A Study of Women's Behavior and Attitude towards Breast Cancer Screening Examinations in Ras Al Khaimah, United Arab Emirates

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Abstract: *This study was conducted to address the behavior and attitude for women of different socio-demographic characteristic residing in the United Arab Emirates (UAE) towards breast cancer screening examinations. The study was undertaken in Ras Al khaimah, one of the emirates of the United Arab Emirates for total of 496 females. We have found that the majority of women who voluntarily participated in this study were between the age group 30 to 39 years and the minority was older than 60 years. Furthermore, most of the women who participated were Emirati women (around 68%) with marriage and parity experience. The majority of women (around 91%) who participated in this study had no family history of breast cancer and 2.2 %of the women pointed to breast problems sometime during their lifespan. Around 62 % of the women in this study had no breast feeding present history. While around 236 women (approximately 48 %) from this study (women with abnormal clinical breast examination and all women older than 40 years old) were referred to mammogram or ultrasound, only 88 women have responded. This low number of response to required mammogram (approximately 37%) shows that more health education, awareness and health support is required throughout the primary health care system and hospitals in UAE to encourage the use of breast examinations techniques among the population of UAE. Some recommendations have been stated in this article to increase breast cancer awareness among different communities in UAE.*

Keywords: *Breast cancer, Mammography, Clinical breast examination, Ras Al Khaimeh, UAE, awareness, early detection, screening, the Pink Caravan*

1. INTRODUCTION

Breast cancer ranks second in frequency of incidence in the world after lung cancer; it is the most common cancer in women. In terms of mortality, it is the fifth cause of death from cancer overall and the most common cause of mortality in females [1]. North American countries have the highest incidence rates, while Asia and Africa present the lowest risk of breast cancer [11]. Incidence rates are still growing, for almost all developing countries and low-risk countries [1,2].

In recent years there is evidence of a reduction in breast cancer death rates in high-risk countries [4,5,6,7]. These changes probably reflect improvements in treatment and/or early diagnosis, due to screening programs and better awareness of breast cancer among women [3,4].

Early detection of breast cancer through mammography screening as well as adjuvant therapy are the best ways not only to reduce mortality from breast cancer but also to improve the life quality of patients [6,7,8]. Large-scale randomized trials have shown that, in females aged between 50 and 64 years, regular mammography can lower mortality by roughly 30% [2].

During the last years, the United Arab Emirates (UAE) has achieved rapid development in many areas. This growth has induced an increase in different public health problems [10]. Cancer incidence in United Arab Emirates (UAE) has been rising in the most recent few decades and cancer patterns are changing quickly [9]. Cancer is the third leading cause of death in the UAE succeeding cardiovascular diseases and road traffic accidents. Breast cancer accounted for 8.3% of total deaths in 2001 and 7.7 % of total deaths in 2002 (MOH, 2006) [9].

For the year 2002, breast cancer ranked the most common cancer among females (nationals and non-nationals) living in the UAE and accounted for 13% of the total cancers [9, 10]. Breast cancer was more frequent among the non-nationals (19.5%) than the UAE and Omani nationals (9.9%). Early pregnancy, multiparty and breast feeding, seems to be the different protective factors responsible of this lower incidence among "nationals" [10].

This study was undertaken to characterize the breast cancer screening experience and attitudes of women towards mammogram to offer a valid base for planning community interventions aimed at increasing the appropriate use of screening technologies.

2. MATERIALS AND METHODS

A breast cancer screening programme was realized by Friends of cancer patients organization initiative the Pink Caravan , a non- governmental UAE based charitable organization, volunteer-based operating as a specialized entity under the umbrella of the Supreme Council for Family Affairs in Sharjah.

The program was carried out in Ras Al khaimah, one of the emirates of the United Arab Emirates (UAE), in the east of the Arabian Gulf. It is in the northern part of the UAE bordering Oman's exclave. The emirate of Ras Al Khaimah covers an area of 1,700 square km. Medical examinations were run in different health care centers such as Shaim hospital and Saker hospital.

A total of 496 females came to participate in the programme. The clinical breast examination was done for all of them and they were assessed case by case and referred to mammogram or ultrasound if needed. Furthermore, a questionnaire was used for data collection and was filled by nurses. The questionnaire covered different areas of interest including the socio-demographic characteristics, family history, parity and breast feeding (the sample was random, the questioner was not piloted as it was based on usual information gathered during a medical interview for present and past medical/surgical/family history for women).

Descriptive statistics were used for data analysis. Statistical analysis was performed by using MS office excel professional 2010 suit.

3. RESULTS AND DISCUSSION

In UAE, few studies have been carried out to assess the beliefs, attitudes, and behavior of females in regard of screening mammography and ultrasound techniques. Consequently, the objective of this study was to evaluate the attitudes and practices of females in Ras Al khaimah, UAE.

The age of the participants in this study ranges between 19 and 80 years with average of 37 years. The majority was between the age group of 30 to 39 years, for the other age groups the percentages were respectively 24 % between 15 and 29 years, 22.4% between 40 and 49 years, 14.1% between 50 and 59 years, and only 5.4% were older than 60 years.

Regarding the marital status, 85.9% were ever married and 78.2% had ever a child, while 14.1% were single women. With regard to nationality, the overwhelming majority of participants were Emirati 67.7%, 5.2% were Arabs non- Emirati (Palestinians, Syrians, Tunisians, Omanis and Somalis) and 27% from other non-Arabic nationalities with Indians and Filipinos forming the majority.

Around 17.13 % of the women reported that they were in menopause and 24 women were currently using hormonal replacement therapy. A family history of breast cancer among first-degree relatives was found among 2.8% of the women and 5.8% have unknown family history. Approximately 2.22 % of the women pointed to breast problems sometime during their entire lifespan. The socio-demographic characteristics of females participating in the program are shown in table1.

Coverage rates of clinical breast examination (CBE) for women were 100%. Women with abnormal clinical breast examination and all women, older than 40, were referred to mammogram or ultrasound even if they had normal CBE. Suspicious cases after mammogram and ultrasound results were sent to fine needle aspiration or core biopsy (100%). Results are shown in tables 1, 2 and 3.

The majority of females had normal CBE and only 31 women had abnormal CBE (Tables 2 and 3). While 236 women were referred to mammogram or ultrasound, only 88 responded. From those 88 females 29 women were requested to do biopsy and only two cases of cancer were detected.

Table 1. *Socio-Demographic characteristics of females participating in the program undertaken by the Pink Caravan initiative*

TABLE 1			
	DATA	Frequency	%
AGE	0-29	119	23.99
	30-39	169	34.07
	40-49	111	22.38
	50-59	70	14.11
	>60	27	5.44
Nationality	Emirates	336	67.74
	Other Arabs	26	5.24
	Others	134	27.02
Marital Status	Married	426	85.89
	Single	70	14.11
Parity	Ever Had a Child	388	78.23
	Never Had a Child	81	16.33
	Unknown	27	5.44
Breast Feeding Present History	Yes	38	7.66
	No	307	61.90
	Unknown	151	30.44
Family History	Yes	14	2.82
	No	453	91.33
	Unknown	29	5.85
Referred to mammogram	Yes	236	47.60

Table 2. *Clinical breast examination (CBE) results*

TABLE 2			
CBE Results			
Normal	%	Abnormal	%
465	93.8	31	6.3

Table 3. *CBE results in relation to Socio-Demographic characteristics of females participating in the program undertaken by the Pink Caravan initiative*

TABLE 3					
Variable	Group	CBE Normal		CBE Abnormal	
		NO.	%	NO.	%
AGE	0-29	110	18.46	9	1.81
	30-39	161	27.01	8	1.61
	40-49	105	17.62	6	1.21
	50-59	63	10.57	7	1.41
	>60	26	4.36	1	0.20
Nationality	Emirates	314	52.68	22	4.44
	Other Arabs	20	3.36	6	1.21
	Others	131	21.98	3	0.60

Marital Status	Married	400	67.11	26	5.24
	Single	65	10.91	5	1.01
Parity	Ever Had a Child	364	61.07	24	4.84
	Never Had a Child	76	12.75	5	1.01
	Unknown	25	4.19	2	0.40
Breast Feeding Present History	Yes	38	6.38	0	0.00
	No	280	46.98	27	5.44
	Unknown	147	24.66	4	0.81
Family History	Yes	14	2.35	0	0.00
	No	423	70.97	30	6.05
	Unknown	28	4.70	1	0.20

Based on the above statistics, it is shown that the majority of participants in the program were married; analysis showed that women 45 years of age and older, were more likely to be mammogram users, while only 4 females older than 60 years use the mammogram. A study among women with no prior mammography experience showed that as women get older they are less likely to intend to get a mammogram [12]. In the USA, mammography use was most established among women 50-59 years old, and then declined inversely with age (CDC, 1990). In Canada, the proportion of women aged 50–69 years reported ever having had a mammogram was significantly higher than that among women aged 40–49 and among those aged 70 years or more, moreover significant predictors of never having had a mammogram included higher age, residence in a rural area, no involvement in volunteer groups, no regular medical consultations, infrequent physical activity and no hormone replacement therapy [13].

Regarding to family history, Zapka et al. found that Women with a family history of breast cancer reported greater use of mammography, as did women who reported having a regular physician check up(particularly a gynecologist or internist) [14].

There is a hypothetical risk from screening because excess breast cancers have been demonstrated in women receiving doses of 0.25-20 Gy; the risk of exposure appears to be greater in younger women; but researchers have shown a 24% mortality reduction from biennial screening of women aged between 40 and 49 years and a benefit-to-risk ratio of 48.5 lives saved per life lost and 121.3 years of life saved per year of life lost. Therefore, the theoretical radiation risk from screening mammography is extremely minute compared with the benefit of life-saving [15].

While around 236 women (approximately 48 %) from this study (women with abnormal clinical breast examination and all women older than 40 years old) were referred to mammogram or ultrasound, only 88 women have responded. This low number of response to required mammogram (approximately 37%) shows that more health education, awareness and health support is required throughout the primary health care system and hospitals in UAE to encourage the use of breast examinations techniques especially mammography among the population of UAE. Breast self-examination should be recommended since it has an influence on mammography use. Health planners must exploit encouraging factors and lessen discouraging factors to improve breast cancer screening practices among Emirati females.

4. RECOMMENDATIONS TO INCREASE BREAST CANCER AWARENESS IN UAE

A study undertaken by (Park et al., 2011) has shown that mass media health communication strategies may not be as highly influential on their own if not supported by interpersonal community intervention channels. One –way mass communication driven by government may not easily change women's attitudes towards breast cancer screening that is why a community-based health communication is needed. This may include a combination of community outreach activities such as direct mailing, group educational sessions in residential apartment complexes, street promotions, apartment billboards etc…and clinic and pharmacy-based-in-reach such as posters in clinic and pharmacy waiting rooms, in addition to physicians and pharmacists recommendations.

Adopting a systematic model such as Precede-Proceed model where the participants will play an active role in defining their own problems and establishing their goals may work better in increasing awareness for breast cancer screening [16, 17]. This model guides the planner through a process that starts with outcomes and objectives and then goes backward to inputs and strategies. Using such a model will require a careful social, epidemiological, educational, environmental, and policy assessment to be conducted [16].

Some of the gaps that could be filled within the healthcare system in UAE that may increase breast cancer awareness among different communities include:

- Implementation of a national cancer registry – currently there is no central hub for the collection of all private and public facilities cancer incidence – it is all fragmented and done internally at the facilities. It will require a compulsory mandate to enforce the reporting of cases at point of diagnosis. Due to the large expatriate community in the country – figures may also be skewed as patients leave the country to get further investigations done in their country of origin.

- Early detection can be enhanced through the implementation and inclusion of basic screening methods during medical check-ups at Primary Health Care Centers – this can include annual clinical breast examinations. To have this as a standard practice through the country, adopted by all Authorities.

- During the Pink Caravan ride hosted once per year around Feb – they have screened around 500 patients per day with a team of x25 (doctors, nurses and admin staff) – thus reaching a target of 5,000 men and women in 10 days. This is a high impact period which has created an expectation among the residents along the routes they have stopped at – to come for their annual check-ups each Feb with the Pink Caravan team. There is no national screening program that works on a census basis with the database of the residents to send them reminders and invitations to attend their annual (or every 2 year) screening and FOCP / Pink Caravan is currently fulfilling that role. However as a charitable organization – they are are not able to sustain the employment of x25 team to do this function all year round – ideally this should at the very least be supplemented by Government.

- FOCP is in the process of launching a patient navigation program which will offer a toll free number for anyone in the country to phone for guidance, what the next steps should be, where to go, what to do – a guiding hand – this will over time be able to handle a large database and collect demographics – with technology to support sms reminders and invitations to public to attend the annual screening program.

In conclusion, it seems that initiatives such as Pink Caravan has led to an increase in breast cancer awareness among the communities as per the recent Pink Caravan press release "The report reveals that during the period of the 2013 Pink Caravan Ride, the campaign's mobile clinics provided free early detection breast cancer testing to a total of 3,991 women and 1,029 men. This brings the combined number of screenings for the past three years to 16,345 women and 5,450 men, coming to a total of 21,795 screenings in all.

Speaking about the statistics, Dr Sawsan Al Madhi, Secretary General for Friends of Cancer Patients charitable organization (FOCP) Head of the Pink Caravan's Medical and Awareness Committee, said "A point of special interest has been the increase in awareness amongst men with regards to breast cancer, as can be seen from the more than 100% increase in men opting to be screened in 2013, when compared to the 476 screenings done on men in 2012. We take this as clear evidence that the Pink Caravan has been making a real community wide impact and are very pleased to see that we have been able to remove some of the stigma that has traditionally surrounded the disease."

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