breast Abnormality include swelling or thickening of the breast, dimpling of the breast skin, nipple crust, redness or heat of breast skin, new nipple discharge that is not breast milk (including blood), skin sores, bumps, growing veins on the breast, sunken nipple, changes in the size or shape of the breast, "orange peel" skin, hard lump in the breast, skin changes on the breast such as scaliness or flaky skin, pain in any area of the breast, nipple pain, and lump in the underarm area (armpit).



CONCLUSION

Self-efficacy of breast self-examination is key to achieving effective monthly breast self-examination. This will aid in the reduction of breast cancer morbidity and mortality rates. Achieving self-efficacy in breast self-examination is dependent on determinants such as performance accomplishment of breast self-examination, learning or observing someone perform BSE, encouragement by someone to perform BSE and emotional reactions to breast self-examination. Therefore, nurses must play their role in health educating female adolescents to acquire self-efficacy in performing breast self-examination.

RECOMMENDATIONS

1. Breast self-examination should be taught to senior secondary students as part of health promotion activities in the school health programme.
2. Health talks, symposia, and seminars could provide avenues for female adolescents to have access to more information on breast self-examination.
3. There should be consistent orientation to address females especially female adolescents on early breast self-examination and self-efficacy to become conversant with it as they grow into adulthood.
4. Females should be encouraged to perform their BSE regularly at the right time using the right techniques.

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List of Abbreviation

BSE: Breast Self-Examination

DALYs: Disability-Adjusted Life Years

DIY: Do It Yourself

GBCIF: Global Breast Cancer Initiative Framework

PR: Percentile Rank

SE: Self-Efficacy



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