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Assessing Knowledge, Attitude, and Practice of Self-Breast Examination among Females Students in Aden, Yemen

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ABSTRACT

Background: Second most often diagnosed cancer in women worldwide, breast cancer ranks as the second cause of death among all the cancers.
Objective: This study aimed to ascertain how often and how effectively young people undertake self-breast exams to identify breast cancer.
Methods: 160 female students were asked about their demographics, their familiarity with SBE as a screening tool, whether or not they had ever used SBE before, and their knowledge of risk factors, including age and family history.
Results: Of the participants, 55.6% were in their twenties or thirties, while 93.8% were not married. Only 38.1% of respondents reported to have actually utilized SBE, even if 70% of respondents knew it might be used for screening needs. Furthermore, just 41.9% of respondents knew that being older increases the risk; 66.3% were aware that having a family history of breast cancer raises the risk. That aligns with what current research on the discrepancy in public knowledge of the disease and breast cancer screening rates reveals. Though there was a lot of knowledge about risk factors like family history, a sizable portion of the participants did not actively participate in SBE or other breast cancer preventive actions.
Conclusion: The results suggest that young people should be especially informed and assisted to engage in preventative activities against breast cancer. To help young people close the knowledge gap between what they know and what they do so as to raise their adoption of preventative measures, it is imperative to start stronger health education programs.

Keywords: Breast Cancer, Awareness, Attitude, Practice, Self-Breast Examination

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INTRODUCTION

Second most often diagnosed cancer in women worldwide, breast cancer ranks as the second cause of death among all the cancers [1]. It results from cells spiraling out of control in breast tissue and developing a tumor. Each of the 15 to 20 lobes of glandular tissue in the human breast consists of smaller lobules capable of producing milk (1-3). Risk factors raising one's likelihood of a diagnosis with breast cancer mostly affect women, especially those 50 years of age and above. Women who inherit gene mutations like breast cancer gene 1 (BRCA1) or breast cancer gene 2 (BRCA2) are in more danger (4). A family history may raise the risk; still, around 85% of women diagnosed with breast cancer have no family history. Lifestyle elements include obesity or being overweight, lack of physical activity, and alcohol consumption (5).

Typical signs could include a new breast lump or tumor, a modification in breast form or size, skin dimpling or inflammation, or a nipple discharge unrelated to breastfeeding. Early diagnosis is crucial if one wants to treat efficiently, so it is mostly utilized for screening to find breast cancers before palpability. Ultrasounds, MRIs, and biopsies are additional diagnostic tests used alongside mammograms (6).

Effective treatment requires early discovery. Mammography is the primary screening tool because it can detect cancers before they manifest symptoms. Ultrasounds, MRIs, and biopsies are among further diagnostic tools (6).

The stage of breast cancer will affect the available alternatives before choosing a treatment course (7,8). Radiation treatment involves radiation aimed at regions where cancer cells might remain following the tumor's removal. If patients have had a mastectomy or if breast-conserving surgery is performed, radiation can be utilized (9-11).

Chemotherapy is a medication treatment whereby cancer cells are killed, or, in some situations, cancer cell development is slowed down using a systemic approach. When a malignancy is hormone receptor positive, hormonal therapy is administered (12). Medications used in hormonal therapy prevent hormones from binding to estrogen or another hormone in hormone receptor-positive tumors. Targeted therapy acts especially on cancer cells bearing a marker (12). Designed to assault cancer cells directly, this medication functions at a cellular level. Since breast cancer is discovered sooner nowadays, treatment choices have evolved for the better. Most importantly, early discovery of breast cancer will enable patients to live healthier for years.

The study aimed at assessing female university students' knowledge of breast cancer, risk factors, symptoms, and early detection methods, including mammography, clinical breast examination (CBE), and breast self-examination (BSE), to find out how female students view breast cancer screening in terms of their perceived susceptibility, challenges to screening, and readiness to follow preventative actions and to check how often female students do breast self-exams and use clinical breast exams or mammograms, which helps us understand their breast cancer screening habits and preventive actions.

METHODOLOGY

Aiming at assessing the Knowledge, Attitudes, and Practices (KAP) about Breast Cancer Screening among female students at the University of Science and Technology, Aden, Yemen, this investigation is a cross-sectional study. Data collection at a specific period in time to evaluate the relationship between variables calls for a cross-sectional study.

The research was undertaken with female students enrolled at the University of Science and Technology in Aden, Yemen. The university provides a diverse academic environment embracing students from different specialties, thereby guaranteeing a representative sample for the research objectives.

Using specify formula e.g., OpenEpi formula] at a 95% confidence level, the sample size was calculated with a 0.05% margin of error and expected prevalence of 92%. Random sampling was used to choose participants to be representative of different faculties 160 females.

Data was acquired via an online survey and a consistent questionnaire sent via in-person interviews. Originally verified KAP study on breast cancer screening, the questionnaire consists of four sections:

1. Demographics include age, academic year, faculty, etc.;
2. Awareness—risk factors, symptoms, screening methods —

3. Attitudes (perceptions, beliefs, readiness to take part in screening)
4. Practices (self-examinations, medical consultations, screening activities)

While the online survey was sent via university systems and social media groups to increase participation, trained data collectors visited personally to guarantee response clarity.

Validity and Reliability

Pretesting with 20 students, the questionnaire tested clarity, dependability, and comprehension. Cronbach's alpha allowed one to evaluate the dependability of the instrument with a threshold of ≥0.7.

Ethical Considerations

Ethical clearance was obtained from the University of Science and Technology, Aden, Yemen's ethics commission. Before taking part, participants gave informed permission guaranteeing voluntary involvement, anonymity, and secrecy. Data was safely kept and only used for study needs.

Data Analysis

Data analysis by using SPSS version 26 for the analysis. Demographic variables, knowledge, attitudes, and practices were characterized using descriptive statistics, including frequencies, percentages, and averages. With a significance level of $p < 0.05$, chi-square, Pearson's correlation, and logistic regression were used to investigate the relationship between knowledge, attitudes, and practices.

RESULTS

The demographic data shows that majority of participants were in the age between 20 and 27, with majority of participants as singles (Table 1).

Table 1: Demographic data of participants

		Frequency n=160	Percent
Age	Less than 20	55	34.4
	Between 20 and 27	89	55.6
	Greater than 27	16	10.0
Marital status	Single	150	93.8
	Married	10	6.3

There were majority of respondents hearing about the self-breast examination with 70% (Table 2). While there were only 38.1% having experience to perform a breast self-examination (Table 3).

Table 2: Hearing about Self-breast examination is a method of screening for breast cancer.

	Frequency	Percent	P value
Yes	112	70.0	<0.001
No	48	30.0	
Total	160	100.0	

Table3: Having an experience to perform a breast self-examination

	Frequency	Percent	P value
Yes	61	38.1	<0.01
No	99	61.9	
Total	160	100.0	

The percentage of awareness was higher than that of participants with no awareness that a familial history of breast cancer elevates the chance of developing breast cancer in the future (Table 4). In addition, there was high number of participants with no awareness of association between age and the chance of developing breast cancer in the future (Table 5).

Table 4: Percentage of awareness that a familial history of breast cancer elevates the chance of developing breast cancer in the future

	Frequency	Percent	P value
Yes	106	66.3	<0.01
No	54	33.8	
Total	160	100.0	

Table 5: Percentage of awareness of association between age and the chance of developing breast cancer in the future

	Frequency	Percent	P value
Yes	67	41.9	<0.05
No	93	58.1	
Total	160	100.0	

DISCUSSION

With 55.6% between 20 and 27 years old and 34.4% under 20 years old, the bulk of study participants

were young adults. This finding is consistent with most past studies, which have also focused mostly on younger groups' awareness of breast cancer. For example, they found that young women (ages 18–29) are less likely to engage in procedures for preventing breast cancer, including self-breast inspection (SBE), since they believe that the small risk at this age is low (13-15). Similar findings have been observed in other fields where a mostly young population showed reduced degrees of awareness and behaviors of breast self-examination (16).

Regarding marital status, the majority of respondents—93.8%—were single, a result consistent with results in (7), which showed a similar distribution. Preventive health initiatives, like SBE, might thus not be given top priority in debates on personal or other health concerns.

According to current results, SBE was known to 70.0% of the participants as a tool for breast cancer screening. This is significantly higher than what has been found in some specific studies. For instance, some studies found that 50% of women in the same age range knew about SBE, suggesting that awareness campaigns for breast cancer could have had better success in recent times (17-18). Nevertheless, the fact that 30.0% of our study subjects were uninformed about SBE supports the conclusions made by (19), which show that, especially in younger groups, a considerable section of the society lacked sufficient knowledge about breast cancer prevention. This emphasizes the need for ongoing educational projects.

In current results, only 38.1% of people conducted a self-breast check despite general awareness. This difference between awareness and use corresponds with several studies. For example, (20-21) found that just 42% of the numerous women who knew SBE regularly participated in it. Likewise (22) revealed that women voiced worries about the appropriate execution of SBE or felt fear about undergoing the operation, which could help to explain the lower-than-expected practice rate recorded in our study. It is imperative to raise awareness and offer easily available, correct, strong knowledge about the SBE procedure.

In current study, 66.3% of the subjects acknowledged in that a family history of breast cancer increases the likelihood of the illness's development. This is consistent with other research (23) with similar results. On the other hand, other studies (14) revealed raised awareness levels (approximately 80%), suggesting that in some groups family history is a known risk factor. Of our participants, 33.8% lacked knowledge of this risk factor, suggesting the need for education on genetic predisposition and the importance of family medical history in the assessment of breast cancer risk.

Table 5 reveals that just 41.9% of participants knew that growing older raises a breast cancer risk. By contrast, in a study conducted in Saudi Arabia, seventy percent of the subjects understood that the development of breast cancer is correlated with rising age (12). Advancing age is known to raise the incidence of breast cancer; hence, we worry that our study might have missed this risk factor. Other research, including (24), suggests that younger women—especially those under the age of 30—may not view themselves as being at risk for breast cancer, which would help to explain why they pay little attention to the part age plays in this disease. As our study indicates, when compared to earlier studies, there are advantages and disadvantages to increasing knowledge of breast cancer and completing self-screens. Although family history and SBEs abound, our results reveal that individuals' knowledge of the risk of breast cancer resulting from age and their actual practice of self-breast exams still differ greatly. Comparable investigations have revealed that, in terms of health promotion, people's knowledge does not match their actual behavior (25). Although knowledge is important, the frequency of self-breast checks is insufficient, so educational campaigns should promote useful application in addition to knowledge sharing. Research indicates that campaigns could teach on the value of SBE and the approach for its use, maybe through seminars, video tutorials, or community support initiatives (25). Reducing psychological barriers, such as the anxiety of discovering abnormalities, will help one to increase the frequency and quality of breast self-examinations.

CONCLUSION

Overall, our findings reveal that participants are well-informed about the risk factors for breast cancer, family history, and self-breast examinations; nevertheless, there are clear discrepancies in practice, particularly with regard to self-examination

and the age-dependent risk of breast cancer. Although our findings demonstrate some improvement over earlier research, more has to be done to get individuals to truly use what they know is healthy for their condition. To reach this target, one could have to eliminate physical and psychological barriers to consistent SBE practice as well as improve educational programs and simplify resource availability.

Conflict of interest

The authors declare that no conflict of interest.

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