MEDIA PENELITIAN DAN
PENGEMBANGAN KESEHATAN
Vol 35 No 1, Maret 2025

e-ISSN: 2338-3445
p-ISSN: 0853-9987

EARLY DETECTION BEHAVIOR OF BREAST CANCER IN WOMEN OF CHILDBEARING AGE: A SCOPING REVIEW

Perilaku Deteksi Dini Kanker Payudara pada Wanita Usia Subur: Scoping Review

Rahmalia Shoffy Salsabila[1*], Bagoes Widjanarko[1], Mateus Sakundarno Adi[2]
[1]Department of Health Promotion, Faculty of Public Health, Universitas Diponegoro, Semarang, Indonesia
[2]Department of Epidemiology, Faculty of Public Health, Universitas Diponegoro, Semarang, Indonesia
*Email: shoffysalsabila@gmail.com

ABSTRAK

Kanker payudara tetap menjadi masalah kesehatan global utama dengan insidensi yang meningkat, khususnya pada wanita usia subur yang mengalami fluktuasi hormonal signifikan. Deteksi dini merupakan cara yang tepat untuk membantu meminimalkan insidensi kanker payudara, namun pada kenyataannya, perilaku deteksi dini masih buruk, terutama di negara-negara berkembang. Penelitian ini bertujuan untuk mengeksplorasi faktor-faktor yang memengaruhi perilaku deteksi dini kanker payudara pada wanita usia subur. Desain penelitian ini menggunakan scoping review sebagai langkah awal menuju tinjauan sistematis dengan kerangka kerja PRISMA-ScR. Pencarian artikel melalui basis data seperti Scopus dan ScienceDirect. Dari total 144 artikel yang diidentifikasi, 11 memenuhi kriteria inklusi, mencakup studi cross sectional yang diterbitkan antara tahun 2019 hingga 2024, tersedia dalam bahasa Inggris, dan membahas faktor-faktor yang memengaruhi perilaku deteksi dini kanker payudara. Temuan penelitian mengungkapkan bahwa faktor-faktor yang memengaruhi perilaku deteksi dini meliputi pengetahuan, kesadaran, kondisi sosial-ekonomi, dukungan keluarga, Lokasi tempat tinggal, kepercayaan budaya, status pernikahan, dan aksesibilitas terhadap layanan kesehatan. Praktik seperti Pemeriksaan Payudara Sendiri (SADARI), Pemeriksaan Payudara Klinis (SADANIS), dan Mammografi masih rendah, terutama di wilayah dengan sumber daya kesehatan yang terbatas.Temuan ini menekankan pentingnya kampanye edukasi dan pengurangan hambatan struktural untuk meningkatkan deteksi dini. Strategi kolaboratif yang melibatkan pendidikan, pemberdayaan masyarakat, dan peningkatan aksesibilitas layanan kesehatan sangat penting untuk meningkatkan perilaku deteksi dini pada wanita usia subur.

***Kata kunci**: deteksi dini, kanker payudara, pengetahuan, scoping review*

ABSTRACT

Breast cancer remains a major global health problem, with increasing incidence, particularly in women of childbearing age who experience significant hormonal fluctuations. Early detection is the right way to help minimize the incidence of breast cancer, but in reality there is still poor early detection behavior, especially in developing countries. This study aimed to explore factors influencing early detection behavior of breast cancer in women of childbearing age. The research design utilized a scoping review, a precursor to a systematic review. The PRISMA-ScR framework guided the process. The article search was conducted using databases such as Scopus and ScienceDirect. Among the total 144 articles identified, 11 met the inclusion criteria, focusing on studies published between 2019 and 2024, available in English, and discussing factors affecting early breast cancer detection behavior. The findings reveal that factors influencing early detection behavior include knowledge, awareness, social-economic conditions, family support, the location of residence, cultural beliefs, marital

https://doi.org/10.34011/jmp2k.v35i1.2784

e-ISSN: 2338-3445
p-ISSN: 0853-9987

status and accessibility to healthcare services. Practices such as breast self-examinations (BSE), Clinical Breast Examination, and mammography remain low, especially in regions with limited healthcare resources, despite moderate awareness levels. These findings underscore the importance of educational campaigns, community-based strategies, and reducing structural barriers to improve early detection rates. Collaborative strategies involving education, community empowerment, and improved healthcare accessibility are essential to enhance early detection behavior in women of childbearing age.

Keywords: breast cancer, early detection, knowledge, scoping review

INTRODUCTION

Breast cancer is a major global health problem with an increasing incidence worldwide. Global Cancer Statistics in 2020 showed more than 2.3 million new cases were diagnosed, making it the most common cancer in women [1]. This trend is in line with the increasing prevalence in various regions, especially in countries with low Sociodemographic Indexes. Zhuojun, et al. (2024) reported an annual increase of 0.82% in breast cancer incidence among women aged 20–39 years, accompanied by a 0.87% rise in prevalence between 1990 and 2021, particularly in regions with limited access to healthcare services [2]. In the United Kingdom, the prevalence of breast cancer has also increased by 2.5 times, with a peak incidence in women aged 60-69 years [3]. Global projections indicate that the number of these incidents will continue to increase until 2030, especially in Sub-Saharan Africa and Asia [4]. The increase in the incidence of breast cancer is influenced by various factors, one of which is the genetic history of cancer in the family that increases the risk of developing breast cancer, as shown by Susi [5]. A woman's Age also plays a role as a risk factor contributing to breast cancer [6] Suparna & Sari (2022) stated that, hormonal history such as exposure to the hormone estrogen related to breast cells is part of the risk factors for breast cancer [7].

Early detection is one of the most effective interventions in minimizing breast cancer because it allows for the identification of tumors at an early stage. Early detection of breast cancer through Breast Self-Examination (BSE), Clinical Breast Examination (CBE), or mammography screening is essential, especially in developing countries. Adwoa & Busisiwe (2018) stated that BSE and CBE are cost-effective methods that can help minimize the severity of breast cancer and reduce mortality [8] The importance of early detection of breast cancer should be emphasized in women of childbearing age (15-49 years), a phase characterized by significant hormonal fluctuations that can affect breast health [9] Research by Ophira, et al (2020) shows that women who routinely undergo BSE, CBE, and mammography show higher survival rates compared to those who do not undergo these [10].

Early detection of breast cancer in developing countries is poor and is one of the main causes of low patient survival rates. According to the research by Monica & Eucario, women in low- and middle-income countries (LMICs) are generally late in getting screened, which leads to most women in developing countries being diagnosed at an advanced stage [11]. This early detection behavior is greatly influenced by various factors. Knowledge, awareness, attitudes, and practices related to early detection services in women play an important role in efforts to improve the early detection of breast cancer [12]. Previous research has shown that the perceived barriers when conducting early detection of breast cancer in women are also factors that affect early detection behavior of breast cancer [13]. Therefore, this article will examine the factors influencing the behavior of early detection of breast cancer among women of childbearing age. The advantage of this article from similar research is that it discusses the scope of developing countries regarding the three types of early

https://doi.org/10.34011/jmp2k.v35i1.2784

e-ISSN: 2338-3445
p-ISSN: 0853-9987

detection, namely breast self examination, clinical breast examination, and mammography, it is hoped that effective strategies can be proposed to increase participation and adherence in early detection efforts of breast cancer.

METHODS

The methodology employed in this article is a scoping review. This scoping review was developed in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines. Data collection was obtained through two data base sources, namely Scopus and Sciendirect. The keywords used in the search for the article are: (women OR “childbearing age” OR “childbearing women”) AND (“early detection behavior” OR “early detection”) AND (“breast cancer” OR “mamamary cancer”). Article searches are limited to the last 5 years, starting from 2019 to 2024. The inclusion criteria of this scoping review are studies that have a sample of women of childbearing age with an age range of 15-49 years. The selected article is an original English article with a cross-sectional study design, available in full text and open access. It is based on research conducted in developing countries and discusses factors influencing early detection behavior of breast cancer in women of childbearing age. Early detection methods, such as breast self-examination, clinical breast examination, and mammography, are also included as part of the inclusion criteria. The exclusion criteria of this scoping review are research with a sample of women who are patients of breast cancer or women currently undergoing breast cancer therapy, research with the type of article review, and outdated studies. The search results resulted in 124 articles sourced from Scopus and 20 articles sourced from Sciendirect. The total number of articles is 144 articles. Of the 144 articles, after reading the entire content of the full text article, there are 62 articles issued because they did not discuss factors related to early detection in the scope of women of childbearing age. A total of 71 articles were excluded as they did not fulfill the inclusion criteria. The final results showed that there were 11 articles that were considered worthy and met the inclusion criteria. The process of data extraction and identification is described through figure 1.

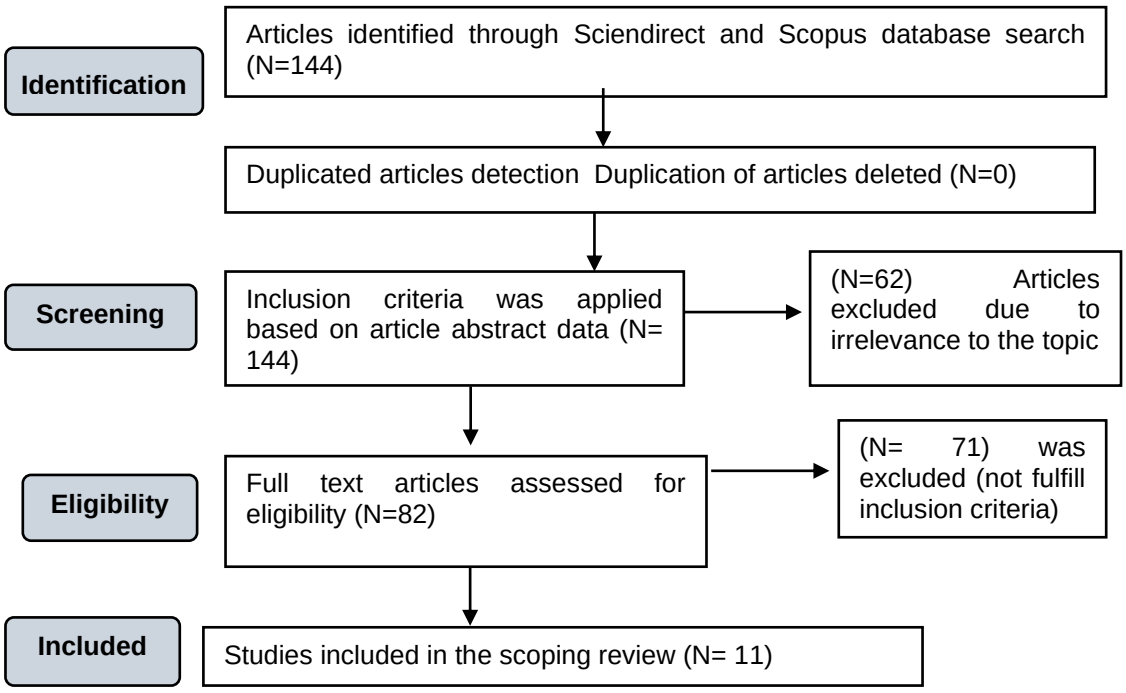

Figure 1. PRISMA Flowchart

https://doi.org/10.34011/jmp2k.v35i1.2784

e-ISSN: 2338-3445
p-ISSN: 0853-9987

RESULT

The researcher provides detailed characteristics of the selected literature studies in table 1. The study was conducted in developing countries, some of which still face economic challenges. Participants in the selected literature are women of childbearing age where there are female students from several majors, women of childbearing age who have symptoms of breast cancer, and women of childbearing age who live in the countryside without breast cancer.

Table 1. Data Charting

No	Author(s)/Year/ Title	Objective	Method	Result
1	Osei-Afriyie *et al.* (2021) / "Breast cancer awareness, risk factors and screening practices among future health professionals in Ghana: A cross-sectional study"	Exploring knowledge, contributing factors, and self-reported practices related to breast cancer screening among female university students.	A cross-sectional study was conducted in 2019 using stratified random sampling among 385 female undergraduate students in Ghana.	A disparity persists between knowledge and actions, driven by optimistic views on risk and religious influences. Lower rates of regular BSE, CBE, and mammography were observed among those who didn't perceive themselves as being at risk.
2	Elias Rizk *et al.* (2024) / "Breast cancer screening in Lebanon: Understanding knowledge, attitudes and barriers"	Investigate knowledge, attitudes, and barriers towards breast cancer (BC) screening among Lebanese women	A Cross sectional study was conducted in 2023 using snowball sampling among 400 Lebanese women aged 35 with no prior or current BC diagnosis in Lebanon.	Education significantly impacted BC knowledge; increased knowledge reduced screening barriers. Those with healthcare connections had better attitudes and fewer obstacles.
3	Alshafie *et al.* (2024) / "Breast self-examination among female medical students at Damascus University: A cross-sectional study"	Assess the knowledge, attitudes, and practice of breast self-examination (BSE)	A Cross sectional study was conducted in 2022 using convenience sampling among 589 female medical students in Syria	Moderate level of BSE knowledge and limited practical experience. Higher knowledge was associated with a good attitude, prior BSE performance, studying medicine, and higher grades.
4	Dadzi and Adam (2019) / "Assessment of knowledge and practice of breast self-examination among reproductive age women in Akatsi South district of Volta region of Ghana"	Assess awareness, knowledge, and practice of breast self-examination (BSE) among reproductive-aged women	A Cross sectional study was conducted in 2017 using random sampling among 385 women aged 15-49 in Akatsi South District, Volta Region, Ghana.	High awareness of breast cancer, but low knowledge and practice of BSE. Younger women more likely to practice BSE.

https://doi.org/10.34011/jmp2k.v35i1.2784

e-ISSN: 2338-3445
p-ISSN: 0853-9987

5	Alam *et al.* (2021) / "Evaluation of knowledge, awareness and attitudes towards breast cancer risk factors and early detection among females in Bangladesh: A hospital-based cross-sectional study"	Investigate knowledge, awareness, and attitudes regarding breast cancer risk factors, early detection methods, and BSE among women	A Cross sectional study was conducted in 2019 using convenience sampling among 1007 women at Sheikh Hasina Medical College, Tangail District, Bangladesh	Low knowledge about risk factors, warning signs, and screening methods. BSE practice was low. Awareness was associated with residence, family history, marital status, literacy, and socioeconomic status. Unmarried women were more likely to perform BSE than married women.
6	Omar *et al.* (2020) / Syria "Female medical students' awareness, attitudes, and knowledge about early detection of breast cancer in Syrian Private University, Syria"	Determine the level of awareness and knowledge among female medical students at a Syrian Private University regarding breast cancer early detection methods.	A Cross-sectional study was conducted d in 2019 using simple random sampling among 407 female medical students at Syrian Private University (Syria)	Despite the low level of awareness about mammography, a higher awareness of breast self-examination was observed, although only 32.7% of respondents practiced it. Notably, knowledge about these practices differed significantly among faculties
7	Ishtiak *et al.* (2022) / Bangladesh "Knowledge, practice and associated factors of breast self-examination among female university students of Bangladesh"	Explore knowledge, practice, and associated factors of breast self-examination (BSE) among female	A Cross-sectional study was conducted in 2013 using convenience (non random sampling) among 400 female university students in Bangladesh	Low overall knowledge and practice. Students from public universities demonstrated significantly higher levels of knowledge and were more likely to engage in the practice of breast self-examination (BSE). Rural residence before university negatively associated with practice.
8	Sharp *et al.* (2019) / Uganda "Modifiable patient-related barriers and their association with breast cancer detection practices among Ugandan women without a diagnosis of breast cancer"	Assess patient-related barriers to breast cancer diagnosis among Ugandan women without a diagnosis, and their correlation	A Cross-sectional study was conducted in 2014 using convenience based sampling among 401 women starting form 25 years without breast cancer in Uganda	A lack of knowledge is identified as a primary modifiable barrier to low engagement in cancer detection practices. Rural women are less likely to participate than urban women, with additional barriers including financial limitations, insufficient social support, and fear.

https://doi.org/10.34011/jmp2k.v35i1.2784

e-ISSN: 2338-3445
p-ISSN: 0853-9987

		with cancer detection practices.		
9	Joho *et al.* (2024) / Tanzania "Perceived barriers and factors influencing uptake of breast cancer screening among women: a population-based cross-sectional study in Tanzania"	Determine the level of uptake of breast cancer (BC) screening (BSE, CBE, Mammography) and associated factors among women	A Community-based analytical cross-sectional study was conducted in 2020 using random sampling among 354 women aged 19 years and older without a known history of breast cancer in Dodoma City, Tanzania	Low uptake of BC screening. Lack of knowledge about BC screening methods was the most frequently cited barrier. low-income families was significantly associated with non-participation in screening.
10	Shunhua Zhang *et al.* (2022) / Eastern China "Socioeconomic status index is an independent determinant of breast cancer screening practices: Evidence from Eastern China"	To assess the association between the socioeconomic status (SES) index and breast cancer screening practices	A Cross-sectional study was conducted in 2020-2021 using snowball sampling among 1816 female with a minimum age of 18 years in Anhui, Eastern China	SES index is a significant determinant of screening practices. Higher SES linked to better screening rates and breast cancer knowledge. Lower SES groups showed poor utilization, requiring tailored intervention strategies.
11	Abdou *et al.* (2020) / "Awareness, attitudes and practices of women in relation to breast cancer in Niger"	To understand women's awareness, attitudes, and practices regarding breast cancer and its detection	A Cross-sectional study was conducted in 2017 using random sampling among 700 women with a minimum age of 25 years in Nigeria	Lack of knowledge about breast cancer as well as gaps in CBE/BSE screening practices

The results of the review of 11 selected articles showed that the factors that affect the behavior of early detection of breast cancer in women of childbearing age are both internal and external factors. The results of this study show that the behavior of early detection of breast cancer depends not only on the level of awareness and knowledge of individuals, but also on systemic complexity which includes barriers to access, social economics, and others social factor. Although awareness about cancer risk tends to increase, the main challenge lies in how that information translates into real action.

DISCUSSION

Internal Factors

Internal factors encompass all elements originating within an individual that influence their thoughts, emotions, and actions. In the context of health behavior, these factors include beliefs, awareness, perceptions, knowledge, values, and attitudes toward health. Such factors often serve as the foundation for decisions related to adopting healthy lifestyles, managing illnesses, or engaging in preventive measures. For instance, an individual's belief in their ability to control their health, commonly referred to as the health locus of control, can either facilitate or hinder healthy behaviors [14]. Several studies found in the literature reveal that individual internal

https://doi.org/10.34011/jmp2k.v35i1.2784

e-ISSN: 2338-3445
p-ISSN: 0853-9987

factors have a significant role in influencing the practice of early detection of breast cancer, such as BSE, CBE, and mammography. Adequate knowledge about breast cancer and its detection methods has been shown to increase participation, while limited knowledge is a major obstacle that is often found, particularly in individuals with a low educational background or living in the countryside. In addition, excessive optimism about personal risks of the consequences of the examination are often hindering the implementation of BSE, with most individuals feeling anxious about the findings.

Studies in Ghana show that awareness of breast cancer risk is high, but there are few respondents in practicing breast self-examination (BSE) where age and risk perception are significant factors in driving early detection of breast cancer [15][16]. In the theory of the health belief model first discovered in the 1950s by Resenstock, it is stated that individuals who have a perception of vulnerability or seriousness about the disease will affect individual behavior, risk perception is an individual's perception of an individual's belief in the possibility of developing a disease where the individual has health-related thoughts by looking at the condition of the individual that basically every individual has various perceptions [17].

Other internal factors found in studies in Bangladesh and Syria [18], [19] prove that women's awareness of breast cancer does not guarantee that the woman has good early detection behaviors. Individual awareness in conducting early detection or initial examination of health services is significantly influenced by the level of knowledge they possess. Individual awareness in conducting early detection or early examination of health services is greatly influenced by the level of knowledge possessed. The higher the level of knowledge about a person's health, the higher the individual's awareness to take preventive steps in maintaining his health. Knowledge serves as a foundation that allows individuals to understand the importance of early screening, recognize early signs of disease, and know the benefits of preventive measures that can be taken. In this context, knowledge includes not only general information about health, but also includes a more specific understanding of a particular disease [20].

Several studies [15] [21] [22] [23] found that the most commonly found internal factors were a lack of knowledge related to breast cancer and early detection this causes limitations in early detection [24]. A major obstacle, as seen in the study in Lebanon, where respondents had limited insights, is that education campaigns are urgently needed to address these constraints [25]. Knowledge is the result of a person's process of observing and understanding a certain object. This plays a very important role in shaping individual behavior. Individual knowledge is affected by information obtained from various sources [26]. The decision to display a particular behavior is the result of a rational process directed at a specific goal and following a sequence of thoughts. Behavioral choices are considered, the consequences and consequences of each behavior are evaluated, and a decision is made whether to act or not. Behavior will occur if there is acceptance through a process that is based on knowledge and the importance of awareness, then the behavior will last for a long time [27]. On the other hand, if behavior is not based on knowledge and awareness, it will not last long.

A person's early detection behavior is not only determined by the level of knowledge, but also by their beliefs and environment that provide or do not provide a stimulus to behave. The non-implementation of BSE behavior in individuals who have symptoms or a history of cancer in their families may be due to a lack of awareness, interest, evaluating, trial, and adoption. Before adopting someone, they will go through a sequential process as above, so that behavior changes can occur. However, if this process does not occur, then the behavior will also not occur, as indicated by Huriya, et al [28].

https://doi.org/10.34011/jmp2k.v35i1.2784

e-ISSN: 2338-3445
p-ISSN: 0853-9987

External Factors

External factors in Leshchenko's research (2023) explain that, external factors in the context of health behavior refer to conditions or elements outside the individual that influence how a person behaves in relation to their health. These factors include physical environments, as well as social influences, including community support and societal norms. Cultural values and beliefs also play a significant role in shaping perceptions of health and acceptable behaviors. Economic conditions, such as income levels and employment opportunities, further impact an individual's ability to access healthcare resources or adopt healthy lifestyles. Additionally, public policies and regulations, such as healthcare laws and public health campaigns, create systemic frameworks that can either promote or hinder health-related behaviors across populations [29].

The literature that has been found shows, the economic and cultural barriers found in Uganda and Tanzania also affect participation in breast cancer screening, with women from rural and low-income areas tending to have lower detection rates [21], [30]. Socioeconomics (SES) also plays a significant role where individuals with higher SES tend to have better knowledge and early detection practices, as evidenced by a study in Eastern China [31]. Socioeconomic level has a significant influence on early detection behavior of breast cancer, where individuals with financial limitations are at higher risk of experiencing delays in carrying out initial examinations compared to those with better economic capabilities. This is due to low income which makes them worried about the cost of breast examinations, especially CBE and Mammography which require them to go to health services [20].

Cultural values such as religious beliefs are also an obstacle in early detection of breast cancer [16]. Cultural values are factors that affect a person's behavior. Cultural Values include beliefs or beliefs in an object [32]. Trust or belief is also the process of behaving after an attitude, with a positive or negative attitude will be based on a person's beliefs [20]. Cultural values have a great influence on a person's behavior with the presence of beliefs or beliefs that will change a decision and act.

Other external factors are lack of social support, both husband and family significantly influences the early detection of breast cancer as evidenced in a study in Uganda [30]. Previous research [33] shows that Family support, including the husband, is interpreted as assistance provided by other family members so that it will provide physical and psychological comfort. Husband support plays an important role in early detection behavior of breast cancer in wives. This support can be in the form of emotional, informational, financial, and instrumental support where the support provided will contribute to improving early detection behavior.

Furthermore, studies have revealed that the location of residence, particularly in rural areas, significantly exacerbates low participation rates in early detection efforts, with women residing in rural settings consistently exhibiting lower levels of Breast Self-Examination (BSE) practice compared to their urban counterparts [34]. This disparity is primarily attributed to the limited availability of healthcare infrastructure and educational resources in rural areas, which creates significant barriers to the adoption of proactive health behaviors. The lack of access to healthcare facilities and specialized services further compounds this issue, as rural residents often encounter difficulties in obtaining timely and accurate health information. Instead, urban residents generally benefit from better access to healthcare services, higher levels of education, and greater economic opportunities, all of which collectively foster greater awareness and engagement in preventive health measures. Higher income levels in urban areas also enable individuals to afford healthcare services and participate in health-promoting activities more readily. Additionally, urban environments often provide more robust exposure to

https://doi.org/10.34011/jmp2k.v35i1.2784

e-ISSN: 2338-3445
p-ISSN: 0853-9987

health education campaigns and community support systems, which play an integral role in encouraging socially and health-beneficial behaviors [35].

Other social factors, such as marital status, were also found to influence, where Unmarried women are more likely to perform Breast Self-Examination (BSE) than married women, as mentioned in the study [18]. One possible reason that explains this finding is the difference in health priorities between unmarried and married women. Unmarried women tend to be more independent in managing their health, including making individual decisions regarding disease prevention. In addition, married women often have additional responsibilities in the family that can distract them from personal health prevention measures, such as BSE. On the other hand, unmarried women tend to be more motivated to be proactive in maintaining their health as a form of independence. Cultural factors, gender norms, and access to health information may also influence this behavior, where unmarried women may have greater exposure to health education programs that encourage early detection. These findings suggest that marital status is one of the social dimensions that need to be considered in understanding women's health behaviors, including in the context of early detection of breast cancer.

CONCLUSION

Early detection behavior of breast cancer in women of childbearing age is influenced by internal factors such as knowledge and risk perception, as well as external factors such as socioeconomic, cultural, and health service accessibility barriers. Governments and health institutions are advised to expand community-based breast cancer screening programs through mobile service units, mammography cost subsidies, and health insurance coverage for cancer screening. Educational campaigns, especially in rural areas. Further studies can explore the relationship between cultural and socioeconomic factors with successful early detection to develop more contextual theories. In addition, in-depth research is needed to examine the effectiveness of family-based approaches and digital interventions in increasing awareness and participation, especially in vulnerable populations.

REFERENCES

[1] H. Sung *et al.*, "Global Cancer Statistics 2020: GLOBOCAN Estimates of Incidence and Mortality Worldwide for 36 Cancers in 185 Countries," *CA. Cancer J. Clin.*, vol. 71, no. 3, pp. 209–249, 2021, doi: 10.3322/caac.21660.

[2] Z. Tang *et al.*, "Breast cancer burden among young women from 1990 to 2021: a global, regional, and national perspective," *Eur. J. Cancer Prev.*, vol. 14, no. 1 , pp. 1–9, 2024, doi: 10.1097/CEJ.0000000000000909.

[3] N. L. Barclay *et al.*, "Trends in incidence, prevalence, and survival of breast cancer in the United Kingdom from 2000 to 2021," *Sci. Rep.*, vol. 14, no. 1, pp. 1–16, 2024, doi: 10.1038/s41598-024-69006-1.

[4] S. Zhang, Z. Jin, L. Bao, and P. Shu, "The global burden of breast cancer in women from 1990 to 2030: assessment and projection based on the global burden of disease study 2019," *Front. Oncol.*, vol. 14, Article 1364397, pp.1-13, 2024, doi: 10.3389/fonc.2024.1364397.

[5] S. Purwanti, N. A. Syukur, and C. B. Haloho, "Faktor Risiko Berhubungan dengan Kejadian Kanker Payudara Wanita," *J. Bidan Cerdas*, vol. 3, no. 4, pp. 168–175, 2021, doi: 10.33860/jbc.v3i4.460.

[6] E. Soviyati, T. S. Gani Utari, and P. Nabila, "Determinan Kejadian Kanker Payudara Di Rsud 45 Kuningan Periode Tahun 2018-2019," *J. Ilmu Kesehat. Bhakti Husada Heal. Sci. J.*, vol. 11, no. 1, pp. 62–70, 2020, doi: 10.34305/jikbh.v11i1.140.

[7] K. Suparna and L. M. K. K. S. Sari, "Kanker Payudara: Diagnostik, Faktor Risiko, Dan Stadium," *Ganesha Med.*, vol. 2, no. 1, pp. 42–48, 2022, doi: 10.23887/gm.v2i1.47032.

https://doi.org/10.34011/jmp2k.v35i1.2784

e-ISSN: 2338-3445
p-ISSN: 0853-9987

[8] A. B. Bonsu and B. P. Ncama, "Evidence of promoting prevention and the early detection of breast cancer among women, a hospital-based education and screening interventions in low- and middle-income countries: A systematic review protocol," *Syst. Rev.*, vol. 7, no. 1, pp. 1–7, 2018, doi: 10.1186/s13643-018-0889-0.

[9] C. Atuhairwe, D. Amongin, E. Agaba, S. Mugarura, and I. M. Taremwa, "The effect of knowledge on uptake of breast cancer prevention modalities among women in Kyadondo County, Uganda," *BMC Public Health*, vol. 18, no. 1, pp. 1–8, 2018, doi: 10.1186/s12889-018-5183-5.

[10] O. Ginsburg *et al.*, "Breast Cancer Early Detection: A Phased Approach to Implementation," *Cancer*, vol. 126, no. S10, pp. 2379–2393, 2020, doi: 10.1002/cncr.32887.

[11] M. M. Rivera-Franco and E. Leon-Rodriguez, "Delays in breast cancer detection and treatment in developing countries," *Breast Cancer Basic Clin. Res.*, vol. 12, pp. 1–5, 2018, doi: 10.1177/1178223417752677.

[12] R. H. Udoh, M. Tahiru, M. Ansu-Mensah, V. Bawontuo, F. I. Danquah, and D. Kuupiel, "Women's knowledge, attitude, and practice of breast self- examination in sub-Saharan Africa: A scoping review," *Arch. Public Heal.*, vol. 78, no. 1, pp. 1–10, 2020, doi: 10.1186/s13690-020-00452-9.

[13] A. V. Icanervilia *et al.*, "Early Detection of Breast Cancer in Indonesia: Barriers Identified in a Qualitative Study," *Asian Pacific J. Cancer Prev.*, vol. 24, no. 8, pp. 2749–2755, 2023, doi: 10.31557/APJCP.2023.24.8.2749.

[14] M. Dogonchi, F. Mohammadzadeh, and M. Moshki, "Investigating the Relationship between Health Locus of Control and Health Behaviors: A Systematic Review," *Open Public Health J.*, vol. 15, no. 1, pp. 1–8, 2022, doi: 10.2174/18749445-v15-e2208010.

[15] R. Dadzi and A. Adam, "Assessment of Knowledge and Practice of Breast Self-Examination among Reproductive Age Women in Akatsi South district of Volta region of Ghana," *PLoS One*, vol. 14, no. 12, pp. 1–12, 2019, doi: 10.1371/journal.pone.0226925.

[16] S. Osei-Afriyie, A. K. Addae, S. Oppong, H. Amu, E. Ampofo, and E. Osei, "Breast Cancer Awareness, Risk factors and Screening Practices among Future Health Professionals in Ghana: A cross-sectional study," *PLoS One*, vol. 16, no. 6, pp. 1–17, 2021, doi: 10.1371/journal.pone.0253373.

[17] C. Abraham and P. Sheeran, *The Health Belief Model*, no. January. 2015. doi: 10.1017/CBO9780511543579.022.

[18] N. E. Alam *et al.*, "Evaluation of Knowledge, Awareness and Attitudes towards Breast Cancer Risk Factors and Early Detection among Females in Bangladesh: A hospital based cross-sectional study," *PLoS One*, vol. 16, no. 9, pp. 1–13, 2021, doi: 10.1371/journal.pone.0257271.

[19] A. Omar, A. Bakr, and N. Ibrahim, "Female Medical Students' Awareness, Attitudes, and Knowledge about Early Detection of breast Cancer in Syrian Private University, Syria," *Heliyon*, vol. 6, no. 4, pp. 2–7, 2020, doi: 10.1016/j.heliyon.2020.e03819.

[20] G. A. R. Dyanti and N. L. P. Suariyani, "Faktor-Faktor Keterlambatan Penderita Kanker Payudara dalam Melakukan Pemeriksaan Awal ke Pelayanan Kesehatan," *J. Kesehat. Masy.*, vol. 11, no. 2, pp. 97–104, 2016.

[21] A. A. Joho, M. B. Mdoe, T. J. Masoi, and J. J. Yahaya, "Perceived Barriers and Factors Influencing Uptake of Breast Cancer Screening among Women: a population-based cross-sectional study," *Sci. Rep.*, vol. 14, no. 1, pp. 1–9, 2024, doi: 10.1038/s41598-024-62218-5.

[22] R. Tagne Simo *et al.*, "Assessment of Breast Cancer Awareness and Detection of Asymptomatic Cases in Ngaoundere, Adamawa Region of Cameroon," *Heliyon*, vol. 10, no. 12, pp. 2–9, 2024, doi: 10.1016/j.heliyon.2024.e32995.

[23] A. Abdou, G. Van Hal, and I. Dille, "Awareness, Attitudes and Practices of Women in

https://doi.org/10.34011/jmp2k.v35i1.2784

e-ISSN: 2338-3445
p-ISSN: 0853-9987

Relation to Breast Cancer in Niger," *Heliyon*, vol. 6, no. 7, pp. 2–7, 2020, doi: 10.1016/j.heliyon.2020.e04316.

[24] M. Alshafie, A. Bitar, M. Alfawal, M. B. Alameer, D. Alhomsi, and M. Saifo, "Breast Self-Examination among Female Medical Students at Damascus University: A cross-sectional study," *Heliyon*, vol. 10, no. 15, pp. 2–10, 2024, doi: 10.1016/j.heliyon.2024.e35312.

[25] T. Elias-Rizk, E. Issa, E. Ammanouil, M. Abou Khalil, P. Salameh, and A. Abi-Gerges, "Breast Cancer Screening in Lebanon: Understanding knowledge, Attitudes and Barriers," *Clin. Epidemiol. Glob. Heal.*, vol. 29, no. 3, pp. 1–6, 2024, doi: 10.1016/j.cegh.2024.101733.

[26] Andi Azizah Damayanti, A. A. Mappahya, Nurhikmawati, Mona Nulanda, and N. Khalid, "Hubungan Tingkat Pengetahuan Mahasiswa tentang Fibroadenoma Mammae terhadap Perilaku Pemeriksaan Payudara Sendiri (SADARI) di Fakultas Kedokteran Universitas Muslim Indonesia Angkatan 2019," *Fakumi Med. J. J. Mhs. Kedokt.*, vol. 3, no. 1, pp. 21–27, 2023, doi: 10.33096/fmj.v3i1.175.

[27] Darsini, Fahrurrozi, and E. A. Cahyono, "Pengetahuan," *J. Keperawatan*, vol. 12, no. 1, p. 97, 2019.

[28] H. A. H. Siagian, W. Wardani, Z. Riska, I. Marwiyah, A. Febrian Surbakti, and R. Agustina Harahap, "Hubungan Tingkat Pengetahuan Terhadap Perilaku Sadari Sebagai Deteksi Dini Kanker Payudara Pada Mahasiswi Prodi Ilmu Komputer Angkatan 2021 Universitas X," *J. Ilmu Kedokt. dan Kesehat.*, vol. 11, no. 4, pp. 720–728, 2024, doi: 10.33024/jikk.v11i4.13557.

[29] L. Leshchenko, "The Influence of External and Internal Factors on the Formation of Self-Preservation Behavior of Older People (Regional Aspect)," *Logos Prax.*, vol. 22, no. 1, pp. 93–101, 2023, doi: 10.15688/lp.jvolsu.2023.1.11.

[30] J. W. Sharp *et al.*, "Modifiable Patient-Related Barriers and their Association with Breast Cancer Detection Practices among Ugandan Women without a Diagnosis of Breast Cancer," *PLoS One*, vol. 14, no. 6, pp. 1–13, 2019, doi: 10.1371/journal.pone.0217938.

[31] S. Zhang, H. Wang, B. Liu, J. Yu, and Y. Gao, "Socioeconomic Status Index is an Independent Determinant of Breast Cancer Screening Practices: Evidence from Eastern China," *PLoS One*, vol. 17, no. 12, pp. 1–17, 2022, doi: 10.1371/journal.pone.0279107.

[32] C. Triwibowo and M. E. Pusphandan, *Pengantar Dasar Ilmu Kesehatan Masyarakat*. Nuha Medika, 2015. [Online]. Available: http://pustaka.poltekkes-pdg.ac.id:80/index.php?p=show_detail&id=2625

[33] Y. I. Dewi and G. Indriati, "Support System Suami terhadap Istri dalam Deteksi Kanker Payudara di Kecamatan Simpang Kanan Rokan Hilir Provinsi Riau," *J. Ners Indones.*, vol. 7, no. 2, pp. 1–11, 2017.

[34] A. S. M. Ishtiak, N. Ahmed, F. Gaffar, M. A. S. Khan, and F. Yasmeen, "Knowledge, Practice and Associated Factors of Breast Self-Examination among Female University Students of Bangladesh," *Heliyon*, vol. 8, no. 11, pp. 2–7, 2022, doi: 10.1016/j.heliyon.2022.e11780.

[35] H. Cheng and C. Mao, "Disparities in Environmental Behavior from Urban–Rural Perspectives: How Socioeconomic Status Structures Influence Residents' Environmental Actions—Based on the 2021 China General Social Survey Data," *Sustainability*, vol. 16, no. 18, p. 7886, 2024, doi: 10.3390/su16187886.

https://doi.org/10.34011/jmp2k.v35i1.2784