

Evaluation of Factors that influence Breast Cancer Screening in Women at Mbarara Regional Referral Hospital in Southwestern Uganda

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ABSTRACT

Breast cancer is the most common cause of cancer affecting women and is the second related death among women worldwide. In Uganda, breast cancer is the commonest cancer after Kaposi's sarcoma with an incidence of 23.4 per 100,000 women. Women in Uganda look at breast cancer as a death sentence thus delay in seeking medical care. This study focused to find out the factors that influence breast cancer screening among women attending health care services from Mbarara regional referral hospital. This was a cross-sectional study conducted among women attending health care services from Mbarara regional referral hospital. The study was randomly done among 100 women who filled out the questionnaires for determining the factors that influence breast cancer screening among women attending health care services from Mbarara regional referral hospital. The proportion of women attending health care from Mbarara regional referral hospital who have ever done breast cancer screening was still very low at 25% despite the early screening and breast cancer diagnosis campaigns made. Hospital-based factors and socio-demographic factors have both a negative and positive correlation with breast cancer screening. Social demographic factors have a significant positive association with breast cancer screening and culture, religion and distance from the hospital have a negative correlation with breast cancer screening.

Keywords: breast cancer, screening, women, Mbarara

INTRODUCTION

Breast cancer presents as the most common cause of cancer affecting women, the second cause of cancer-related death, and the sixth cause of death from disease in women of all ages [1-10]. Breast cancer kills approximately 400,000 women globally yearly [11-18] and is the leading cause of cancer deaths among women. More than 1.2 million women are diagnosed with breast cancer annually worldwide [19-23]. Breast cancer is about 100 times less common among men than women. For men, the

lifetime risk of getting breast cancer is about 1 in 1000. The number of breast cancer cases in men relative to the population has been fairly stable over the last 30 years [24-26].

Wealthy societies carry the greatest cancer risk, with incidence rates of more than 80 per 100,000 populations yearly [13]. Women have about 1 in 8 chances of having invasive breast cancer sometime during their life and 1 in 35 chances of dying from breast cancer [14-16].

Methotrexate is a commonly used

chemotherapeutic agent used in the management of various types of cancers including breast cancer [17]. Methotrexate is an anti-folate that targets dihydrofolate reductase and thymidylate synthase, which are enzymes involved in DNA synthesis. Therefore, MXT inhibits nucleotide and DNA synthesis in rapidly dividing cells. This inhibition culminates in apoptosis and cell cycle arrest in cancer and synovial fibroblast cells [18]. Despite the effectiveness of methotrexate and other anti-cancer drugs, systemic organ toxicity is a common drawback that most times compel patients to withdraw from treatment [18]. Therefore, it is vital to ascertain the prevalence and other factors that influence breast cancer screening among women attending health care services from Mbarara regional referral hospital Southwestern Uganda so as to give ample information to health workers on effective management protocol.

Statement of Problem

Cancer ranks as a leading cause of death and an important barrier to increasing life expectancy in every country of the world [19]. Worldwide, an estimated 19.3 million new cancer cases and almost 10.0 million cancer deaths occurred in 2020. Female breast cancer has surpassed lung cancer as the most commonly diagnosed cancer and it is one the leading cause of cancer death. The global cancer burden is expected to be 28.4 million cases in 2040, a 47% rise from 2020 [20]. The use of conventional drugs like methotrexate in the management of breast cancer comes with some adverse effects that do compel patients to boycott the use of medications [18].

In Uganda, breast cancer is the

commonest cancer after Kaposi's sarcoma with an incidence of 23.4 per 100,000 women. Women in Uganda perceive breast cancer as a death sentence thus delay in seeking medical care.

Justification of the Study

Information from this study will provide a vivid picture of the number of women presenting for breast cancer screening at Mbarara regional referral hospital. It will also provide data on factors that influence breast cancer screening among women attending health care services from Mbarara regional referral hospital. Such information can be utilized by health providers and planners in establishing and improving breast cancer screening among women. The ultimate goal would thus be to improve the general quality of health and survival potential for breast cancer patients.

Aim of the Study

To assess factors that influence breast cancer screening among women attending health care services from Mbarara regional referral hospital Southwestern Uganda.

Specific Objectives of the Study

- Determine the number of women presenting for breast cancer screening at Mbarara regional referral hospital.
- Establish factors that influence breast cancer screening among women attending health care services from Mbarara regional referral hospital.

Research questions

- ❖ What is the number of women presenting for breast cancer screening at Mbarara regional referral hospital?

- ❖ What factors influence breast cancer screening among women attending health care services

from Mbarara regional referral hospital?

METHODOLOGY

Study Design

The study was cross-sectional to determine the factors that influence breast cancer screening among women attending health care services in Mbarara Regional Referral Hospital in southwestern Uganda.

Study Population

The population was consisting of women attending health care services from Mbarara Regional Referral Hospital. The population was consisting of women of ages starting from 15 years and also of different tribes from all over the country but majorly women from the southwestern part of Uganda.

Study Area

Mbarara Regional Referral Hospital is a government-owned hospital and a teaching hospital for the medical students of Mbarara University of Science and Technology located in Mbarara municipality in southwestern Uganda.

Sample Size Determination

It was determined using Fisher's formula (1990)

$$n = \frac{Z^2 pq}{d^2}$$

Where;

n =desired sample size

Z=standard deviation, take confidence level 95% is 1.96

P= proportion of target population estimated to be 85%

Q= degree of acceptable errors estimated at 5%=0.05

d= 1-q

Therefore,

$n = (1.96) (1.96) \times 0.85 \times 0.15 / (0.05) (0.05)$

n=196

Because of limited resources, a sample size of 100 people was used.

Sampling Technique

A random sampling technique was used. In this technique, each member of the population had an equal chance of being selected as a subject selected independently of other members.

Here, the researcher was sampling women attending health care from Mbarara Regional Referral Hospital until the number of respondents required was obtained.

Inclusions

Women attending health care services at Mbarara Regional Referral Hospital after obtaining their consent.

Exclusions

The study excluded all women who were critically ill, girls below 15 years of age, and the mentally unstable.

Data Collection Method

Data was collected using a questionnaire which was in simple English and was explained very well to the respondent.

Data Analysis

The data collected was analyzed manually using a calculator and other computer programs like Microsoft Word and spreadsheet to create the statistical impression of the study which is presented according to the study objectives.

Ethical Considerations

Confidentiality was ensured whereby the name of the respondents was not disclosed to anyone. Informed consent forms were available such that the respondents participate out of a free will

and the researcher explained the benefit of the research to the respondents

RESULTS

Table 1: showing the distribution of respondents by age

Age in years	Frequency	Percentage (%)
15-19	9	9
20-29	58	58
30-39	18	18
40-49	4	4
50	11	11
Total	100	100

More than half of the respondents, 58 (58%) were in the age group of 20-29 years and the least respondents were 4 (4%) in the age group of 40-49 years while the mean age by

calculation was approximately 29 (29%) lying in the age bracket of 20-29 years and the modal age group was 20-29 years.

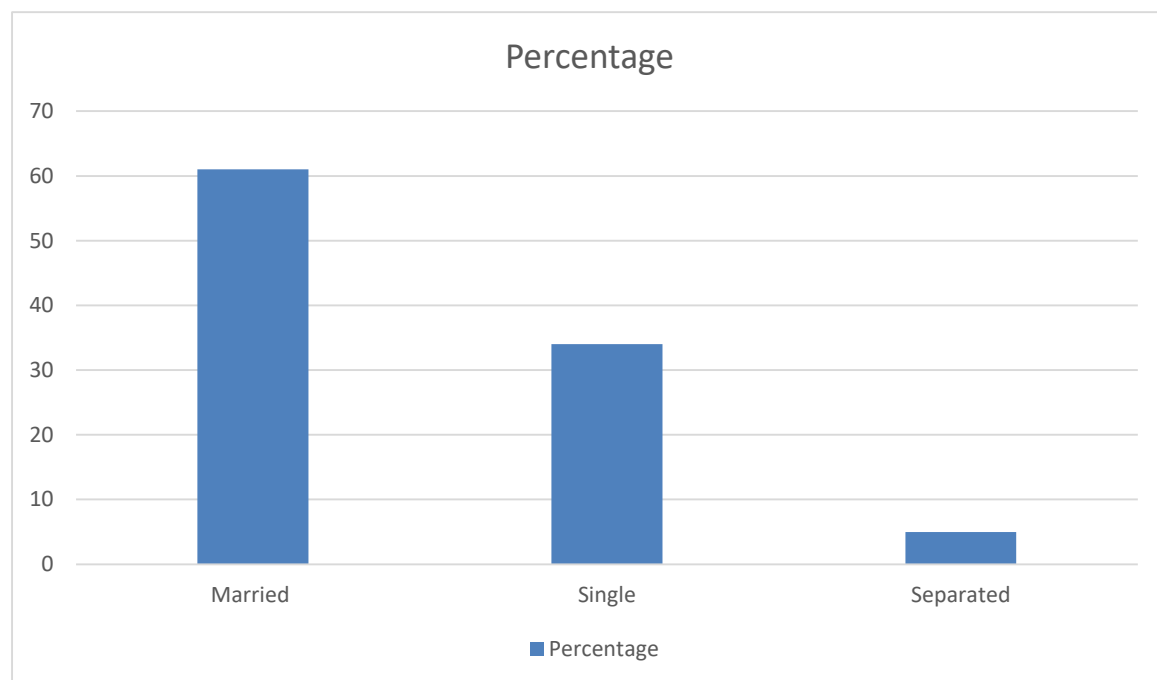


Figure 1: A bar graph showing the marital status of the respondents

From the figure above, a total of 100 were single, 5% were separated. respondents, 61 % were married, 34%

Table 2: showing the religion of the respondents

Religion	Frequency	Percentage (%)
Catholic	32	32
Anglican	41	41
S.D.A	9	9
Muslim	12	12
Others	6	6
Total	100	100

Of the respondents, 32 %were Catholics, 41% were Anglicans, 9% were Seventh-day

Adventists, 12% were Muslims and 6% did not have a specific religion.

Table 3: showing the education levels of the respondents

EDUCATION LEVEL	FREQUENCY	PERCENTAGE (%)
Primary	15	15
Secondary	38	38
Tertiary	42	42
None	5	5
Total	100	100

From Table 3 above, 42% of the respondents did tertiary education followed by 38% with secondary

education, 15% of the respondents had studied primary level and 5% of the respondents did not study.

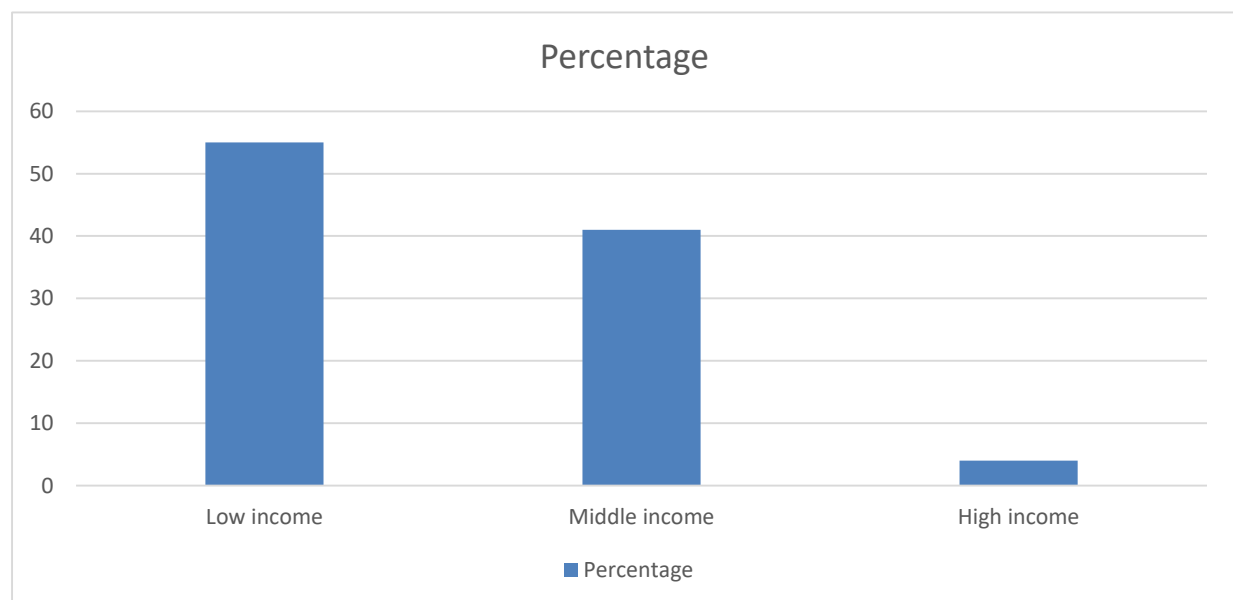


Figure 2: Bar graph showing the income levels of the respondents

From the figure above, 55% were of low-income, 41% were middle-income and 4%

were low-income.

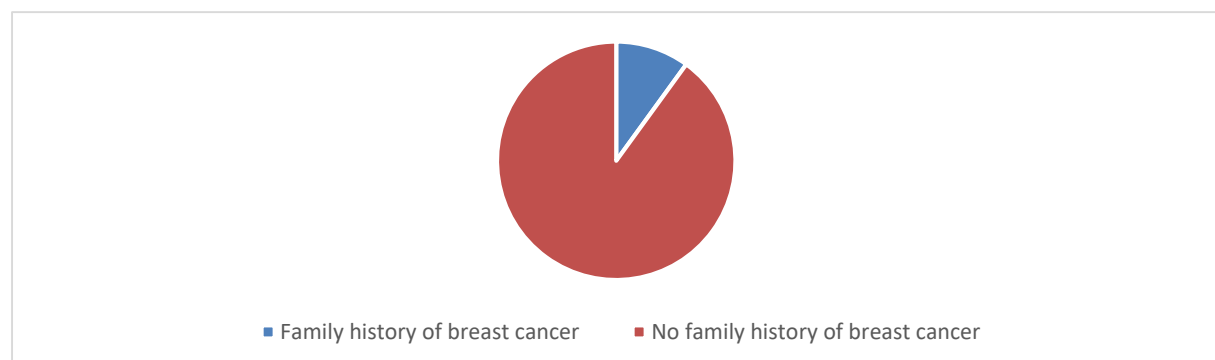


Figure 3: A pie chart showing respondents with a family history of breast cancer

Among the respondents, 10% had a

family history of breast cancer and 90%

didn't have a family history of breast cancer.

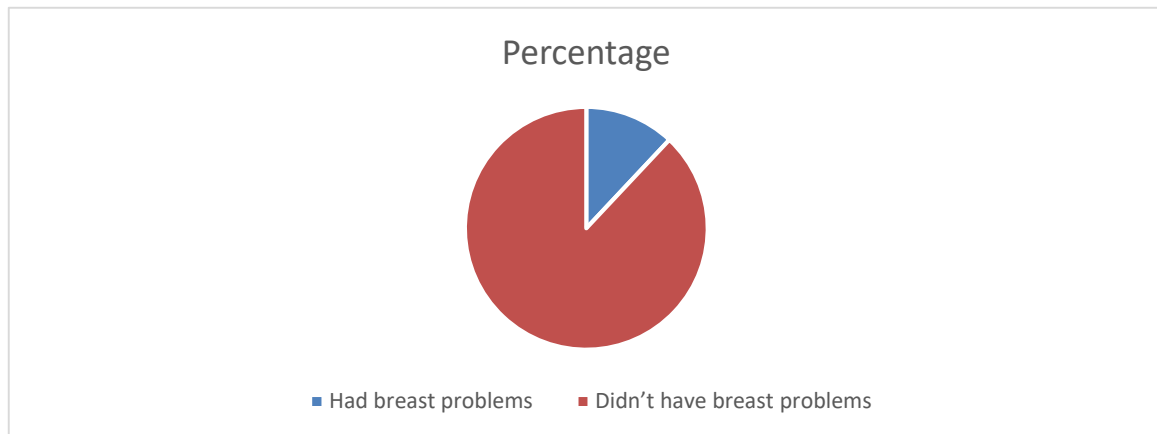


Figure 4: A pie chart showing respondents with breast cancer problem

From the figure above, 12% of the respondents had breast problem while 88% did not have any breast problem.

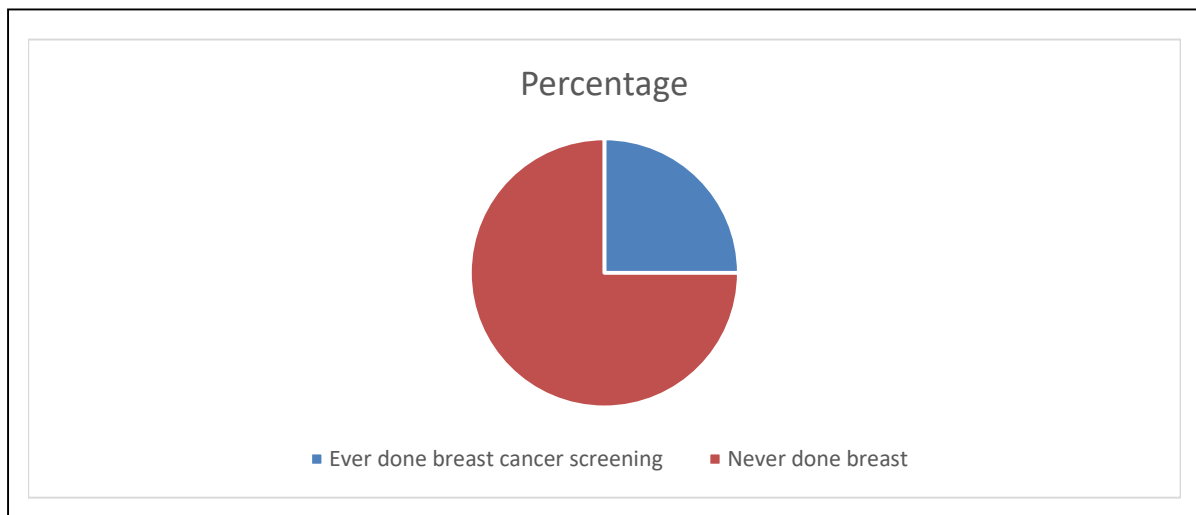


Figure 5: A pie chart showing the percentage of women who have ever done breast cancer screening before

From the figure above, only 25% of the respondents had ever done breast cancer screening before and 75% had never done breast cancer screening before.

Table 4: showing percentage distribution of reasons as to why some respondents had never done breast cancer screening before

REASON	FREQUENCY	PERCENTAGE (%)
Never thought about it	32	32
Don't know what to do	13	13
Don't know where to start from.	12	12
Not allowed in my culture	0	0
Not allowed in my religion	0	0
Screening tests are expensive	12	12
It's a waste of time	6	6
Total	75	75

Out of the number of respondents who had never done breast cancer screening of the total of all respondents, 32% had never thought about it, 13% did not know what to do, 12% didn't know where to

start, 12% believed that screening tests are very expensive, 6% believed that it is a waste of time. None of the respondents responded that it's not allowed in their culture or religion.

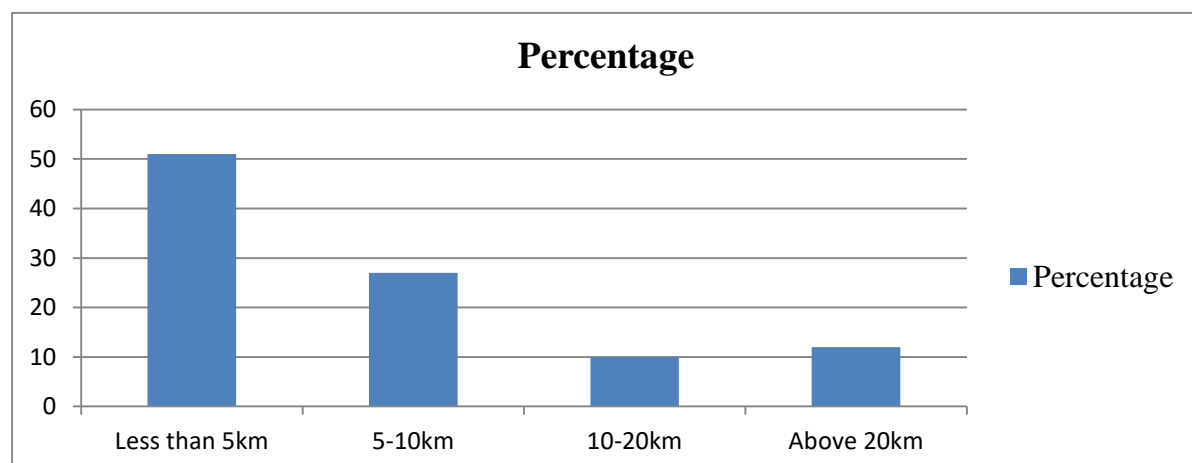


Figure 6: A bar graph showing the distance of respondent's homes to the hospital

A large number of respondents 51% reported that they stay less than 5km from the hospital, 27% reported that they stay 5-10km from the hospital, 10%

reported that they stay 10-20km from the hospital, 12% reported that they stay above 20km from the hospital.

Table 5: showing percentage distribution of other hospital-based factors by respondents

FACTORS		FREQUENCY	PERCENTAGE (%)	TOTAL
Education session by doctor/nurses on screening.	Yes	36	36	100
	No	64	64	
Guidance by a doctor/nurse on screening.	Yes	38	38	100
	No	62	62	
Advice by doctor/nurses to screening with mammogram.	Yes	29	29	100
	No	71	71	
Other given attention than breast cancer.	Yes	70	70	100
	No	30	30	

Out of the total number of respondents, 64% had never been taught by a doctor/nurse on screening compared to the 36% who had been taught. 62% of the respondents reported that they have never been guided by doctors/nurses on screening compared to 38% who had been guided.

A sample of 100 respondents were interviewed by use of questionnaires. More than half of the respondents, 58% were in the age group 20-29 years. However, age seemed to influence breast cancer screening among the respondents because most of the respondents 75% had not done breast cancer screening before and 25% had never done breast cancer screening before. All religions were represented, 32% were Anglicans, 9% were Seventh Day Adventists, 12% were Muslims and others were 6%. More than half of the respondents 61% were married, 34% were single and 5% were separated. This indicated that the number of households reduced breast cancer screening.

A larger number 71% reported that they had never been advised by the doctors/nurses to go for a mammogram and only 29% had ever been advised. 70% of the respondents believed that other issues are given more attention than breast cancer and only 30% reported that breast cancer is also given attention.

DISCUSSION

Almost all the respondents were educated, 38% did secondary education, 15% with primary education, 42% had studied tertiary institutions and 5% of the respondents had never gone to school and this affected screening which agrees with the research of more than half of the respondents were of low-income level 55% and this influenced screening because 12% of them reported that breast cancer screening tests are very expensive, 41% were in the middle-income level and only 4% were of high-income level. This concurs with research done by Moser *et al.* [21] which also says that economic status has a powerful effect on breast cancer screening. The bigger number of the respondents 90%

had no family history of breast cancer and this has affected their screening behavior, 75% had never done any form of screening. This is seen in their response by which, 32% reported having never thought about screening, and 6% reported that screening is a waste of time. However, 13% didn't know what to do, 12% of the respondents didn't know where to start and none of the respondents reported that screening is not allowed in their culture and religion. Only 12% of the respondents had breast problems, this is attributed to the low percentage of those who had ever done screening before, 25% of which 13% had ever done BSE, 8% CBE, 2% had used a mammogram, and 2% had used the ultrasound.

More than half of the respondents reported that they stay 5km from the hospital, 12 %reported that they stay 5-10km from the hospital, 10% reported that they stay between 10-20km from the hospital, 12% of the respondents reported that they stay above 20km from the hospital however, distance from the

hospital does not affect screening since more than half of the respondents reported that they stay less than 5km from the hospital. This corroborates the findings of Ofor *et al.* [22]. 64% of the respondents had never had education sessions by doctors/nurses as opposed to the other 36% and this greatly influences breast cancer screening among women, only 38% of the respondents had been guided by doctors/nurses on how to perform breast self-examination and this seen by only 13% of the respondents who had ever done breast self-examination, only 29% had ever been advised by a doctor/nurse to go for screening using a mammogram and this is seen by the only 29% who have done breast screening using a mammogram. This result is in line with that of Ozims *et al.* [23].

A big number of respondents 70% believed that other issues other than breast cancer are given more attention in hospitals and this negatively influences the number of women who go for screening.

CONCLUSION

The proportion of women attending health care services at Mbarara Regional Referral Hospital that have ever undertaken any form of breast cancer screening was 25%. Social-demographic factors such as age, level of income, marital status, and level of education have a significant positive association with breast cancer screening. Meanwhile,

culture, religion, and distance from the hospital have a significant negative correlation with breast cancer screening. Hospital factors like breast self-examination, guidance by doctors /nurses on BSE, and advice on breast cancer screening using a mammogram have a significant and positive correlation with breast cancer screening.

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