Breast Cancer Screening Awareness Among Hebron Women Utilization of BSE and Mammograms

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ABSTRACT

Aim: The main aim of the study is identifying Hebron women awareness and practice regarding to Breast cancer screening including BSE and mammography screening. A descriptive cross-sectional quantitative study design is used.

Objectives of Study: Identifying the knowledge level among women regarding to Breast cancer screening. Exploring factors that affect both knowledge and practice of women is regarding to breast cancer screening. Identifying the relationship between demographic variables with knowledge, attitude and practice regarding to women knowledge, attitude and practice toward breast cancer screening.

Methods: Convenience sample method used according to the determination the inclusion criteria; the sample size was 50 women. Hebron women age more than 20 years old included in the study.

Results: Based on data analysis of the knowledge level of breast self-examination, the majority of them (63%) rated their knowledge as medium knowledge. Also, 22% of them rated their knowledge as "Good". Only 13% of the women rated their knowledge as "Excellent". On the other hand, 14% of the participated women indicated that their knowledge in breast self-examination is weak. More importantly, 14% of the surveyed women indicated that they have no idea about breast self- examination.

Conclusion: Breast cancer is a global health problem and the most common cancer amongst women, it comprising 23% of the female cancers. Also, it's the leading cause of cancer-related deaths in low-resourced countries. Women in any age range are at risk of breast cancer, which increases with advanced age. In our study, a P value equal to 0.041 which is less than $\alpha = 0.05$, thus we concluded that there is a significant difference between place of residence of women participants and Knowledge, attitude and practice toward breast cancer screening at $\alpha \leq 0.05$. The result showed that women from cities have better knowledge attitude and practice toward breast cancer screening.

Keywords: Breast cancer; Mammography screening; Breast self-examination

INTRODUCTION

Breast cancer is a global health problem and the most common cancer amongst women, comprising 23% of the female cancers [1]. Also, it's the leading cause of cancer-related deaths in low-resourced countries. Women in any age range are at risk of breast cancer which increases with advanced age [2]. Despite the development of advanced technology in the detection of breast cancer, the mortality rate remains high. Breast cancer is the main cause of cancer mortality in women aged 40-44 years old [3]. Although substantial improvement in survival has been reported in high-income countries, the risk continues to increase. The survival rates in middle- and low-income countries remain low [3]. Data from National Cancer Registry (NCR) shows breast cancer as the leading cancer amongst women. There is a study conducted in Turkey amongst female health workers found that Breast Self-Examination (BSE) was not a regular behavior; doctors made up 31.3% of those who performed BSE and midwives, 21.8% [4]. This indicates that health personnel do perform BSE, but the rate of those who practice BSE on a regular basis is low. The level of knowledge

and attitude of women are important determinants for the use of screening programs and creation of an environment supportive of screening behaviors by offering positive role models. Empowering women with information about early detection methods and their related benefits could help to advance their skills in performing BSE and encourage them to do mammography [5].

It is important that women are aware of the risk factors of breast cancer, in order to guide them for necessary screening. Lack of basic knowledge and an effective information delivery system for breast cancer further threatens the life and well-being of women. Breast cancer is silently killing women–mainly those who have no knowledge and continue to be ignorant about breast cancer and breast diagnostic screening methods for early detection. In addition, silence and lack of understanding of the concept of risk factors associated with breast cancer discourage people from seeking early intervention or even admitting that the symptoms that they are experiencing are related to breast cancer. The level of awareness regarding how to perform simple life-saving diagnostic breast checks such as BSE and mammography.

The empowerment of women with information on BSE and Mammography screening is a paramount importance, especially in countries without modern technologies for breast cancer screening suggested that health beliefs differ from culture to culture, that cancer fatalism may be a deterrent to participation in health-promoting behaviors. This is because some people believe that illnesses or catastrophic events happen because of a higher power (such as God), or they are meant to happen and cannot be avoided; as a result, fatalism becomes part of the person's worldview. The Cultural values and ethnic diversity have an impact on health beliefs, which may influence how women interact with the western medication, especially conditions such as breast cancer. Some women delay seeking for the treatment because of fear of stigma concerning their daughters as it is believed that they also might be affected by breast cancer and might not be considered for a good marriage. Furthermore, it is believed that cancer is a death sentences from God. In our research we aim to measure the awareness of women in Hebron district area of Palestine about BSE and mammogram.

Breast cancer

Breast cancer is the most frequently diagnosed cancer and the leading cause of cancer death among females worldwide, with an estimated 1.7 million cases and 521,900 deaths in 2015. Breast cancer alone accounts for 25% of all cancer cases and 15% of all cancer deaths among females. The Rates are generally high in Northern America, Australia/ New Zealand, and Northern and Western Europe; intermediate in Central and Eastern Europe, Latin America, and the Caribbean; and low in most of Africa and Asia. Breast cancer is the most common cancer diagnosed among women in the United States, accounting for nearly 1 in 3 cancers. The Breast cancer is the most commonly diagnosed cancer in women in Malaysia. It reported 3,525 female breast cancer with overall Age Standardized Incidence Rate (ASR) was 39.3 per 100,000 population About one in 19 women in this country are at risk, compared to one in eight in Europe and the United States [2].

Breast cancer screening

There are two early detection methods. Firstly, is early diagnosis or awareness of early signs and symptoms in symptomatic populations in order to facilitate diagnosis and early treatment. Secondly is screening, which systematic application of a screening test in a presumably asymptomatic population. It aims to identify individuals with an abnormality suggestive of cancer. A screening program is a far more complex undertaking that an early diagnosis program screening is very much opportunistic in nature, and targets women attending women's wellness clinics and maternal and child-health clinics. Breast Self-Examination (BSE) is also taught to women attending these clinics by public health nurses. This empowered the women toward self-awareness of their health. Breast cancer screening comprises of breast self-examination, clinical breast examination and mammography.

The women aged 50-59 years old had the highest sensitivity of Clinical Breast Examination (CBE), while it is lowest in women aged 40-49 years old and there is no evidence on the effect of screening through Breast Self-Examination (BSE).The Mammogram is a form of X ray of the breast that can identify tissue abnormalities, including cancerous growth, which can detect breast cancer as much as two years before a lump can be felt. Mammogram can be divided into screening mammogram and diagnostic mammogram.

Mammogram screening used to check for breast cancer in women who have no signs or symptoms of the disease. It can detect breast tumors that cannot be felt through micro calcifications finding which sometimes indicate the presence of breast cancer. In diagnostic mammogram, it is used to investigate for breast cancer after a lump or other sign or symptom of the disease has been found. Mammography screening is the only screening method that has proven to be effective. It can reduce breast cancer mortality by 20% to 30% in women over 50 years old in high-income countries when the screening coverage is over 70%. Mammography screening is very complex and required intensive resource and no research of its effectiveness has been conducted in low resource settings. Meta-analyses of randomized controlled trials demonstrate a 7% to 23% reduction in breast cancer mortality rates with screening mammography in women 40 to 49 years of age [6].

Although few women 50 years of age or older have risks from mammography that outweigh the benefits, the evidence suggests that more women 40 to 49 years of age have such risks. The decision to start regular, biennial screening mammography before the age of 50 years should be an individual one and take patient context into account, including the patient's values regarding specific benefits and harms. The evidence was insufficient to assess the additional benefits and harms of screening mammography in women 75 years or older [3].

The USPSTF also concludes on insufficient evidence to assess the balance of benefits and harms of adjunctive screening for breast cancer using breast ultrasonography, Magnetic Resonance Imaging (MRI), Digital Breast Tomosynthesis (DBT), or other

methods in women identified to have dense breasts on an otherwise negative mammogram screening.

Knowledge on mammogram screening: The knowledge on mammogram screening can be acquired from education and experience. Education can be gained through mass media promotion, internet, health campaign, pamphlet, brochure and education from health care personnel or consultation with medical staff. Study had proved that women with higher knowledge had better perception and practice of mammogram finds out the 10 majority of women had heard about breast cancer (81.2%) and indicated that books, magazines and brochures as their source of information (55.2%).

The study by reported there was poor knowledge pertaining to mammography screening for breast cancer among women in sub urban area. Most of them do not sure the answer (45.3% to 61.6%) rather than wrongly answer (4.7% to 43.0%) and only 8% truly answer that mammogram should be done once in a life. There are 10.5% of women claimed that mammogram not a painful procedure and had no serious side effect and nearly half of respondents (48.8%) correctly mentioned that mammogram can detect breast cancer in early stage. They were seriously unaware and lack of knowledge on mammogram. Limited literacy skills and lack of knowledge about screening mammography may contribute considerably to the underutilization of screening mammograms in low-income women. Study on female university students reported to had inadequate knowledge of breast cancer [4].

The mean total knowledge score of the students was 60.7% with Indian students had significantly less knowledge of breast cancer compared to their Chinese and Malay counter parts. In Brazil only 7.4% of the interviewees had adequate knowledge on mammography among women users of local health services. Lack of information is the main barrier to mammography. Women in that study had inadequate knowledge related to mammography as a procedure for breast cancer screening. Therefore, knowledge and adequate information regarding mammogram screening are necessary in increased uptake of mammogram screening.

Attitude on mammogram screening: Many barriers and factors influence mammogram screening uptake include attitude of the women herself.

The attitude toward mammogram screening among women is different based on their level of knowledge. False believe and poor knowledge in mammogram screening are the factors that contribute to poor attitude. Negative social perception, poverty, cultural and religion practices, and influence of 12 complementary and alternative medicines are also among the factors influencing the attitude. Other barriers to mammography include embarrassment, cost, exposure to radiation and pain. Study among women in public health services users in Brazil revealed 97.1% of women had an adequate attitude toward mammogram screening. The main barrier (81.8%) to mammogram screening was lack of referral by physicians working at the health center [5].

Practices on mammogram screening: The practice of mammogram screening is low due to lack of time, lack of

knowledge, not knowing where to go for the test and a fear of the test result. However, study on health personnel in tertiary hospital revealed an increased uptake of mammogram screening at 80.3% (95% Confidence Interval (CI): 76.8%, 83.5%) among 534 respondents. The findings of this study highlighted that 20% of personnel did not undertake mammography screening although there is no cost incurred and the procedure is fully accessible to them.

In the United Arab Emirates, less than 10.3% of women had mammography and only 25% of Turkish women have mammogram, which was as a result of inadequate knowledge of screening and insufficient offering of screening by health care workers. However, another study in Brazil revealed a higher proportion of practice on mammogram screening at 35.7%. Study in Jordan showed negative perceptions and limited knowledge on breast cancer screening causing 87.6% had never undergone mammography screening [6,7].

There was low participation rate in early detection of breast cancer, where Southeast Asian women living in Sydney have displayed less than 14 members' participation in breast screening due to a lack of general breast cancer knowledge and knowledge regarding available screening practices.

Theoretical framework

According to Swanson, theories are created in order to understand and explain a certain phenomenon and also broaden the existing knowledge within the already set boundaries. Theoretical framework presents a theory which explains why research dilemma beneath study.

Dependent variable: Knowledge, attitude and practice of women toward breast cancer screening (BSE and mammography).

Independent variables: Demographic data, educational level, breast cancer family history, health teaching.

Problem statement

There are different methods for early diagnosis of breast cancer such as BSE, physical examination by a medical doctor and mammography. Unfortunately, most breast cancers are diagnosed when they are in the advanced stages. Breast cancer mortality may be compounded by limited resources, inadequate preventative screening programs and lack of access to advanced technology in rural health facilities, which lead to late presentation or not coming forth because of their health-belief system [8].

Significance of study

This information regarding to women attitude and practice toward BSE and Mammography is in low level. The clarification of the knowledge, practice of the women toward BSE and Mammography may guide clinical practice, inform policy makers, allow focused direction of community education and support growing understanding of women attitude and practice.

For practice: This study may assist in identifying the attitude and practice of the women in prevention measurements.

For research: There is no research on the attitude and practice on the Hebron women about screening of breast cancer. This study may assist in identifying possible areas of future research to provide evidence-based solutions for clinical practice, education and policy development.

For policy development: Policy development and changes to existing policies arise from the identification of areas of concern within clinical practice. Once concerns have been substantiated by research, evidence-based policy can be developed in order to effect changes in the practice of women. This study may provide information to assist in policy development toward better engagement of women in breast cancer screening.

Operational definitions

In this study it refers to the correct level of response of the subject regarding to breast cancer screening elicited through structured questionnaire participants who selected a correct choice from a certain item and mean score value was considered to be knowledgeable.

Practice

In this study it refers to the women's actions toward BSE and mammography screening done by the Hebron women on the subject regarding the Breast cancer screening.

METHODOLOGY

This study conducted by explaining the research design and methods used which include the study population and its eligibility criteria, sample size, sampling technique used, recruitment process. The method which used to collect data is data analysis methods, validity and reliability of the research instrument and ethical considerations.

Research design

The study used a quantitative, cross sectional descriptive research design a good design would help the researcher to avoid bias while collecting the data.

Study population

The sampling population used in this study is the women lived in Hebron.

Target population

Hebron women age more than 20 years old included in the study in schools, Health care clinics, University.

Population size

The population of this study was Arab woman from Hebron city. About 50 women included.

Inclusion criteria: Being able to give informed consent (verbal or written) and age above 20 years old.

Exclusion criteria: Males, Diagnosed previously with mental illness, unable to give informed consent

Data collection tool

Self-administrative questionnaire to test the knowledge and practice toward mammography and breast cancer was in Arabic language. Check list including knowledge, practice toward mammogram and self-breast examination according to previous studies.

Validity and reliability: Content validity ensured through previous study and our supervisor to ensure the relevance of questionnaire to subject under study. The data collection tool was in Arabic. Then the Reliability scale (Alpha Cronbach) computed and was above 0.7 for all parts.

Pilot study: A pilot study conducted on 5% of the sample size and it was excluded from sample size. It was conducted to determine the clarity of the questionnaire, to estimate the time required for the data collection.

Data analysis

To analyze the collected data, the researcher used SPSS software (Statistical Package for Social Sciences) and MS Excel. The researcher used descriptive and frequency statistics to study the main characteristic (Demographic data) of the sample. Moreover, the researcher used the One-Way ANOVA test to test the main hypothesis of this research. ANOVA is used to determine whether there are any significant differences between the means of more than two independent (unrelated) groups. Two groups are independent when we randomly select participants for a group, without regard to who else has been selected for either group.

RESULTS

Demographic variables

A total of 50 women participated in this research. Out of the total, 58% of the participants were from cities, 18% were from villages, and 24% defined their place residence as "others". With respect to participants' age, the data analysis disclosed that the majority of them (56%) were above 40 years old, while 30% were between 31 and 40 years old. Finally, 14% of the participants were in the age range 20 to 30. On the other hand, 10% indicated that they are divorced. Also, 14% of the surveyed women who took part in this study are widows.

The respecting the level of education, the data analysis of the demographic data revealed that 54% of the surveyed women are unschooled. In addition, 10% of them finished preparatory education, and 10 finished secondary educations. In the bright side, 20% of the studied women are with BA degrees, and 6% with Master and above degrees. So, in general we can say that the majority of the sample is married women, from cities, and they are above 40 years old with no education (Table 1) below shows data [6].When we asked the women whether they have visited the doctor and had done a routine medical checkup, 78% of the women responded that they did. However, only 22%

of the women indicated that they have never visited doctors nor done regular medical checkups (Table 2) below demonstrations results.

Table 1: Do you visit the doctor and do routine medical checkup?

Medical checkup	Frequency	Percent
Yes	39	78%
No	11	22%
Total	50	100%

For the question if the women know about early screening for breast cancer, 82% of the participated women indicated that they know about it. Also, only 18% of the women said that they don't know about early screening for breast cancer (Table 3) below represents these findings [7].

Table 2: Do know about early screening for breast cancer.

Early screening for breast cancer	Frequency	Percent
Yes	41	82%
No	9	18%
Total	50	100%

With regard wither participants' families have a history of breast cancer, 20% of the applicants indicated that their families have history of breast cancer. On the bright side, 80% of the women said that their families have no history of breast cancer below illustrates these results.

When we examined participants' level of knowledge of breast self-examination, the majority of them (63%) rated their knowledge as medium knowledge. Also, 22% of them rated their knowledge as "Good". Only 13% of the women rated their knowledge as "Excellent". On the other hand, 14% of the participated women indicated that their knowledge in breast self-examination is weak. More importantly, 14% of the surveyed women indicated that they have no idea about breast self-examination depicts these results.

As a follow-up question, we questioned the participants to identify their source of knowledge about breast self-examination. 66% of the surveyed women reported that they received knowledge about breast self-examination from medical staff. Another 16% of the participants said that they received knowledge about breast self-examination from TV. Only 4% of the participants indicated that they got their knowledge about breast self-examination from "Radio" details the answers for this question.

To test wither the women have ever did breast self-examination, we asked them a direct question. 18% of the women responded that they did the breast self-examination by themselves. However, 64% of the participated women said that they have never done the breast self-examination shows these findings.

Related to question "Have you heard about mammography?" most of the surveyed women (86%) indicated that they heard about mammography. Only 14% of the surveyed women said that they never heard about mammography. The table represents the data for this question.

When we examined participants' level of knowledge about mammography, the majority of the women (38%) reported that their level of knowledge about mammography is medium. Moreover, 26% of the participants rated their knowledge about mammography as "Good". Only 13% of the surveyed women rated their knowledge as "Excellent". Also, 14% of the women said that their knowledge about mammography is "weak". Finally, 6% of the surveyed women said that they have no idea about mammography. The table represents all the data for this question [8].

As a follow-up question, we asked the participants to identify their source of knowledge about mammograms. 80% of the surveyed women reported that they received knowledge about mammograms from medical staff. Another 6% of the participants said that they received knowledge about mammograms from TV. Only 2% of the participants indicated that they got their knowledge about mammograms from "Radio".

Table 3: Have you done mammography before?

Variables	Frequency	Percent
Medical staff	40	80%
The TV	3	6%
The radio	1	2%
Other	6	12%
Total	50	100%

The results of the hypothesis testing

To test the main hypothesis of this research the researcher used the One-Way ANOVA test. For the place of residence, the ANOVA test produced a P value equal to 0.041 which is less than α=0.05, thus we conclude that there is a significant difference between place of residence of women participants and Knowledge, attitude and practice toward breast cancer screening at $α ≤ 0.05$. The data analysis showed that women from cities have better knowledge attitude and practice toward breast cancer screening. For the age variable, the ANOVA test revealed a P value equal to 0.001 which is less than α=0.05, thus we conclude that there is significant difference between age of women participants and Knowledge, attitude and practice toward breast cancer screening at $α ≤ 0.05$. The data analysis indicates that women from the age group 31-40 have better knowledge attitude

and practice toward breast cancer screening. With respect to marital status, the ANOVA test yield a P value of 0.984, which is greater than 0.05. Therefore, we conclude that there is no significant relationship between marital status of women participants and knowledge, attitude and practice toward breast cancer screening at α ≤ 0.05. Regarding to the level of education, the ANOVA test have a P value of 0.0657, which is greater than 0.05. Thus, we conclude that there is no significant relationship between level of education of women participants and Knowledge, attitude and practice toward breast cancer screening at α ≤ 0.05. The tables below represent the results of the ANOVA tests.

DISCUSSION

The purpose of screening is to advance the time of diagnosis so that prognosis can be improved by earlier intervention. A consequence of earlier diagnosis is to increase the apparent incidence of breast cancer in a screened population and extends the average time from diagnosis to death, even if screening were to confer no benefit. The appropriate measure of benefit is the reduction in mortality from breast cancer in women offered screening compared with women not offered screening.

Our survey indicated that Palestine women tend to know about screening of breast cancer, but generally had poor awareness of other breast cancer-related information including risk factors and some atypical symptoms. Only on the question if the women know about early screening for breast cancer, 82% of the participated women indicated that they know about it. Also, only 18% of the women said that they don't know about early screening for breast cancer.

In this study, a total of fifty women participated during this research. Out of the entire, 58% of the participants were from cities, 18% were from villages, and 24% define their place residence as "others". With reference to participants' age, the info analysis disclosed that the bulk of them (56%) were above 40 years old, while 30% were between 31 and 40 years old. Finally, 14% of the participants were within the age range 20 to 30. With reference to women legal status, the bulk of the ladies (76%) were married [8]. On the opposite hand, 10% indicated that they're divorced. Also, 14% of the surveyed women who took part during this study were widows. Respecting the extent of education, the info analysis of the demographic data revealed that 54% of the surveyed women were unschooled. Additionally, 10% of them finished preparatory education, and 10 finished secondary educations. Within the silver lining, 20% of the studied women were with BA degrees, and 6% with Master and above degrees. So generally, we will say that the bulk of the sample was married women, from cities, and that they are above 40 years old with no education.

The results indicated that the awareness and understanding of breast cancer is associated with age, occupation, educational level and family income. Women 25-35 years of age, with high education level and high annual family income tend to be more aware of this information. Generally, in China, younger women pay more attention to health care and tend to be better educated. Our analysis showed colinearity between age and

education as a result, these women are more likely to be active learners and to access available information. Actually, some studies have shown that cancer awareness among older age groups was even worse.

In particular, although most breast cancer is diagnosed in women older than 35 years, and age is an important risk factor for breast cancer, awareness that age is a risk factor is generally poor, for breast cancer and some other types of cancer. These findings suggest that more public health education should be addressed to women older than 35 years [9].

A similar trend was found in other surveys with regard to socioeconomic status. As stated above, the significant differences of awareness were observed among women in different occupations, for two possible reasons. First, different occupations call for different educational levels, which could include knowledge of health care. Second, women of different occupations preferred different health service resources, which might affect their understanding of breast cancer. For example, in our survey, medical personnel were more knowledgeable about breast cancer than farmers, because professional educations of medical employees make it easier for them to access the relevant knowledge. These results were consistent with several other studies agreed with previous study.

The women who know more about breast cancer risk factors and mammography are more likely to receive breast cancer screening, which can lead to earlier diagnosis and treatment and improved survival. Some study found that the rate of detection of early-stage breast cancer was relatively low in eastern China even lower than some survey results, Rates of BSE practice, clinical examination and X-ray screening were lower than the study of Whitman et al. (74%-90% had a mammogram). In our study, only 26.5% received breast X-rays. We thought lack of related knowledge might have led to lower rates of early detection. Interestingly, current study results showed that women who previously had early screening had better knowledge scores (correlation coefficient: 0.213; P<0.05), which indicates an effective interaction between awareness and screening. Although, the investigators of the Shanghai study concluded that "intensive BSE instruction in the absence of mammography would be unlikely to reduce breast cancer mortality," and the American Cancer Society no longer recommends that all women perform monthly BSE, most researchers agree that self-examination probably improves awareness and might play a part in nationwide programs for earlier-stage detection in China.

In our study, a P value equal to 0.041 which is less than α=0.05, thus we conclude that there is significant difference between place of residence of women participants and Knowledge, attitude and practice toward breast cancer screening at α ≤ 0.05. The data analysis showed that women from cities have better knowledge attitude and practice toward breast cancer screening. For the age variable, P value equal to 0.001 which is less than α=0.05, thus we conclude that there is a significant difference between age of women participants and Knowledge, attitude and practice toward breast cancer screening at α ≤ 0.05. The data analysis indicated that women from the age group 31-40 have better knowledge attitude and practice toward breast cancer

screening. With respect to Marital status, a P value of 0.984, which is greater than 0.05. Therefore, we conclude that there is no significant relationship between marital status of women participants and Knowledge, attitude and practice toward breast cancer screening at $\alpha \leq 0.05$. Regarding to the level of education, have a P value of 0.0657, which is greater than 0.05. Thus, we infer that there is no significant relationship between level of education of women participants and Knowledge, attitude and practice toward breast cancer screening at $\alpha \leq 0.059$ [10].

CONCLUSION

In our study, a P value equal to 0.041 which is less than α=0.05, thus we conclude that there is a significant difference between place of residence of women participants and knowledge, attitude and practice toward breast cancer screening at $\alpha \leq 0.05$. The result showed that women from cities have better knowledge attitude and practice toward breast cancer screening.

ETHICAL CONSIDERATION AND ACCESSIBILITY

Consent form used to ensure the agreement of women participation in the study after full explanation about confidentially, privacy and their right to withdraw any time during the filling of questionnaire.

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