Knowledge, attitude and practices of a group of Moroccan women towards breast cancer: A cross- sectional study

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Abstract—Regular screening for breast cancer is associated with better survival, but compliance with guidelines depends on good knowledge and attitudes. This study aimed to assess the level of breast cancer knowledge, attitudes and screening practices among a group of 150 Moroccan women aged 20 to 86 years old with no history of breast cancer. The average age of the sample (n=150) was 45.42±12.1 years. The knowledge of study participants about some risk factors for breast cancer was good concerning the increase of likelihood of the disease in inactive (84%) and obese women (75.3%) and oral contraceptive users (72%). Mammography was performed among 34.7% of participants while the most frequently identified barrier limiting this practice was financial (66%). More emphasis should be placed on educating females about breast cancer and specific targeting of the barriers identified.

Index Terms— Attitudes, breast, cancer, knowledge, Morocco, screening, women

1 INTRODUCTION

Breast cancer as a multifactorial disease is the most common cancer in women both in the developed and the developing world. Female breast cancer (with lung cancer) is the leading type worldwide in terms of the number of new declared cases; approximately 2.1 million diagnoses are estimated in 2018, contributing to about 11.6% of the total cancer incidence burden. It's also the leading cause of cancer death for women (15.0%) [1].

Breast cancer is a major public health problem in developed nations and is becoming an increasingly predominant problem in low and middle income countries. According to the World Health Organization, the incidence rates in the developing countries will rise due to increasing life expectancy, growing urbanization, and greater adoption of Western lifestyles [2].

As in the rest of the world Morocco's most common cancer among women is the breast cancer (5 years prevalence: 23.9% of all cancers). It's incidence is of 10 136 new cases reported in 2018 (21.04% of all cancers) and it's representing the second cause of death by cancer with 3518 deaths in 2018(12.03 % of all cancers) [1].

Danaei et al, calculated the contribution of various modifiable risk factors, excluding reproductive factors, to the overall breast cancer burden [3]. The authors conclude that 21% of all breast cancer deaths worldwide are attributable to alcohol use, overweight and obesity, and physical inactivity. This proportion was higher in high-income countries (27%), and the most important contributor was overweight and obesity. In low- and middle-income countries, the proportion of breast cancers attributable to these risk factors was 18%, and physical inactivity was the most important determinant (10%) [12].

Five-year survival rates for women with breast cancer vary widely among localized (98.8%), regional (85.2%) and distant disease (26.3%) [4], which indicate the survival benefits of earlier detection. Screening recommendations generally include breast self-examination (BSE), mammography and clinical breast examination (CBE). Among these three modalities, only mammography was found to decrease mortality (by up to 20%) [5]. Reduction in mortality rates was observed in many countries after the introduction of awareness screening campaigns as per guidelines and was attributed to better compliance with the guidelines [6].

In this spirit, Morocco has since March 2010 a National Prevention and Control of Cancer Plan (NPCCP). The plan includes 4 main strategic areas: prevention, early detection, diagnostic and therapeutic management, and palliative care [7].

The objective of our study was to describe the knowledge, attitude and perception of Moroccan women using health facilities and targeted by the NPCCP toward breast cancer. Our hypothesis was that low knowledge about breast cancer contributes to late detection among Moroccan women. To our knowledge there is no previous study in Beni Mellal-khenifra region to assess Moroccan women awareness of breast cancer.

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2 METHODS

2.1 Study Design and sampling

A cross-sectional study, using a structured questionnaire, started in March 2018 among a group of Moroccan females residing in Beni Mellal city who were aged 20 to 86 years, with no previous or current diagnosis of breast cancer. A sample of 150 participants was obtained from the regional hospital to represent different socio-economic standards.

2.2 Data Collection

A face to face interview was conducted by trained staffs using a semi-structured questionnaire among a sample of women at the regional hospital.

The questionnaire included two main parts. Part one includes questions about socio-demographic and cultural information such as age, gender, place of residence, marital status, level of education, occupational status, etc. The second part includes

questions about knowledge (breast cancer risk factors and protective factors) and attitude (breast cancer screening).

2.3 Statistical analyses

Statistical analysis was carried out using Statistical Package for the Social Sciences (SPSS) software version 10.0 for Windows (SPSS Inc., Chicago, IL). Categorical variables were presented as frequencies and percentages, while continuous variables were presented as means and standard deviations.

3 Results

As demonstrated in this document, the numbering for sections The average age of the sample (n=150) was 45.42±12.1 years, 42.7% being above the age of 50 years. Among the participants, 8% had a university degree, 78% of the participants were married and 29.3% reported a first-degree family history of breast cancer. A proportion of 92.7% of participants were housewives. The average socioeconomic level was the most common, with a proportion of 70.0% (Table 1).

Multiple questions with "yes" or "no" responses were designed to assess participants knowledge in three key areas, including risk factors for breast cancer, methods of early detection and their attitudes and practices including practice of breast self-examination (BSE), clinical breast examination (CBE) and mammography screening.

Table 2 shows participant's answers to some selected questions. The knowledge of study participants about risk factors for breast cancer was good concerning the increase of likelihood of the disease in inactive (84%) and obese women (75.3%) and oral contraceptive users (72%). Also 82% of participants believe that good eating habits (82.7%) and regular activity (88%) decrease the likelihood of the disease. However, knowledge of participants concerning the protective effect of breastfeeding and the inheritability of breast cancer was rather poor.

In terms of methods of diagnosis, a large proportion (94.7) of participants was able to correctly identify BSE as a method for detection of breast cancer, and mammography as enhancing in early detection of breast cancer (99.3%).

In terms of practice, 70.7% of participants practice BSE, the source of information about BSE was equally obtained from media, health care professionals and family and friends. Only 34% had clinical breast evaluation (CBE) in the past years. The main reason advanced for missing CBE analysis is the absence of any breast problem. (Table 3) Mammography was performed among 34.7% of participants while the most frequently identified barrier limiting this practice was financial (66%) (Table 4).

TABLE 1

SOCIO-DEMOGRAPHIC CHARACTERISTICS OF PARTICIPANTS

	N	Percent (%)
Age	45.(42±12.1)	
20-34	31	20.7
35-49	55	36.7
50-86	64	42.7
Marital Statut		
Single	21	14
Married	117	78
Divorced	7	4.7
Widowed	5	3.3
Occupational activity		
Employed	11	7.3
House wife	139	92.7
Socioeconomic status		
Low	30	20
Medium	105	70
High	15	10
Educational level		
Without	89	59.3
Primary	22	14.7
≤ Primary	27	18
Secondary	12	8
University		
Origin		
Urban	62	41.3
Rural	88	58.7
First degree FH	44	29.3

4 Discussion

In Morocco breast cancer is usually diagnosed at advanced stages and happens more frequently in young women in comparison to western countries [8]. The importance of knowledge of breast cancer risk factors among women was emphasized by Washbrook (2006) [9]. Previous studies suggested that better knowledge of breast cancer, and better attitudes towards the disease are correlated with better screening [10]. Frequent screening was associated with better survival and earlier detection. But women's limited knowledge about breast cancer has also been identified in many develop and developing countries [11]- [12].

In our study participants showed good knowledge concerning the increase of likelihood of the disease in older inactive and obese women and also among oral contraceptive users. The American Cancer Society assumes that around one-third of the yearly 500,000 malignant tumor-related deaths result from inactivity, high caloric intake, and overweight [13]. Large studies and meta-analyses demonstrated that physical activity reduces the risk of developing cancer in pre-as well as in postmenopausal women [14]. Interestingly, the present data is significantly higher than that reported in a previous nationwide study in Morocco which showed poor understanding of major breast cancer risk factors and symptoms. [7].

Nevertheless half of the participants in our study showed poor understanding of some of the major breast cancer risk factors like inheritability and the protective effect of breast feeding. Such poor knowledge of the risk factors could rein-

force myths and lead to low practice of regular screening, especially by women with high risk.

Results from the current study suggest better BSE practices than either mammography or CBE. Despite being the cheapest non-invasive method, screening through BSE was not found to decrease mortality from breast cancer in randomized controlled trials, yet lead to increased rate of biopsies of benign lesions [4]. Results showed that despite detecting higher numbers of breast cancers using BSE, there was no change in mortality. Furthermore, there was insufficient data to support the incidence of CBE. Thus current USPSTF guidelines are against BSE screening, and have insufficient evidence for CBE screening.

This study revealed a high percentage of women above 40 years having performed mammograms in Beni Mellal (34.7%) compared to results in Qatar (26.9%), in Jordan (8.6%), in Malaysia (8%) [15] and in China (24%) [16]. But less than those reported in Lebanon (59.1%) [9]. The higher percentage found in the present study may be in part due to the high proportion of participants more than 40 years (mean of age 45.42±12.1 years).

4 Conclusion

This study has then important implications for health care providers. It is highlighting the gaps in knowledge of the disease, and significant barriers and costs of screening, which may contribute to late stage diagnosis of breast cancer. This puts a high burden on the already overburdened healthcare

TABLE 2

PARTICIPANTS KNOWLEDGE ABOUT RISK FACTORS OF BREAST CANCER.

Items	Yes n (%)	No n(%)
-Aging have an effect on the likelihood of breast cancer	122(81.3)	28(18.7)
-Obesity has an effect on breast cancer likelihood	113(75.3)	37(24.7)
-Oral contraceptives use increase the likelihood of breast cancer	108(72)	42(28)
-Breast feeding decrease the likelihood of breast cancer	72(48)	78(52)
-Hormone replacement therapy (HRT) has an effect on breast cancer likelihood	36(24)	114(76)
-Family history of breast cancer increase the likelihood of breast cancer among women	61(40.7)	89(59.3)
-No family history of breast cancer means no risk of developing the disease	108(72)	42(28)
- Physical inactivity increase the likelihood of breast cancer	126(84)	24(16)
- Moderate regular activity decrease the likelihood of breast cancer	(88)	18(12)
- Good eating habits decrease the likelihood of breast cancer	124(82.7)	26(17.3)

TABLE 3

DISTRIBUTION OF RESPONDENTS ACCORDING TO KNOWLEDGE AND PRACTICE OF BSE, CBE AND MAMMOGRAPHY

Knowledge and practice	BSE	CBE	Mammography
	n (%)	n (%)	n(%)
Ever heard of:			
Yes	147(98)	106(70.7)	118(78.7)
No	3(2)	44(29.3)	32(21.3)
Know is important in the early detection of breast cancer			
Yes	142(94.7)	131(87.3)	14(99.3)
No	8(5.3)	6(4)	1(0.7)
Sources of information			
Media	47(31.3)	47(31.3)	47(31.3)
Health care professionals	50(33.3)	50(33.3)	50(33.3)
Family / friends	50(33.3)	50(33.3)	50(33.3)
Other	3(2.1)	3(2.1)	3(2.1)
Age recommended to start the examination			
After puberty	12(8)	5(3.3)	4(2.7)
After 20 yo	66(44)	50(33.3)	30(20)
Since 40 yo	36(24)	71(47.3)	110(73.3)
After menopause	36(24)	11(7.3)	2(1.3)
Other	0(0)	13(8.6)	4(2.7)
Frequency recommended for performing the examination			
Every day	80(53.7)	8(5.8)	0(0)
Every month	56(37.3)	78(56.9)	33(22)
Every year	8(5.3)	24(17.5)	94(62.7)
In case of problem	6(4)	27(19.7)	18(12)
Don't know	0(0)	13(8.6)	5(2)
Who should practice it			
Doctor	39(26)	116(77.3)	120(100)
Nurse	22(14.7)	16(10.6)	30(20)
The person herself	89(59.3)	10(6.6)	0(0)
Other	3(2)	8(5.3)	0(0)
Have you done the test before			
Yes	106(70.7)	51(34)	52(34.7)
No	44(29.3)	99(66)	98(65.3)

TABLE 4

FREQUENCIES OF REPORTED BARRIERS TO OBTAINING A MAMMOGRAM

Barriers to Obtaining a Mammogram	N (%)
Lack of transportation	26 (17.3)
Too costly	99(66)
Painful	7(4.6)
Other	18(12)

services.

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