

Breast Cancer Screening in Relation to Access Barriers to Health Care System

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Abstract: A survey of 370 female school teachers working at governmental schools was conducted to investigate access barriers for breast screening. A stratified sampling was used to select schools. All female teachers aged 34-45 years old were invited to fill out the self-administered questionnaire to investigate access barriers to health care system. The results revealed up to 46% of women encountered access barriers including limited resources, time limitation, lack of privacy, crowdedness and geographical barriers for the treatment abroad. Women perceived lower access barriers if they were medically insured $P=0.03$, and resided out camp $P=0.00$. Negative attitudes and feeling toward breast screening such as fear were identified as barriers for approximately a half of the women. Women with children expressed higher negative attitudes and feeling toward breast cancer screening $P=0.05$.

Keywords: Breast cancer- Access barriers-Gaza Strip, Gaza women teachers

1. Introduction

Breast cancer is the most common cancer in the Arab world, account for 14% to 42% of all women cancers [1]. On average, breast cancer occurs a decade earlier among women in the Arab world than it was in the Western countries [2]. Yet, high fraction of patients in the Arab countries presented in late stage at diagnosis, in Syria 73%, in Egypt 70%, and 69% in Jordan, versus 35% in USA [3]. In Palestine, 42% of reported cases presented in advanced stages of the disease [4]. Despite dissemination of educational programs to raise awareness and to increase access to breast screening, there has been little impact on breast cancer outcome in Gaza Strip and the 5-year survival rate in Gaza Stripe is 53% [5].

The concept of breast screening is earlier detection. This approach implies under the concept that early detection will mitigate breast cancer outcomes, and improve the lives of women with significant reductions in cancer-related mortality [6]. However, many women are still under-screened. A study conducted in West Bank reported low participation rates in breast cancer screening activities [7]. Another study conducted in Qatar revealed that participation rates for breast screening also low among the Arab women [8]. Factors that experience barriers to adequate health care, may be related several factors including individual characteristics as well as health providers and health care system [9]-10].

A study conducted in Bangladesh found that women could not access to breast cancer services due to the bad road condition and because they don't have money to pay for transport [11]. Another study examined accessibility to Health Services in Palestine found that physical obstructions including checkpoints in the way and barriers increases the travel time significantly and acts as obstacles to reach health services [12].

Health insurance coverage is a very important factor for access to health care. In 2008 in USA about one of five adult women aged 50 and 75 never had a mammogram, some

women don't get a mammogram because they don't have health insurance and can't afford it only 56% of uninsured women had a mammogram in the past two years versus 84% of insured women. Additionally, some women who have low income are less likely up to date with screening programs [9].

In the World Bank Report, women devote most of their times in home responsibility and little time remain for themselves [13]. A study conducted in Iran reported that female workers spent most of daily hours at their work, thus long working hours act as barriers for performing breast cancer screening [14].

Availability of skilled and educated health care providers also are factors that facilitate access to breast screening. However, Many studies identified that lack of physician referral and recommendation acts as barriers for access to screening [15]-[16]. However, barriers for breast screening are not fully examined in our context. Accordingly, this study was conducted to explore access barriers to breast cancer screening among Governmental female school teachers in Gaza city. It is hoped the findings of this study will provide useful information to draw basic line for intervention policies that may help in decreasing mortality and minimizing the severity of the problems.

2. Method and Material

A cross-sectional study was carried out among female school teachers 2012. A stratified sampling was used to select schools. Firstly, Gaza city divided into two stratum, East and west Gaza city. Secondly, in each strata twelve schools were selected by simple random sampling. All female teachers aged 35-45 years (N=420) were invited to fill out self-administered questionnaire. Teachers with past history of breast cancer and teachers who came from abroad before two years were excluded. In all N=370 (88%) female teachers agreed to participate and gave informed consent. Approval for the study was obtained from Higher Ministry

of education, and Public health faculty at school of Public Health.

2.1 Instrument

A self-administered questionnaire was used for data collection. Expert committees formed of public health specialists were evaluated questionnaire validity content. The statistical test used for measuring the internal consistency is Cronbachs Alpha coefficient. Cronbach Alpha was 0.92. A pilot study was carried out in 40 female teachers working in two schools for checking the clarity of the questions and to test applicability of the tools. The questionnaire consisted of four sections. Socio-demographic characteristic of the participants, health workers role, attitudes and access factors for breast cancer screening. Socio-demographic included age, marital status, average income, education, economic status, locality, having children, and having a first-degree relative with breast cancer. Health workers roles included five questions about attending educational sessions, competence in self-examination, receive invitations for mammography, receive advice for breast screening and advice for mammography. Responses were measured using nominal scale "True", "False". Women's behavior toward breast screening constituted of 11 questions many of them was adapted from [7], and 15 questions investigated availability and accessibility of resources for breast screening. All items in the subscales were scored using Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree).

2.2 Data analysis

For statistical analysis SPSS (13) was used. Differences in demographic, access factors and the study variable were calculated with t-test.

3. Results

The mean age of the participants was 40 years +/-3.20. Three hundred sixteen (85.4%) were married. 84.4% of the study populations have children. Regarding education level of the husband two hundred forty eight (74.7%) had a university degree and eighty four (25.3%) had secondary degree and less. 271 (73.4%) had average income and 98 (26.6%) had very low income. 95.4% of the study population were medically-insured and 4.6% don't have health insurance. 78.1% resided in Gaza city and 21.9% resided outside Gaza city. 83.4 % have children. And 23% of teachers have positive breast cancer family history.

3.1 Health workers roles

Finding of this study revealed that 66.2 % of teacher's attained educational sessions and taught breast self-examination, among those who received training 26.4% feel that they are incompetent to examine their selves. 49.7% of women received advice from doctors or nurses for breast screening whereas, only 18.4% received advice for mammography and approximately 27.6 % had an invitation for mammography.

Table 1: Health Workers Roles

Items	N%
Did you attend or receive health education about breast cancer?	245(66.2)
Do you have enough experience to examine yourself?	180(49)
Did you receive advice from doctors or nurses for breast screening?	184(49.7)
Did you receive advice for mammography?	68(18.4)
Did you receive invitation for breast screening	102(27.6)

3.2 Access barriers for breast screening

Approximately, a half of women don't have time to go to the clinic, 67.2% of them said that work time was not helpful. Homework and child care were barriers for about 52.2% of women. Only 44.4% of women received information about breast screening and among those who received information's 50.2% said that the information they received were not enough to encourage them to seek breast screening whereas, 42.2% of teachers don't know where to go and to whom will directed if they feel any breast changes. More than a half of women reported access barriers including lack of specialists (49%) and lack of equipment (46.3%). Approximately, 54% of women referred their difficulties to reach health facilities to the lack of options and inability to treat breast cancer abroad as barriers for access to breast care. Moreover, about 48% declared that not paying attention to privacy act as barriers for their participation in breast screening. Whereas, crowdedness of the clinics was barriers for 56% of the women. Financial and physical factors were barriers for only one third of women. Approximately 95.4% of the women were medically insured. Only about one third of them said the fees for health insurance and the transportation expenses constituted a financial burden for them. In addition, only about one third of them said the distance to reach medical facilities is difficult. The results found that women resided into camp perceived higher access barriers $P=0.00$. Women with inadequate health insurance perceived higher access barriers $P=0.03$.

Table 2: Accessibility and Availability

Items	Mean %
Not having health insurance	1.6(31.6)
Not afford paying health insurance	1.5(30.4)
Transportation expenses	1.5(30.1)
Difficulty to reach health centers	1.7(34.1)
Do not know where to go if feel any breast changes	2.12(42.4)
Did not receive any information	2.22(44.4)
Information received were not enough to encourage breast screening	2.51(50.2)
Not having time to go for clinic for screening	3(60.6)
Work time not helpful	3.2(67.2)
Unavailability of specialist	2.45(49)
Unavailability of equipment	2.3(46.3)
Unavailability and lack of options for treatment abroad	2.7(54)
Overcrowded clinic	2.8(56)
Unavailability of privacy	2.4(48)

3.3 Breast cancer screening attitudes.

Approximately, 85.6% of women believed that the breast examination by health care provider is helpful in tumor detection and may increase the chances of curability (76.4%) and only one third of the women said that there is no need for breast examination if breast cancer is detected. Our findings revealed that fear and worries act as barriers in up to 45% of the women. About 48.7% feel fear of suffering of the disease, 47% afraid of changing their appearance, 44.6% of the women feel fear of the rumors if diagnosed with breast screening, 43% afraid of changing sexual relationship, 43.8% afraid of neglecting children's and 41.8% feel fear of death. 40.8% were not willing to know anything about you're the disease and breast examination is needed if cancer is detected because the time would have lag were reported by 36.2%.

The results found that women who have children expressed negative attitudes and feeling towards breast screening $P=0.05$. There are no statistically significant differences in relation to age, marital status, place of residency, locality, health insurance, income, the level of education of the husbands and positive family history.

Table 3: Breast cancer screening attitudes

Items	Mean (%)
Breast examination by health care provider is helpful in detecting tumor in early stage	4.3(85.7)
Breast Examination by health care provider increases the chances of curability	3.8(76.4)
Not willing to do breast screening for fear detect breast cancer	2.3(45.7)
Afraid of breast screening for fear of neglecting children and no one can take care for them	2.2(43.8)
Afraid of breast screening for fear of death	2.1(41.8)
Afraid of breast screening for fear of the suffering of the disease	2.4(48.7)
Afraid of breast screening for fear of changing the appearance	2.35(47)
Afraid of breast screening for fear of rumors	2.2(44.6)
Afraid of breast screening for fear to change the sexual relationship with spouse	2.11(42.2)
There is no need for breast examination if cancer is detected because the time would have lag	1.81(36.2)
Prefer not to do breast screening and not willing to know anything about you're the disease	2.04(40.8)
Mean: 42.57 SD: 15.05 Median:41.81	

4. Discussion

Despite that the education is the main pillar for early diagnosis of breast cancer to increase awareness [17]. About a one third of women who attended educational sessions, feel that they are incompetent to examine their selves competently. The most feasible strategies to fulfill the goal of education is to teach women how to examine their breasts competently, as the behavior change communicating studies have an impact in improving knowledge and behavior [18]. Lack of Health professional's recommendation, act as barriers for breast screening in our study as well as in many studies [15]-[16]. This may contribute in late stage at presentation [19]. Furthermore, this might rise the importance that health worker should be supported by the

sufficient education about breast cancer and its guidelines to be able to perform their educational activities, and to be able to use referral mechanisms to ensure further investigation at appropriate time [20].

Although, the majority of women have had good attitudes towards health care providers, up to 45% of them encountered fear of breast cancer diagnosis as well as fear of the consequences of the disease and fear of death. Similar findings were reported among Qatari women [8]. Whereas, only, 3.9% of turkey female teacher not performing CBE for fear of finding tumors [21]. Fear of suffering of the disease in the present study gained the highest score from all reasons for fear; this may indicate that teachers afraid more of their inability to cope with the consequences of the disease. Furthermore, fear of the disease might contribute in lower willingness in up to 40.9% of the women to know about their disease. On the other hand, the perceptions of limited resources available and the geographical barriers for treatment abroad, might contribute in the lower willingness to women to have screening and to know about their disease. In addition, there are also issues that related to the fear of the social relationships, about 44.6% of the women feel fear of the rumors if diagnosed with breast screening, as a consequence the women might hide the disease and discouraged from seeking breast screening and treatment.

In support to other study, long working hours act as barriers for performing breast cancer screening [14]. Time limitation due to the work obligation might reflect the way that health services provided. Unavailability of afternoon shifts might contribute in their perception of the time limitations and create limit for their participations in breast screening. In this regard some facilitations of the Ministry of High Education are useful to help teachers find time for their participation in breast screening. Moreover, most of women underestimate their health when it comes to their ownhealth either because homework and child care [11]-[22]. Accordingly, limit time remain for themselves [13].

According to O'Connor et al(2009) decision aids and information from health care providers may help the women and reduce difficulties in decision making; improve people's knowledge about of the options, create accurate risk perception of their harm and benefit and increase participation in screening process[23]. However, 44.4% of teachers said that they didn't receive information's about breast cancer. Whereas, 50.2% said that information's received were not enough to encourage them to seek breast screening whereas, 42.2% of teachers don't know where to go and to whom will directed if theyfeel any breast changes. This may highlight the importance that health care provider should be aware of breast cancer and it's screening to be able to perform their educational activities and where to refer the suspected cases.

Lack of breast screening resources was previously reported among Gaza women [24]. In Facts, Gaza suffers of the scarcity of resources, only five oncologists and five pathologists are available to serve the two million of the population those women constituting the half of them [25]. Further more, only one mammography set is available within governmental primary health centers. As a result people

forced and resort for treatment and diagnosis abroad. However, the economic and geographical barriers created limit for breast care. The unfortunate reality of the high perceptions of access barriers is the limited screening options due to the limited resources available that might contribute in the lack confidence of health services provided. In addition, only about one third of them said the distance to reach medical facilities is difficult. According to the PCBS (2004) access health survey physical accessibility to health centers in Gaza Governorates was good. Results of that survey showed that 97.7% of households in Gaza Governorates have a health centers in their locality [26]. This figure indicates that access to health facilities is good in Gaza whereas, access to screening services is limited. Also, cancer services available in Gaza city therefore women reside into camp may perceived access difficulties

Since that, the availability of health insurance coverage is an important factor for access to health care, approximately 95.4% of the female teachers were medically insured. Only about one third of the teachers said the fees for health insurance and the transportation expenses constitute a financial burden for them. In 2008 in USA about one of five adult women aged 50 and 75 never had a mammogram, some women don't get a mammogram because they don't have health insurance and can't afford it [9]. In Malaysia Parsa et al (2008) found that there was no significant relation of the health insurance and breast screening behavior [27]. Not paying attention to privacy was an important issue in our study, about 48% of the women reported that their privacy is not assured. In another local study, in only 16.5 % of the clients attended health facilities in Gaza Governorates said that their privacy is not assured [28]. These variations may be attributed to the shyness and embracement of examinations to the sensitive parts of the body such as the breast and might be the cancer patients more sensitive about the privacy due to their disease.

Our study is subject to several limitations. The findings cannot be generalized beyond the study sample because the study was undertaken in one governorate and the results may not be generalized to other governorates of Gaza Strip. The study targeted only female teachers which may form sample bias while opinion of other class of the society could reflect other perspectives different from this target group.

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