Nurses' knowledge, attitudes and practices regarding breast cancer screening in the Sousse region of Tunisia: a cross-sectional descriptive study.

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Abstract

The aim of our study is to describe the knowledge, attitudes, and practices of nurses about breast cancer screening in the region of Sousse, in Tunisia. This is a transversal descriptive study with a quantitative approach which was carried out during 2015-2016 and concerns nurses working in the different basic healthcare centers (BHC), (Tunisian health centers providing basic preventive and curative care). They were selected by simple random chance sampling (n=160) using as a basis a self-administered questionnaire written through the analysis of literature. Our sample concerns 153 nurses. Only 46.40% had a KAP (knowledge, attitudes, and practices) score above or equal to 16. This score is related to the different characteristics of the participants. It is important to highlight those practicing nurses (those working in the basic healthcare centers) should receive training in advising patients in the practice of breast self-examination so that they can educate and tell women attending BHC.

Keywords: Breast cancer, Nursing attitudes, Nursing knowledge, Nursing practice, Screening.

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Introduction

Several problems were risks which can threaten the life of the woman in short, average and long-term. It is important to be not only interested in the problems bound to the reproductive health of the woman but to other problems such as the breast cancer. Indeed, the clinical profile of breast cancer in Tunisia was characterized always by a patients' very high percentage which consults at a late stage of the disease [1].

It is recognized that among the promising strategies in the prevention of cancer, we can quote the raising awareness and the information of the population and particularly the target groups. It is necessary to become aware of the lifestyle of the patient and its effect on the health, as well as the ease of access to the health-promoting information [2]. It would be possible to believe that the integration of the knowledge, the attitudes, and practices in the Structure of the first level would allow reducing the morbidity and the mortality bound to some Non-communicable diseases as breast cancer.

Indeed, the promotion and the prevention of the breast cancer are connected to three participants: to the nursing and more particularly in their knowledge, the attitudes, and practices, to the concerned people and to the health system.

The breast cancer is one of the major problems of public health. Indeed, it is the most frequent cancer at the women worldwide. The highest incidence is in the developed countries, but it is also increasing with a rhythm alarming in low-income countries and intermediary [3].

Besides, the incidence of the breast cancer is higher from 4 to 10 times in the western countries in comparison with Asia and Africa [4].

In Tunisia, it is important to underline that the breast cancer remains the feminine the most frequent cancer, clearly in front of that of the colon [5]. The Breast cancer represents 33% of all the new cases of cancer of the woman during period 2004-2006, with an annual average of 785 cases [5].

In 2014, the breast cancer joins as the most frequent cancer in Tunisia with a rate of incidence of 1.826/100,000 w/year at the women, and its weight on the feminine mortality remains striking with 22 % among 2800 dead women [6].

It is also recognized that the creation of three registers of cancer in Tunisia served to answer a need for the medical community and for the decision-makers for a better analysis of the situation of this pathology in Tunisia. So, these registers try to inform the healthcare professionals and to enlighten the decision-makers [5]. According to the estimations for the period 2019-2024 of the register of cancers in the North-Tunisia(2003), the incidence standardized by the breast cancer will be 46.4 cases/100,000 W/year [7].

The breast cancer screening is overseen by the National office of the family and the population (ONFP) and the Direction of basic health care (DBHC). [2] Also, the clinical average diameter of the breast cancer in the diagnosis is situated around 4.0 centimetres [2].

These alarming figures thus justify the necessity of efforts to improve the early screening of the breast cancer in Tunisia.

It is important to underline that the premature detection of the breast cancer by mammography, Clinical Breast Exam (CBE) and breast self-exam (BSE) is essential to reduce the morbidity and the mortality bound to this cancer [8].

Although the mammography is considered as the only effective method of screening, it remains the most complex method and

requires many resources [9]. However, the practice of the breast self-exam helps the women to be autonomous, to be responsible for their own health [9]. So, the research is in progress to estimate the third way of screening which is the clinical breast exam as a low-cost approach for the screening of this cancer, and which can be used in the least rich countries [10].

Among the projects of breast cancer screening in Tunisia, we note that of the National office of the family and the population and that of the Tunisian Association of the health of the reproduction.

The implication of all the healthcare professionals thus remains necessary to encourage the support of the population to the early screening. In fact, the nursing skills transferred in the clinical practice should strengthen the quality and the security of the lavished care and the transmitted-on information. At present, the time seems convenient to examine the knowledge, the attitudes and the practices of the nurses of early screening of the breast cancer.

It is important also to underline that the levels of knowledge of the nurses about the breast cancer and the screening play an important role in the contents of the education of the patient [11].

Besides, the nurses of public health are more familiarized with the questions of risk assessment and screening, and their purpose is to encourage the women to take part in the program of breast cancer screening [12].

Indeed, the nurses have a major role in the education, the distribution and the raising awareness to the breast cancer at the women of the community to change their behaviour on screening [13].

In the transverse study of Ahmed and al. [14], among the important resources of distribution of the knowledge, attitudes, and practices on the breast cancer, the nurses join the group the most adapted for this action. Indeed, the nurses can have a major influence on the behaviour of the women, and they must themselves be informed well about the breast cancer and the importance of the premature detection [14].

Besides, the Tunisian health system is a pluralistic system, a compound of a public sector, a private sector and a semi-public sector. The public sector is the main supplier of health care. There is not at present an adequate mechanism of regulation between three sectors; what has for consequence a low membership of the private sector in the programs of prevention [15].

This public sector is constituted by establishments depending directly on the Ministry of Health, other ministries and by establishment's semi-public.

At present, the offer of the Ministry of Health is organized on four levels.

The basic health centers which are the front door of the public sector, form a decentralized network which meets the needs in care preventive and in curative basic care [15].

Then, the peripheral rural maternities (maternity hospitals) and the hospitals of the district; the latter containing at least, a department of medicine, a maternity and a technical basic tray.

At the third level, we find regional hospitals which are situated in the administrative centre of governorates and in certain very populated delegations and join the first note level for the specialized care.

At the fourth level, the sanitary establishments with university vocation such as teaching hospitals and specialized institutes. They provide medical care highly specialized, contribute to the education and take part in works of scientific research [15].

The literature allowed to highlight that the primary health care is a vaster concept which includes the services of first-line care, the promotion of the health and the prevention of the diseases. This concept reflects the approach of the performance of the services to a community [16].

The primary care has to refer to an ambitious program through characteristics. In fact, the primary care opens perspectives to the prevention of the diseases, to the promotion of the health, as well as to the early screening of the diseases [16].

Besides, basic health centres are functionally organized around the sanitary district and are managed either within the framework of the groupings of basic health for the most part, or less frequently by hospitals of the district or regional [16].

The Tunisian system of the care of primary health is regulated by the State, its missions are defined, but misses it financial and human resources provoke problems, what explains the interregional disparity as well as between the various governorates.

Certain basic health care centres in the region of Sousse assure a gynaecological medical consultation only once a week such as for another governorate where only three midwifes move in 10 basic health centres.

In another governorate a midwife occupies a fixed post in the centre of mother and child care while another one assures the activity of 7 BHC. While other 6 BHC in the region of Sousse has no midwife.

And for certain centres there is a mobile team which consists of a doctor gynaecologist and of two midwives, which moves in 6 others centres.

So, we notice that the mode of the care of some diseases in evolution such as the breast cancer is not completely adapted any more to the needs for the citizens and for the consultant women.

So, before setting up such a program of screening and the training courses, it is essential to estimate if the nurses intend to conform to the news directed of a program of breast cancer screening and to verify what could damage or help they are participating in the activities of screening.

The results of this study will put bases to decrease the rate of mortality and morbidity of this cancer in the women of the region of Sousse by describing the knowledge, the attitudes and the practices of the nurses.

Objective of the Study

In spite of the importance of the role of the nurses on breast cancer screening, no similar study was again led to handle this subject in the region of Sousse, Tunisia. It thus seems important to approach this problem. This study aims at describing the knowledge, the attitudes and the practices of the nurses on breast cancer screening in the region of Sousse.

Material and Methods

Our study is descriptive transverse with a quantitative approach and has for goal to describe the knowledge, the attitudes and the practices of the nurses on screening of Breast cancer in the region of Sousse, Tunisia.

Our investigation was led informed of the period of 2015-2016 for 12 months and concerned nurses working in the various basic health care centres (BHC) in the region of Sousse according to the sanitary pyramidal structure organized into a hierarchy at four levels.

Besides, in 2015, Sousse counted 305 nurses working in the various districts in the BHC from the list given by the direction of basic health care.

The quantitative data were collected thanks to a simple random chance sampling realized with 94 BHC. We realized our study on 47 BHC chosen at random. This study was exhaustive for the various BHC chosen by the sampling; where from our nurse's sample compound of 160 participants.

The nurses included in our study were the nurses working in the BHC of the structure of the first line, the nurses who agree to answer our questionnaire after the accord, both kinds, present nurses during of the study, the nurses of the various positions and the nurses working in the BHC chosen according to the method of the sampling.

The nurses are excluded from the study who participated in the validity of the measuring instrument, the nurses working in the BHC excluded according to the method of the on-leave sampling, the nurses and the not cooperative nurses.

Our study is based on a questionnaire and searches selected through the review of the literature to be inspired by good ideas and formulate the questions objectively.

Certain questions concerned the knowledge of the nurses of breast cancer screening, the risk factors of this type of cancer, the symptoms and the ways of screening.

In terms of attitudes in front of ways of early screening, it was asked to the nurses if they advised the women to practice the BSE and the reason of the non-execution of breast cancer screening.

In terms of practices, it was asked to the nurses if they practiced themselves systematically the methods of breast cancer screening, if they had learnt to make this examination, if it had been asked to the nurses to mention the main difficulty met to practice a screening of mass of this type of cancer, if they know the BSE and the frequency with which they practiced it.

Our study is based on an auto-administered questionnaire validated by a pre-test realized with 5 participants taken at random and a check by a new test of the corrections on the same population with the aim of verifying the internal validity and the reliability of the answers, the opinion of the experts and a coherence interns with one alpha of Chronbach equal to 0.68.

The realization of this questionnaire is led after the agreement of the Medical Ethics and the Research Committee for the hospital Farhat Hached, Sousse, Tunisia and for the direction of basic health care of Sousse who gave us the permission to distribute the questionnaire to the nurses.

We began the data collection with the nurses concerned by direct contact in the BHC of the district Sousse 1, Sousse 2 and Kalaa Sghira and we their directly put back the questionnaire to make sure of the largest of answers.

We contacted all the doctors' leaders and the supervisors of the various districts by telephone, e-mail, and fax to clarify the doubts which they could have.

Table 1. Knowledge, attitudes, and practices of the nurses on breast cancer screening in the region of Sousse.

	Score ≥ 16	
	Number	Percentage (%)
Gender		
Male (n=36)	13	8.5
Female (n=117)	58	37.9
Age		
[27-40] (n=93)	43	28.2
[40-50] (n=35)	18	11.6
[50-59] (n=25)	10	6.6
Exercise place		
Urban areas (n=60)	37	24.2
rural areas (n=93)	34	22.2
level of education		
the license or the diploma of nursing State (n=93)	44	28.8
the high school diploma with two years of training (n=57)	26	17
Master (n=3)	1	0.7
Seniority		
[1-10] (n=70)	30	19.7
[10-20] (n=46)	24	15.8
[20-36] (n=37)	17	10.9

The questionnaire intended for the nurses was distributed and collected during seven months (from January to July) by means of the direction of the basic health care which distributed

questionnaires in the various remaining districts of Sousse, by means of the supervisors of these districts.

We filled the questionnaire in collaboration, with the oral consent of the participants, while watching the anonymity and the freedom of expression to encourage and assure the loyalty of the answers.

For the data analysis, the meditative information was seized and handled by the software

Statistical Package for the Social Sciences™, version 20.0. To reach the specific goals, we made the calculation of the descriptive statistics associated with the diverse quantitative variables of the questionnaire is: the frequencies and the averages relative to the answers to the closed questions.

For the free open question and without predetermined choices, the dominant idea of the answers was taken, coded and used in a sentence by protecting the words and the expressions used by the participants to guarantee a rigorous largest. Figures and graphs allowing to distinguish the measure of the variables of our study are presented by software Excel 2016™ and Word 2016™.

Furthermore, a score KAP (knowledge, attitude, practice) was calculated according to the model of a study on KAP (knowledge, attitudes, and practices) nurse's inhabitants of Niger towards the breast cancer [17].

In our study, any correct answer to a question amounted to 1 point. On the basis of the obtained answers, it was decided of dichotomized the score at the threshold of 16, the superior scores or equal to 16 being considered good scores.

The validity of the score was tested by the coefficient alpha of Cronbach (=0.62).

Results

The various BHC chosen of the region of Sousse contain 160 nurses. Among them, 5 nurses had participated in the pre-test, 153 had answered our questionnaire and only 2 nurses had refused to answer. Thus, the rate of participation was 50.16%.

The majority of the nurses (65.40%) are main male nurses, 20.90% are nurses, 10.50 % of the major nurses and 3.30% of the supervisors of the unity of care.

According to the results of table 1, 8.50 % of the men had a score=16 versus 37.90 % at the women. Also, the nurses from 27 to 40 years old was a score KAP (28.20 %) higher than those from 41 to 50 years old (11.60%) and 51-59 years old (6.60 %).

So, the nurses working in rural areas (24.20%) had a better score than those practicing in urban areas (22.20 %).

Concerning the level of education, it was noticed that the nurses having the license or the diploma of nursing State (28.80%) had a better score KAP than those having the high school diploma with two years of training (17.00%). The nurses with a seniority from 1 to 10 years (19.70%) was a score KAP upper to 16 with regard to those with a seniority from 11 to 20 years old (15.80 %), and from 21 to 36 years old (10.90 %) (Table 1).

Table 2. The reasons for the no-practice of the clinical breast exam in basic health centres.

	Number	Percentage (%)
The insufficiency of the formation	34	45.94
Lack of personnel	13	17.56
The refusal of women to be examined by male doctors	12	16.22
Lack of time	9	12.16
Lack of rooms of examinations	6	8.12
Total	74	100

Table 3. The difficulties met for a wide practice of breast cancer screening.

	Yes		No	
	N	%	N	%
The misunderstanding	51	33.3	102	66.7
The shame/embarrassment of the examination of breasts	52	34	101	66
The lack of financial means	15	9.8	138	90.2
The carelessness	72	47.1	81	52.9
The fear/anxiety of having the cancer	60	39.2	93	60.8
The fear of the conditions of realization of the screening	3	2	150	98
The quality of the welcome	0	0	153	100

N: Number of nurses; %: Percent.

For the majority of the nurses (45.94%), the major reason for the not practice of the CBE was the insufficiency of the formation. Other reasons were also awarded to the not practice of the CBE such as the lack of personal for 17.56%, the refusal of the women to be examined by a doctor man for 16.22%,

lack of time for 12.16% and only for 8.12% the reason was the lack of rooms of examinations (Table 2).

The main difficulties perceived by the nurses preventing a wide practice of breast cancer screening were the carelessness (47.10%), the fear/anxiety of having the cancer (39.20%), the shame/embarrassment of the examination of breasts (34%), and the misunderstanding (33.30%) (Table 3).

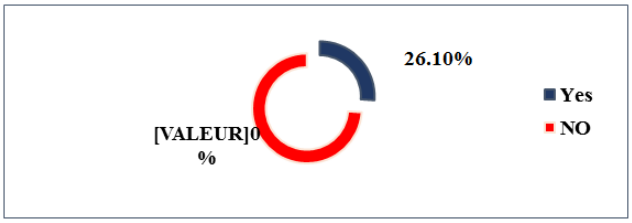

Figure 1. The participation of the nurses in educational sessions of breast cancer screening.

The majority of the nurses (73.80%) had not participated in educational sessions of breast cancer screening (Figure 1). Among the reasons of the non-participation in these sessions, the lack of training was reported by 28.32% of the nurses, the misunderstanding for 20.35% and the lack of motivation for 19.47%.

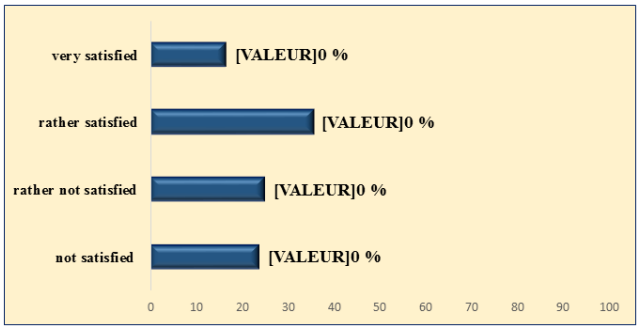

Figure 2. Perception of the consultant women on the screening of Breast cancer.

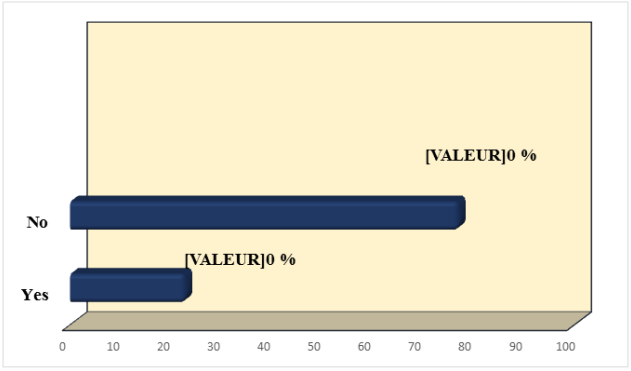

Figure 3. Difficulties adopting the preventive behaviour of breast cancer screening in a regular and continuous way.

The circle of acquaintances was "rather satisfied to very satisfied" for 51.60% of the participating nurses (Figure 2). The majority of the participants (77.10%) had no difficulty adopting the preventive behaviour of breast cancer screening in a regular and continuous way (Figure 3).

So, according to our results, the lack of knowledge, the time and the responsibility of the work were among the situations which prevented from adopting the preventive behaviour of breast cancer screening for 45.75% and 43.79% of the nurses.

Discussion

Our sample concerned 153 nurses who answered our request with a rate of 95.62% participation. We noted a feminine ascendancy with a sex ratio of 0:3.

Mean age of our sample was 41.14 ± 8.86 years old with extremes of 27 and 59 years.

Almost two thirds (60.80%) of our sample practiced in a rural area. Besides, for the majority of the nurses (45.94%), the major reason of the non-practice of the CBE (clinical Breast exam) was the insufficiency of training. Other reasons were also attributed to the non-practice of the CBE such as the refusal of the women to be examined by a doctor man for 16.22% of them.

In another study, for the activities of the breast cancer screening, the women see certain reluctance towards the doctor men and prefer to resort to the staffs of a feminine kind to benefit from these services [18]. In the transverse descriptive study of Sakine and al. (2009), the main reasons for not making the BSE is the misunderstanding of the technique of the BSE (Breast Self-exam) (57%), the absence of histories of breast cancer (39%) and finally the oversight (18%) [19].

According to our sample, the main difficulties hindering a wide practice of breast cancer screening were the carelessness (47.10%), the fear/anxiety to have cancer (39.20%), the shame/embarrassment of the examination of breasts (34%) and the misunderstanding (33.30%). Besides, in the study carried out in Niamey, in Niger, in 2010, among the main difficulties for a wide practice of the screening of mass of the breast cancer, the lack of training was reported by 22.30% of the questioned professionals and it lack the means by 18.70% [17].

Furthermore, the main difficulties perceived by the nurses preventing a wide practice of breast cancer screening are the lack of financial means (30.60%), the lack of people in number and qualification (16.70%), the lack of information (13.70%), lack of raising awareness of the population (10.6%); however, the lack of professional raising awareness was evoked only by 3.40% of the students [20].

Besides, the majority of the nurses 73.80% had participated in educational sessions of breast cancer screening. That is why, according to the study carried out in Sri Lanka in 2011, programs Educational of health should be led to improve the knowledge on the good technique of the BSE [21]. So, it is necessary for the healthcare professionals, in particular, the nurses who have frequent contacts with the women, to have some knowledge on the factors which influence the appeal to the behaviour of breast cancer screening [22].

According to the literature, the nurses are at the heart of the fight against the breast cancer, in particular of the screening. This particular place of the nurses strengthens the importance

which supplies the adequate information on the breast cancer and the screening [23].

Furthermore, the nurses have an educational role to be played. This role consists in encouraging the women to get acquainted with their breasts, to offer of the information, to direct the women to the gynecological services and to tell them about the program of screening [24].

The literature teaches us that, in their work, the nurses have the opportunity to discuss with the patients and to encourage them to be more watchful as for the health of their breasts; they play an important role in the breast cancer screening [25].

As underline it certain authors [26], the privileged position of the nurses allows them to discuss the health of breasts, the importance of the cancer screening and the mammography [26].

According to Secginli and Nahcivan (2006), the nurses can give much to the effective promotion of breast cancer screening [23].

Besides, the nurses have a role to play not only in raising awareness but also in the re-launching of the patients so that they cross regularly their mammography. The interest of the nurses towards the health of breasts, as shown by their promotion of the breast self-examination, carries to believe that they will integrate probably without any trouble the raising awareness to the breast cancer screening in their tasks [24].

Limits of the Study

The study was delicate and difficult to realize and we were confronted with several obstacles. Indeed, first, we quote the rarity of the articles on the study of knowledge, attitudes, and practices of the nurses of breast cancer screening, particularly in Tunisia, what urged to us to choose a quantitative investigation. Our study is so the first search which handles this concept in the region of Sousse.

The travel to the different basic health centres (BHC) is another difficulty which engendered the waste of time in the realization of the study.

Another limit in the questionnaire was filled by the nurses investigated during the schedules of the work; it was not thus possible to us to assure us that these questionnaires were well performed without the assistant of a third person.

The implications for the practice, the research and the training formation

This research work brings interesting elements of reflections. Our results can supply important indications to improve the knowledge, the attitudes and the practices of the nurses of breast cancer screening.

We propose the following recommendations in the domains of the research, the training, the practice of the health workers.

First of all, in the field of the research, we suggest realizing a similar study with a qualitative investigation with the women consulting the various BHC of the region of Sousse.

So, a more varied population, by increasing every time possible the size of the sample, could supply interesting data and enrich our level of knowledge on the breast cancer screening to the nursing staff in the various BHC of Tunisia.

In the field of the formation, we suggest developing certain activities of learning favouring the integration of the knowledge, as:

- The demonstrations and the sessions of learning by clinical nursing situation;
- Put the subject of the breast cancer screening in value in teachings and find the adapted educational methods;
- Make sensitive universities in the problems of the health and in the importance of the prevention of the breast cancer;
- Insist on the importance of the update of the knowledge of the nurses of breast cancer screening.

In the field of the practice, we propose:

- To restore the results of the present study to the direction of basic health care to make sensitize the persons in charge to consider inadequacies and present gaps at the nurses working in the BHC on breast cancer screening;
- To plan a specific information campaign and the integration of the nurses in these campaigns;
- To organize sessions of information and communication with regular and continuous rhythm in the BHC with the assistance of the nurses by using various ways such as the demonstration of the BSE, the posters, and the leaflets.
- Strengthen the awareness-raising activities of the nurses about the breast cancer screening to obtain their membership in these programs.
- Set up actions to improve the knowledge of the nurses as regards the breast cancer screening.
- Integrate the nurses into the partners of information to help them systematize the transmission of the messages of prevention and promotion of the breast cancer screening during the consultations.
- Make the breast cancer screening during any examination realized by the nurses working in
- Basic Health Centers during a consultation offered to the women.

Conclusion

In Tunisia, the breast cancer represents a major sanitary problem today requiring a global care. It is thus important to act to decrease the rate of morbidity and mortality of this disease. It is possible also to decrease its gravity by the screening to detect at an early stage the disease allowing a good forecast and a better quality of life.

Besides, knowledge and practices of the nurses working in the BHC on the activities of premature detection are very important for the reduction of the incidence of the breast cancer.

Finally, the results of the study showed that knowledge, attitudes and the practices of the nurses in the Basic Health

Centres of the region of Sousse, Tunisia on premature detection of the breast cancer were not rather satisfactory, what could be a cause of the increase of the incidence of the cases of breast cancer diagnosed in advanced stages; from where the importance of an integration of the nurses in the program of breast cancer screening.

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