

IMPLEMENTATION OF BREAST SELF-EXAMINATION IN BREAST CANCER PREVENTION IN ADOLESCENTS: A LITERATURE REVIEW

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Abstract

In particular for teenagers, Breast cancer is one of the leading causes of sickness and death worldwide, and breast self-examination is an essential tool for its early diagnosis, and knowledge of the importance of this examination is essential to prevent this disease. Performing breast self-examination regularly helps adolescents to recognize changes in their breasts. In addition, breast self-examination also serves as an initial step to detect abnormalities, which if found early, can increase the chances of recovery. Although many adolescents already understand the importance of breast self-examination, additional socialization and motivation are still needed to encourage them to carry out regular examinations. Educational activities that involve direct interaction and discussion can increase adolescents' understanding and awareness of breast cancer and how crucial early identification is. The application of self-examination for breast cancer in preventing breast cancer in adolescents is very important and must be supported by effective education and ongoing motivation.

Keywords: Implementation, breast self-examination, breast cancer, adolescents

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INTRODUCTION

Teenagers in Indonesia are currently going through a rapid social transition from traditional to modern culture, which has an impact on their conventions, values, and way of life. Lifestyle and developments are important factors that greatly influence teenagers in being at risk of breast cancer (HUSNA, A., & FAHLEVI). Teenagers' actions when it comes to breast self-examination are influenced by a number of variables, such as attitude and knowledge. Lack of knowledge about breast self-examination will lead to an attitude of less concern about breast self-examination efforts, an attitude of less concern about breast self-examination efforts will encourage a teenager to have bad actions on breast cancer prevention by early detection. One of the most common cancers that affect women is breast cancer, according to the WHO (2017). From the 6.3 million women who were diagnosed with breast cancer in the last five years, there are now 1.7 million more victims of the disease. With 522,000 deaths, breast cancer is also the leading cause of mortality for women. According to data from Indonesia, there are 100 new victims for every 100,000 people annually. This indicates that approximately 237,000 new cases of cancer are diagnosed annually out of a population of 237 million. Malignant cancer accounts for 2.2% of fatalities worldwide across all age groups. In Indonesia, there are 1.4 cancer cases for per 1000 people. Although the incidence of cancer rises with age, empirical evidence also indicates that being young does not protect against breast cancer (Sadoh et al., 2021). Patients with breast cancer have been identified at an early age; several fourteen-year-old girls have tumors in their breasts, which have the potential to progress to cancer if not discovered in time. According to a 2011 WHO estimate, 1,150,000 women particularly teenagers have breast cancer, with 700,000 of those individuals residing in underdeveloped nations like Indonesia (Grego et al., 2011). Given the increasing trend in the number of cancer sufferers, efforts need to be made to prevent it. The Indonesian Ministry of Health has put in place the the technique of breast self-examination as an early detection program for breast cancer. Finding lumps or other abnormalities in the breasts is simple for any woman to perform with breast self-examination. The primary goal of breast self-examination is to detect cancer early on, when treatment can be more effective. However, the majority of women are not aware that breast self-examination is even necessary (Aprianti, S., & Kurniawan, 2022). This is a crucial step since, in nearly all cases, individuals with breast abnormalities initially become aware of them through appropriate breast self-examination.

Women are guided to self-examine for breast cancer through breast self-examination. Women can find abnormalities in the size and shape of their breasts through self-examination (Amosu et al., 2021). The low rate of breast self-examination among Indonesian women, particularly teenagers, can also be attributed to a number of factors, including the lack of knowledge and a lack of interest in learning about breast cancer prevention among many Indonesian teenagers, who are more sensitive to acne on their faces than to breast cancer symptoms.

Ibrahim et al., (2019) stated that breast self-examination is a movement carried out by oneself, easy and cheap, as one of the most recommended early detection methods for breast cancer for every woman. Since approximately 85% of breast lumps are discovered by the patient, this action is crucial. One of the screening methods is routine breast self-examination or early detection approaches carried out by women themselves (Maesaroh, 2020). In adolescent girls, there is physical development such as menstrual development and breast development which of course will be interesting for adolescent girls to learn about, especially if something abnormal happens, for example breast cancer.

Awareness of breast self-examination among young women influences their efforts to prevent breast cancer. With the right information, young women can more clearly comprehend the need of performing breast self-examinations as an effort to find out whether there are lumps that can develop into cancer in the breast. Other factors that can influence this are environmental factors, the lack of information received by young women from health workers, and limited information about breast self-examination. Breast self-examination is very important for young women to do (Ibitoye, O. F., & Thupayegale-Tshwenegae, 2021). Adolescents initially find it difficult to accept the many physical, social, and spiritual changes that occur throughout adolescence, but as time, age, and understanding develop, they are able to accept these changes (Calbayram, N. C., & Guven, 2021). By educating the public about cancer screening and early detection techniques, the public is made aware of the early indications of cancer. For example, breast self-examination education can be used as a screening method or early detection of breast cancer.

The problem found was that young women were still lacking in willingness to explore information about early detection of breast cancer. Some female students who know about breast self-examination are from independently finding out about breast self-examination through social media.

Research conducted by Novelia et al., (2021) on the effectiveness of breast self-examination health education on the level of knowledge of adolescent girls with the results obtained, namely, the level of knowledge of respondents increased by 20-40% compared to before receiving health education. In addition, adolescents' perceptions regarding breast self-examination are also one of the factors for adolescents not carrying out breast self-examination. Negative perceptions regarding breast self-examination, for example, fear of finding something during the examination, are one of the factors for the failure of breast self-examination programs by adolescent girls. The information received or given does not provide protection to adolescents from things that endanger reproductive health. It is important to be aware of what the normal shape of the breast is and whether or not there are changes over time. With early detection of the breast, many women have survived breast cancer. Breast self-examination screening needs to be carried out for adolescent girls as an effort to prevent further health problems. The implementation of Adolescent females should practice breast self-examination and have a healthy lifestyle in order to prevent breast cancer (Adhyatma, A. A., & Nurlela, 2021).

RESEARCH METHOD

This study uses a descriptive method by collecting data from various reliable sources, including literature studies and recent publications. A descriptive approach is used to describe the implementation of breast self-examination in preventing breast cancer in adolescents. The first stage in this research method is collecting literature relevant to the research topic. A literature search was conducted through academic databases, scientific journals, and related publications that discuss the implementation of breast self-examination in preventing breast cancer in adolescents. The selected literature must be of good quality and relevant to the research objectives. After collecting the literature, an analysis and synthesis of the information found was carried out. Relevant data and information on types, risk factors, symptoms, and treatment of breast cancer, definitions and methods of breast self-examination, implementation and influence of breast self-examination in preventing breast cancer in adolescents related to the research topic.

RESULT AND DISCUSSION

Types, Risk Factors, Symptoms, and Treatment of Breast Cancer

Sun et al. (2017) state that one type of cancer that develops when cells in the breast grow unnaturally and inappropriately is called breast cancer. While women account for the majority of instances, men can also develop breast cancer. Data from Indonesia's Ministry of Health indicate that One of the most common types of cancer is breast cancer kinds there. As a matter of fact, among the leading causes of cancer-related fatalities among women is this illness. That's why it's important to raise awareness of breast cancer prevention increased.

One kind Breast cancer is a type of cancer that appears in the breast tissue. This disorder develops when breast cells grow unnaturally and improperly. These cells divide and spread rapidly to surrounding tissues, and can even spread to other organs (metastasis). Breast cancer is often found in the mammary glands (lobules) or in the ducts that carry milk to the nipple (ducts). These malignant tumors can also form in the connective tissue or fat in the breast (Łukasiewicz et al., 2021).

When cells in breast tissue change and proliferate, breast cancer results rapidly. This abnormal cell growth forms a tumor. Tumors become malignant when cells grow and spread in the breast tissue to other organs of the body. Both women and men are at risk for this disease (Ikhuoria, E. B., & Bach, 2018). However, women are a hundred times more susceptible. Worldwide, breast cancer is among the main reasons why people die. But in recent years, the disease's death rate has declined thanks to the increasing awareness of women to detect the disease early. Breast cancer therapy is increasingly proving its effectiveness as a method of treating patients.

Breast cancer can be classified based on its cause, aggressiveness, and treatment. The initial appearance of this cancer can be from various parts of the breast. But it can also initially appear from the armpit area, where the lymph nodes are. This cancer can also metastasize, or spread to, other body organs such the brain, lungs, or bones. Doctors need to do a thorough examination to determine the appropriate breast cancer treatment and therapy (Obeagu, E. I., & Obeagu, 2024).

Based on the nature of the cells, Breast cancer comes in two flavors: non-invasive and invasive. Breast cancer that is non-invasive (in situ) is a condition when cancer cells grow and settle in their original location (do not spread). Meanwhile, invasive (malignant) breast cancer is a condition when

cancer cells spread to penetrate the entire breast tissue and its surroundings or to other organs of the body.

Momenimovahed, Z., & Salehiniya, H. (2019) stated that non-invasive and invasive breast cancer are divided into several types, namely:

1. Non-Invasive Breast Cancer

Non-invasive There are two categories of breast cancer, specifically: DCIS, or ductal carcinoma in situ, is: Breast cancer that attacks the milk ducts (ducts). DCIS is a type of cancer that can still be cured if it is treated properly and quickly. However, if left untreated, this type of cancer can develop into malignant (invasive) cancer.

Lobular carcinoma in situ (LCIS): Cancer that grows in the breast lobule tissue. Just like DCIS, LCIS also does not spread to the surrounding tissue. However, LCIS in one breast is at risk of triggering cancer in both breasts.

2. Invasive Breast Cancer

Meanwhile, the types of breast cancer that fall into the invasive category are as follows:

Invasive ductal carcinoma (IDC): This type of cancer starts from abnormal cells in the milk-carrying ducts (ducts) that develop into malignant cells, and attack more breast tissue sections. A kind of cancer known as invasive lobular carcinoma (ILC) that begins from abnormal cells in the breast lobules, which then become malignant and attack the breast tissue and extended to the body's other organs.

Until now, it is not known for sure what causes breast cancer. However, basically this condition occurs when there are breast tissue that grows in an irregular and uncontrolled manner. Some risk factors for breast cancer are (Surakasula et al., 2014):

1. Women who do not have children.
2. Having your first child while you're older than thirty.
3. Women who do not breastfeed.
4. Having benign breast cancer in the past tumor surgery.
5. Not being active
6. Long period of time.
7. Having a family history of breast cancer or other types of cancer.
8. Obesity.
9. Excessive alcohol consumption.
10. The habit of consuming fatty foods.
11. Smoking habits and passive smoking.
12. Menopause at the age of over 55 years.

13. The first menstruation (menarche) begins when the age is still too young (under 12 years).

Symptoms of breast cancer can vary. However, in general, some of the symptoms that appear are as follows (Divella et al., 2020):

1. A lump in the breast.
2. Modifications to the nipple, including pulling it inward and causing it to discharge.
3. Modifications to the breast's skin.
4. A lump in the armpit.
5. Breast Cancer Diagnosis

Smolarz et al., (2022) stated that before making a diagnosis, the doctor will conduct an anamnesis (medical interview) regarding the patient's symptoms, lifestyle, medical history, and family history. After that, a series of examinations will be carried out to help establish the diagnosis. A number of treatments are carried out to treat breast cancer, as follows.

1. Surgery

There are three different types of breast cancer surgeries: Breast conserving surgery (BCS), which involves cleansing the lymph nodes that are impacted by the disease and removing the malignant portion of the breast tissue.

During a mastectomy, the afflicted lymph nodes, the malignancy, and the breast tissue as a whole are removed. Mastectomy surgery with breast reconstruction after mastectomy, which is a mastectomy procedure accompanied by the act of returning the breast to its original shape (can be with implants or body tissue itself).

2. Chemotherapy and Radiotherapy

High-powered X-rays are employed in the radiation treatment of breast cancer. The goal is to both inhibit and eventually eradicate cancer cells. Contrarily, chemotherapy is a type of cancer treatment in which drugs are used to halt the growth of cancer cells and shrink the tumor. Chemotherapy can be done before surgery with the aim of shrinking large tumors, or after surgery to kill remaining cancer cells that are still in the breast tissue or that have spread to surrounding tissue or organs. This is done to prevent cancer from recurring.

3. Hormone Therapy

In order to decrease and control breast cancer cells, hormone therapy for the disease works by preventing the hormones progesterone or estrogen from binding to cancer cells.

4. Targeted Therapy

In order to target cancer cells specifically, targeted therapy uses medications or other materials to inhibit chemical signals at the site of cell division and growth. The goal of targeted therapy is in order to halt the spread of cancer cells and eliminate them without harming or killing healthy breast cells. Gender, age, and genetics are the three main risk factors for breast cancer development. Therefore, women are advised to be more aware of checking their breasts independently and regularly. Especially if there are family members who have a history of this disease. For people who have risk factors and do not show symptoms, a mammogram is the right way to find hidden cancer. Based on research, women are advised to start having regular mammograms at the age of 40. The older you get, the greater the need for mammograms because many sufferers of this disease are women who have entered menopause. Changing your lifestyle can also be an important step to prevent breast cancer, for example avoiding cigarettes, eating a balanced diet, getting frequent exercise, staying under a healthy weight, and avoiding pollution and exposure to direct sunlight and harmful chemicals (Angahar, 2017).

Definition and Methods of Breast Self-Examination

The simplest method for early detection of breast cancer is self-breast inspection. By doing it routinely, you can be aware of any unusual changes in your breasts, so you can do further diagnostic tests. Breast cancer that is found early, when it is still small and has not spread, is easier to treat (Özdemir et al., 2014).

Changes in the shape and density of the breasts at certain times are normal. However, being aware of any changes is important because this can be a sign of certain diseases, such as tumors or breast cancer. Philip et al., (1986) recommend doing a self-breast examination at least once a month. It is necessary to do this examination on the same schedule every month. Basically, the best time to do a self-breast examination is 7-10 days after the menstrual period ends. Please note that self-breast examination is not recommended during the menstrual period because there are significant changes in hormone levels during this period, making the breasts feel tighter than usual.

Here are some methods that can be done to implement breast self-examination, as follows (Asmare et al., 2022):

1. While Bathing

While bathing, breast self-examination can be done by lifting one hand from the side of the breast to be examined to the back of the head. Then, using the other hand, feel the entire breast area using the index finger, middle finger, and ring finger that have been smeared with soap. Try to feel your own breasts in a circular motion starting from the part of the breast near the armpit to the nipple. Breast self-examination carried out while bathing is considered quite effective because soap foam can facilitate the movement of the fingers to find any tumors or anatomical modifications to the breasts to the armpit area.

2. When Looking in the Mirror

Here are the steps that can be taken to implement the breast self-examination method when looking in the mirror.

Stand in front of a mirror and undress from the waist up.

Place your arms straight down. Pay attention to the shape, size, skin color, and surface of your own breasts. Don't worry if you find that the shape of both breasts is not the same size because this is normal.

Place your hands on your waist and press hard to tighten your chest muscles. Then, observe both breasts while looking in the mirror.

Bend over in front of the mirror and let your breasts hang down. Feel and observe your breasts to detect any physical changes in your breasts.

Place both hands behind your head and clasp them together. Then, observe any changes in your breasts.

Press the nipples gently using your thumbs and index fingers to see if there is any fluid coming out of the nipples.

Feel the breasts, collarbones, and armpits using your hands slowly to detect any abnormal lumps or pain when touched.

3. While Lying Down

Breast self-examination can also be done while lying down because this position can spread the breast tissue evenly across the chest, making it easier for someone to detect abnormal lumps. The steps that can be taken to examine your own breasts while lying down are as follows:

Lie down on a flat surface in a position that is as comfortable as possible.

Place a small pillow or rolled towel under your shoulders.

Place your left palm beneath your head. Next, move your right hand's fingers in a circular motion to feel your left breast following a clockwise direction. Do the same technique to examine your right breast.

Implementation and Effect of Breast Self-Examination in Breast Cancer Prevention in Adolescents

One of the most prevalent forms of cancer among women is breast cancer, which includes adolescents. Although rare in adolescence, early understanding of breast health is essential for future prevention. One way to raise awareness and detect breast cancer early is to perform a Breast Self-Examination.

Implementation of breast self-examination in adolescents is as follows (AHMED, A. M., & ABD EL HAMED, 2017):

1. Education and Counseling

It is important to provide education about the value of teaching students to self-examine their breasts, particularly in health classes or through extracurricular activities. Health professionals, educators, and the extensively used digital media by teenagers can all provide counseling.

2. Teaching breast self-examination techniques

Breast self-examination involves several steps that include observing and feeling the breasts to detect any unusual changes or lumps. The basic steps of BSE are taught in a simple and easy-to-understand way for adolescents, either through live demonstrations or video tutorials.

3. Routine implementation

Adolescents are encouraged to perform self-breast examinations every month, especially a few days after menstruation, when the breasts are not too sensitive or swollen. This habit should be instilled as early as possible so that adolescents are accustomed to paying attention to their breast health.

The influence of self-breast examinations in preventing breast cancer is as follows (Kurniawan et al., 2023):

1. Early detection

Self-breast examinations allow adolescents to recognize changes in their breasts early, so that if there are abnormal signs, medical action can be taken immediately. Early detection increases the chances of recovery if cancer is found at an early stage.

2. Increased health awareness

Performing regular self-breast examinations can increase adolescents' awareness of their breast health. This awareness can encourage other healthy lifestyle behaviors that can help prevent cancer, such as a balanced diet and exercise.

3. Risk reduction

Self-breast examinations not only help in early detection, but can also reduce adolescent anxiety related to breast health by giving them control over monitoring their own health. Early awareness also encourages consultation with medical personnel if there are suspicious symptoms, which can reduce the risk of developing more serious cancers.

Breast self-examination is an important step in increasing awareness and prevention of breast cancer in adolescents. Through education, training, and regular implementation, breast self-examination can be an effective tool in detecting early changes in the breast, which can ultimately contribute to long-term breast cancer prevention. Ongoing education and support from the surrounding community are essential to ensure that adolescents understand the importance of maintaining their breast health from an early age.

CONCLUSION

One crucial technique for the early identification of breast cancer is breast self-examination, especially for adolescent girls. Through education and implementation of breast self-examination, adolescents can increase their knowledge and awareness of breast health, which contributes to breast cancer prevention. Research shows that the application of the Health Belief Model theory in breast self-examination education can increase breast cancer prevention among adolescents. In a study, after education, In the intervention group, there was a notable improvement in breast cancer prevention knowledge and behavior compared to the control group.

Breast self-examination helps adolescents recognize physical changes in their breasts. Conducting regular examinations allows them to detect lumps or early signs of breast cancer, which often go unnoticed until they reach an advanced stage. By understanding the importance of this examination, adolescents can be more proactive in maintaining their breast health. Although many adolescents already understand the importance of breast self-examination, additional socialization and motivation are still needed to encourage them to carry out regular examinations. Continuous education and support from the surrounding environment, including family and medical personnel, are very important to increase awareness and practice of breast self-examination among adolescents.

Implementation of breast self-examination through effective education can have a positive influence on breast cancer prevention in adolescents. By

increasing knowledge and awareness, teenagers can play an active role in maintaining their breast health and detecting potential problems early.

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