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Research Article

Knowledge, Attitudes and Practices of Health Personnel Regarding Breast Cancer Screening: Case of a Level II Hospital in Conakry

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Abstract

Introduction: Breast cancer is the leading cancer in women worldwide. It is the most common cause of cancer-related death in women. The objective of this study was to assess the knowledge, attitudes, and practices of health personnel at Ratoma Communal Medical Center regarding breast cancer screening. *Methodology*: This was a cross-sectional, prospective, descriptive study lasting 3 months from July 1 to September 30, 2024, carried out in a level II health structure of the health pyramid in Conakry, involving health personnel working in this hospital, present during the data collection period and having agreed to participate in the study. *Results*: The response rate of respondents was 86.7%. General practitioners were the most represented (41.2%) followed by midwives (30.6%) and nurses at 8.2%. All respondents stated that they had heard of breast cancer (100%), of which 90.6% were aware of the existence of risk factors and 98.8 % were aware of the existence of screening methods. All participants had a favorable attitude to breast cancer screening. The level of knowledge of the frequency of mammography (36.5%) and breast self-examination (43.5 %) was low. The practice of personal screening was 80.4 % and only 24.4 % of female staff had performed a screening mammogram. *Conclusion*: Health personnel had a good level of knowledge and acceptable attitude towards breast cancer screening. The rate of mammography performance and knowledge of the frequency of breast self-examination and mammography remain low. It is therefore necessary to promote awareness and continuous training of health providers on the different methods of breast cancer screening.

Keywords

Knowledge, Attitudes and Practices, Health Personnel, Breast Cancer Screening

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1. Introduction

Breast cancer is the leading cancer in women worldwide. In 2018, more than 2 million new cases of breast cancer were diagnosed worldwide, representing 11.6% of all cancers. Breast cancer is also the most common cause of cancer-related death in women [1]. Since the last estimates in 2008, incidence has increased by more than 20%, and mortality by 14% [2]. In Guinea, it ranks second among women's cancers after cervical cancer, and most breast cancers are still discovered at late stages of the disease. [3]. Although considerable progress has been made in the treatment of breast cancer, the prognosis remains poor in developing countries [4]. The poor prognosis could be largely due to delayed diagnosis. When breast cancer is diagnosed at an early stage, the prognosis is considered good, with reduced morbidity and mortality [5]. Its early detection allows for the introduction of conservative surgical therapy that is less burdensome from a psychological and medical point of view, and improves the prognosis. Screening methods are based on mammography, clinical breast examination by a health professional and self-breast examination by women themselves [6]. These last two simple and inexpensive techniques seem to be more realistic and reasonable as methods of screening for breast cancer in developing countries [7]. Studies have shown that the implementation of an early detection program over several years can reduce the mortality rate due to this disease by 25% [3]. For effective screening and early diagnosis, adequate knowledge and awareness are of high importance. Health professionals can bring about a significant change in the overall perspective of their patients regarding screening practices and positively influence their attitudes and beliefs [8]. Several studies have been conducted on breast cancer in our country, but despite the important role played by health personnel in breast cancer screening, none of them were interested in their levels of knowledge, attitudes and practices regarding breast cancer screening. This study therefore aims to fill this information gap. The objective of this study was to assess the knowledge, attitudes and practices of health personnel at the Ratoma Communal Medical Center (CMC) regarding breast cancer screening.

2. Methodology

2.1. Type of Study and Population

This was a cross-sectional, prospective descriptive study lasting 3 months from July 1 to September 30, 2024, carried out at the communal medical center of Ratoma (level II health structure of the health pyramid) in Conakry, involving health personnel working in this health structure, present during the data collection period and having agreed to participate in the study.

2.2. Sampling

We have carried out an exhaustive recruitment of all healthcare personnel (doctors and paramedics) meeting the selection criteria defined above.

2.3. Data Collection

For this step, we gave each participant a collection sheet containing open and closed questions which was completed by the respondents after reading the content and providing clarification if necessary.

For each subject surveyed, we studied socio-professional characteristics, knowledge and attitudes. The practical part of the screening was reserved for female health workers. Knowledge was assessed based on the description of the modalities or technique of breast self-examination, namely:

1) monthly practice (post-menopause) or from day 7 to day 10 of the cycle (in a woman during the period of genital activity);
2) a standing inspection, bare-chested, facing the mirror, with the body leaning slightly forward;
3) a precise, bilateral, comparative inspection of both breasts looking for asymmetry, skin changes, redness, retraction, nipple discharge, in short, any recent changes to the breast must be noted;
4) a careful, comparative palpation, lying on the back or in the shower, the left hand palpating the right breast and vice versa, with the pads of the fingers, the hand being flat, crushing the breast on the costal grill, by exercising circular or back-and-forth movements which explore all the quadrants of each breast without forgetting the axillary extension or the submammary fold;
5) always finish with a slight expression of the nipple in search of a provoked flow;
6) an examination of the axillary hollow with hooked fingers sweeping the entire axillary hollow against the thorax, the pectoralis major and the latissimus dorsi in search of adenopathy.

2.4. Data Entry and Analysis

The data were entered using Excel software from the Office 2010 package and then analyzed using SPSS software in its version 26.0.

2.5. Ethics

Informed consent was obtained from participants, and confidentiality and anonymity were maintained.

3. Results

Of the 98 health workers targeted by the study, 85 agreed to respond to the questionnaire, representing a response rate of 86.7%.

Sociodemographic characteristics

The average age of respondents was 36±9.0 years with extremes of 19 and 69 years.

The majority of female agents were 57.6% compared to 42.4% of male agents.

The majority of agents who responded to the questionnaire were married (65.9%), followed by singles (27.1%). General practitioners were the most represented in the sample (41.2%), followed by midwives (30.6%) and nurses at 8.2%. Specialist doctors represented 5.9% of the sample.

Knowledge of health personnel on breast cancer screening

All respondents said they had heard of breast cancer (100%) and 81.3% mentioned that breast cancer is a major public health problem in Guinea.

Table 1. *Knowledge of health personnel on breast cancer screening from July 1to September 30, 2024 in a level II health facility in Conakry.*

Knowledge	Number of employees (n=85)	Percentage
Awareness of the existence of breast cancer	85	100
Sources of information about the existence of breast cancer		
Media	42	49.4
Structured training	26	30.6
Initial training	51	60.0
Friends	28	32.9
Family	15	17.6
Knowledge of the existence of risk factors for breast cancer		
Yes	77	90.6
No	8	9.4
Risk factors for breast cancer		
Personal or family history of breast cancer	59	69.4
High socio - economic level	25	29.4
Hyperestrogenism	38	44.7
Early menarche	28	32.9
Late menopause	31	36.5
Elderly primiparity	40	47.1
Lack of breastfeeding	58	68.2
Nulliparity	31	36.5
Obesity	27	31.8
Genetic predisposition	36	42.4
Smoking	56	65.9
None	4	4.7
Breast cancer screening methods		
Existence of screening methods		
Yes	84	98.8
No	1	0.2
Different means of screening		
Breast self-examination	67	78.8
Ultrasound	24	28.2
Mammography	75	88.2
Most effective means of screening		
Ultrasound	4	4.7
Breast self-examination	28	32.9
Mammography	68	80.0
Screening allows early diagnosis of breast cancer		
Yes	74	87.1
No	11	12.9
Early detection reduces breast cancer death rate		
Yes	80	94.1
No	5	5.9
Description of the breast self-examination technique		
Standing shirtless in front of the mirror	48	59.3
Look for breast asymmetry	43	53.1
Hand flat on the breast	32	40.5
Palpate in a circular motion	60	75.0
Palpate with the pads of the fingers	49	60.5
Pa l per the breasts what has drant by quadrant	63	77.8
Feeling breasts while lying down	31	38.3
Squeeze each nipple	38	46.9
Feel the armpits	49	60.5

Table 2. Attitudes of health personnel towards breast cancer screening from July 1to September 30, 2024 in a level II health facility in Conakry.

Attitudes toward breast cancer screening	Number of employees (n=85)	Percentage
Favorable attitude towards breast cancer screening	85	100
Participation as a health worker in a breast cancer screening campaign		
Yes	15	17.6
No	70	82.4
Have you advised breast cancer screening?		
Yes	72	84.7
No	13	15.3
Recommended screening methods		
Breast self-examination	56	65.9
Mammography	40	47.1
Ultrasound	10	11.9
Recommended screening method frequencies		
Breast self-examination		
At any time of life	33	38.8
I don't know	15	17.6
Every month at the end of your period	37	43.5
Mammography		
At any time	11	12.9
I don't know	36	42.4
Every 2 years	31	36.5
Every 3 years	7	8.2

Table 3. Practices of female health personnel in relation to breast cancer screening from July 1to September 30, 2024 in a level II health facility in Conakry.

Breast cancer screening practices	Number of employees (n=51)	Percentage
Personal screening practices		
Yes	41	80.4
No	10	19.6
Screening methods used		
Breast self-examination		
Yes	39	95.1
No	2	4.9
Ultrasound		
Yes	1	2.4
No	40	97.6
Mammography		
Yes	10	24.4
No	31	75.6
Frequency of personal practice of breast self-examination (n=39)		
At any time	26	66.7
Every month at the end of your period	13	33.3
Frequency of personal practice of mammography (n=10)		
Irregular	7	70.0
Every 2 years	2	20.0
Every 3 years	1	10.0

4. Discussion

We conducted a 3-month descriptive and prospective study aimed at assessing the level of knowledge, attitudes and practices of health personnel in a level II health facility on breast cancer screening.

To our knowledge, in Guinea, there is no national breast cancer screening program or similar study despite the important role played by health workers in breast cancer screening. However, the involvement of health personnel proves essential for the success of breast cancer screening [9]. The response rate of health workers targeted in this work was 86.7%. But as with any declarative study, there may be a gap between what the respondent says and what he actually does, however our results are consistent with those of other studies in similar contexts which suggests that these results are valid and interpretable. This response rate is identical to that of Zine K and al. or 87% [10]. The lack of response from some health providers was justified by the lack of time without ignoring that the refusal to participate could also be explained by the fact that some of them thought that it was an assessment of their intellectual level. More than 8 out of 10 respondents considered breast cancer as a public health problem in Guinea. Similar observations with higher rates have been reported in

some countries on the African continent and in Saudi Arabia [10-12]. This work shows that all of the respondents were aware of the existence of breast cancer in our populations. This information was acquired either during the initial training course (medical school or in health schools) or during structured training and for some through the media or family. The level of knowledge of health personnel on the risk factors of breast cancer was good. This finding corroborates that of Kemfang N'gowa and al. who in 2015 reported a good level of knowledge of health providers at the Yaoundé General Hospital on the risk factors of breast cancer [13]. The finding reveals that in the majority of cases the risk factors were known and the most frequently cited were personal or family history of breast cancer (90.6%), absence of breastfeeding (68.2%) and elderly primiparity (47.1%). On the other hand, high socioeconomic level, obesity, early menarche, late menopause and nulliparity were recognized as risk factors by only nearly 3 out of 10 respondents. In the study of Saeedi MY and al. [11] the most frequently reported risk factors by female general practitioners were family history of breast cancer (91.9%), advanced age (82.1%), increased breast density (78%), late menopause (75.6%) and nulliparity (73.1%). An Australian study revealed that general practitioners have limited knowledge about some aspects of breast cancer risk factors, only a quarter of them recognized age as a risk factor for breast cancer breast [14]. In the Kingdom United, a study carried out on the knowledge of general practitioners on breast cancer risk factors showed that more than half of participants were able to correctly identify the risk factors assessed [15]. This disparity could be explained by the diversity of the population making up our sample dominated by doctors (41.2%) of whom more than 95% were general practitioners followed by midwives (30.6%). Mammography and breast self-examination were the most cited screening methods. On the other hand, a significant portion of health providers mentioned breast ultrasound among the means of breast cancer screening. We agree with the conclusion of Kemfang N' Gowa and al. [13] who in their series reported an identical finding to ours, indicating that this suggests the need to strengthen the training of staff at the Yaoundé General Hospital to strengthen its capacities in breast cancer screening. In a study carried out in Burkina Faso in 2019, mammography (48.95%) and breast ultrasound (36.36%) were the means of screening for breast cancer cited by health providers [16]. Indeed, for the exploration of dense breasts, the sensitivity of mammography is reduced and ultrasound makes it possible to ensure better visualization of lesions [17]. Analysis of these results reveals that most of the health personnel interviewed did not properly master the different stages of breast self-examination. Quadrant-by-quadrant breast palpation, circular palpation, armpit palpation and the use of fingertips for the examination were the most frequently described elements, however, the other elements of the examination were very little known by the providers at the study site. This demonstrates the need to ensure continuing training for this staff in breast cancer screening through breast self-examination, because the lack of mastery of this practice by health personnel could contribute to a decrease in the screening rate, an increase in the rate of late diagnosis as well as a decrease in the survival rate of breast cancer patients. All of the respondents stated that they were in favor of breast cancer screening. The health worker status of the study population could explain this rate of adherence to this public health practice which can save lives. Regarding the frequency of mammography, 42.4 % of health workers stated that they did not know the frequency of this examination, nearly 13% said that it should be done at any time and only 36.5 % indicated that mammography screening is done every 2 years. An identical observation was reported in the literature with 30.07% of workers recommending a radiological examination every two years [16]. Several organized screening programs have adopted a 2-year surveillance schedule, such as those in France, Canada, Belgium, and Morocco [18, 19]. However, this frequency varies. In the United States, mammography screening is performed annually [20, 21]. The level of knowledge among providers at our study site about the frequency of breast cancer screening with ammography is low. This is a shared observation. In Heena 's study H and al. [22] only 1.6% of their sample had a good level of knowledge compared to 26.8% who had a passable level in terms of mammographic screening for breast cancer. Abda N and al. [23] had also noted a low level of knowledge among health workers regarding radiological screening for breast cancer, particularly in rural areas. The large number of paramedics (midwives and nurses) in the sample and the low representativeness of specialist doctors could explain this finding. The introduction of a training module on mammographic screening for breast cancer in the midwifery training curriculum is necessary to overcome this lack of information. Regarding breast self-examination, only 4 out of 10 respondents knew the frequency of this practice. This finding is consistent with that reported by Kemfang N'gowa and al. [13] in their study on the knowledge, attitudes and practices of health providers on breast cancer screening in Yaoundé in 2015. This calls on health and educational authorities to organize awareness and training sessions for these health personnel on the importance and technique of breast self-examination in order to improve their level of knowledge of this practice and increase the rates of screening and early diagnosis of this cancer. In the absence of an organized mammographic screening system in our poor countries, breast self-examination continues to be recommended in Africa as a means of screening. More than 8 out of 10 respondents indicated having performed breast cancer screening at least once for themselves. Among these female staff who performed screening, almost all women (95.1%) mentioned having performed breast self-examination, of which only 1/3 (33.3%) performed it at the recommended monthly frequency. Frequencies lower than ours have been reported by some authors. Kemfang N'gowa and al. [13]. This finding denotes the lack of awareness of the importance of

breast self-examination in breast cancer screening and the lack of mastery of this practice by most health professionals at the study site. Regarding mammography screening, approximately a quarter of the agents interviewed had performed this examination and only 20% had done so within a 2-year interval. Despite an acceptable level of knowledge about breast cancer screening among providers at our study site, the practice of screening mammography remains below expectations. This could be explained by the fear of some female providers of exposing themselves to X-rays, the high cost of mammography, which must be borne by the workers or their parents, and the difficult accessibility of this examination.

5. Conclusion

This work shows that the health staff of the Ratoma Communal Medical Center have a good level of knowledge and an acceptable attitude towards breast cancer screening. However, the rate of mammography and knowledge of the frequency of breast self-examination and mammography remain low. It is therefore necessary to promote awareness and continuous training of health providers on the different methods of breast cancer screening. Good practice of breast cancer screening among health personnel could lead to an increase in the screening rate of this cancer in the general population and a decrease in the rate of deaths from breast cancer.

Abbreviations

CMC Communal Medical Center

Author Contributions

All authors contributed to the completion of this work.

Conflicts of Interest

The authors declare no conflicts of interest.

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