KNOWLEDGE AND PRACTICE OF DOCTORS AND NURSES REGARDING EARLY DETECTION OF BREAST CANCER

Conhecimento e prática de médicos e enfermeiros sobre detecção precoce do câncer de mama

Conocimiento y práctica de médicos y enfermeros sobre detección precoz del cáncer de mama

ABSTRACT

Objective: To compare the self-reported knowledge and practice of doctors and nurses of the Family Health Strategy regarding early detection of breast cancer. **Methods:** Cross-sectional study conducted in the municipality of Campo Grande, Mato Grosso do Sul, with doctors and nurses of the Family Health Strategy between 2011 and 2012. A structured questionnaire was used to assess sociodemographic variables and knowledge and practice regarding early detection of breast cancer. The assessment of the association between the professional class and the other variables was performed using the Chi-squared test with a significance level of 5%. **Results:** 109 professionals were interviewed: 49.5% (n=54) were doctors and 50.5% (n=55) were nurses. Of these, 72.2% (n=39) of the doctors and 89.1% (n=48) of the nurses had received training on breast cancer. As for the most indicated exam for early detection of breast cancer, there was significant difference regarding mammography (p<0.001), which was indicated by 50% (n=50) of the doctors and 13.2% (n=7) of the nurses. **Conclusion:** There were significant differences both in the knowledge and in the practice regarding the actions for early detection of breast cancer between doctors and nurses working in the FHS. Doctors presented greater knowledge of mammography as the most adequate method for the detection of BC in its earliest stages when compared to nurses. Regarding the practice, the CBE is performed less than expected by both doctors and nurses.

Descriptors: Breast Neoplasms; Family Health Strategy; Professional Practice.

RESUMO

Objetivo: *Comparar o conhecimento e a prática autorreferida dos médicos e enfermeiros atuantes na Estratégia de Saúde da Família em relação à detecção precoce do câncer de mama.* **Métodos:** *Estudo transversal realizado no município de Campo Grande, Mato Grosso do Sul, com médicos e enfermeiros atuantes na Estratégia Saúde da Família, entre 2011 e 2012. Utilizou-se um questionário estruturado para investigação das variáveis sociodemográficas e conhecimento e prática no que diz respeito à detecção precoce do câncer de mama. A avaliação da associação entre a categoria profissional e as demais variáveis foi realizada por meio do teste Qui-quadrado, considerando nível de significância de 5%.* **Resultados:** *Foram entrevistados 109 profissionais, dos quais 49,5% (n=54) eram médicos e 50,5% (n=55) eram enfermeiros. Destes, 72,2% (n=39) dos médicos e 87,2% (n=48) dos enfermeiros haviam recebido capacitações referentes ao câncer de mama. Quanto ao exame mais indicado para a detecção precoce do câncer de mama, houve diferença significativa para mamografia (p<0,001), sendo indicada por 50% (n=50) dos médicos e 13,2% (n=7) dos enfermeiros.* **Conclusão:** *Houve diferenças significativas tanto no conhecimento quanto na prática referentes às ações para a detecção precoce do CM entre médicos e enfermeiros atuantes na ESF. Os médicos apresentaram maior conhecimento sobre a mamografia como método mais adequado para detecção em estágio iniciais do CM quando comparados aos enfermeiros. No que concerne à prática, o ECM é realizado abaixo do esperado, tanto por médicos como por enfermeiros.*

Descritores: *Neoplasias da Mama; Estratégia Saúde da Família; Prática Profissional.*

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RESUMEN

Objetivo: *Comparar el conocimiento y la práctica auto referida de médicos y enfermeros de la Estrategia de Salud de la Familia respecto la detección precoz del cáncer de mama.* **Métodos:** *Estudio transversal realizado en el municipio de Campo Grande, Mato Grosso do Sul, con médicos y enfermeros de la Estrategia de Salud de la Familia entre 2011 y 2012. Se utilizó un cuestionario estructurado para investigar las variables sociodemográficas, el conocimiento y la práctica respecto la detección precoz del cáncer de mama. La valoración de la asociación entre la categoría profesional y las demás variables se dio a través de la prueba Chi-cuadrado, considerando el nivel de significación del 5%.* **Resultados:** *Fueron entrevistados 109 profesionales de los cuales el 49,5% (n=54) eran médicos y el 50,5% (n=55) enfermeros. De estos, el 72,2% (n=39) de los médicos y el 87,2% (n=48) de los enfermeros recibieron capacitaciones sobre el cáncer de mama. Respecto la prueba más indicada para la detección precoz del cáncer de mama, hubo diferencia significativa para la mamografía (p<0,001) que fue indicada por el 50% (n=50) de los médicos y el 13,2% (n=7) de los enfermeros.* **Conclusión:** *Hubo diferencias significativas para el conocimiento y la práctica de las acciones de detección precoz del CM entre los médicos y los enfermeros de la ESF. Los médicos presentaron más conocimiento sobre la mamografía como método más adecuado para la detección en fase inicial del CM al comparar con los enfermeros. Respecto la práctica, el ECM es menos realizado de los que se espera de los médicos y enfermeros.*

Descriptores: *Neoplasias de la mama; Estrategia de Salud Familiar; Práctica Profesional.*

INTRODUCTION

Among the most common malignant neoplasms, breast cancer (BC) is the one that mostly affects women in the world. According to estimates from the National Cancer Institute (*Instituto Nacional de Câncer – INCA*), 57,960 new cases of BC are expected in the country in 2016, which represents 56.20 cases per 100,000 women[1]. In the state of Mato Grosso do Sul, an estimated 820 women will be diagnosed with BC in the same year, with 460 cases in its capital Campo Grande[1].

BC is a disease of utmost importance to public health in the country due to its high incidence. Primary prevention measures are very important given that circa 30% of BC cases could be prevented through healthy habits and behaviors[1]. However, this type of prevention is not fully possible due to the multiple causes involved in its etiology – it is not possible to predict the onset of the disease[2,3].

BC secondary prevention strategies should be based on the early detection of the disease through measures such as early diagnosis with actions carried out with individuals with signs and/or symptoms of the disease and screening of the asymptomatic population through tests or examinations[4], including mammography and clinical breast examination (CBE)[5].

Early detection is based on the concept that the earlier the detection and diagnosis of cancer, the better the prognosis, increasing the possibility of cure and survival among women[5-7]. The high morbidity and mortality rates in the country associated with this type of cancer are probably due to late diagnosis. It is recommended the association of primary and secondary prevention practices[8] in order to reduce such rates and the development of policies focused on women's health that can provide them with access to effective screening and early diagnosis actions[9].

BC actions in Brazil must be coordinated by the Primary Health Care (PHC) through the Family Health Strategy (*Estratégia de Saúde da Família – ESF*)[10,11]. This level of care is close to the user and should follow the person longitudinally; it is the gateway to Brazil's National Health System, also known as the Unified Health System (*Sistema Único de Saúde – SUS*), providing promotion, prevention, curative and rehabilitative services to optimize the health and well-being of individuals[12]. Strategies to fight BC should include effective communication with the population, warning people about the onset of signs and symptoms and increasing their adherence to proposed actions; in addition, it should include continuous training of professionals in order to improve their diagnostic capability and decision-making and the organization of services to ensure comprehensive care throughout BC treatment[13].

Doctors and nurses play a significant role in health promotion, prevention and diagnosis of BC among professionals who compose the ESF team, as well as in the monitoring of women with this disease. Requesting a mammogram is among the specific duties of doctors to control BC, which also include complementary tests when necessary, such as ultrasound. The identification of the vulnerable population, CBE, health education activities, palliative care, and others[10], are among the duties of doctors and nurses.

The increase in BC incidence, prevalence and mortality rates indicate the constant need for the reorganization of PHC actions regarding the timely diagnosis and treatment. Health promotion, through the adoption of habits such as proper nutrition, weight control, regular physical activity and abandonment of tobacco and alcohol, becomes important for improving indicators related to this disease[10]. Thus, it is essential to improve communication between professionals, population and health services for the dissemination of information about risk factors, signs, symptoms, health promotion and disease prevention.

Given that, the present study aimed to compare the self-reported knowledge and practice of doctors and nurses of the Family Health Strategy (*Estratégia de Saúde da Família – ESF*) regarding early detection of breast cancer given the importance of these professionals in BC actions.

METHODS

This is a cross-sectional study conducted in the municipality of Campo Grande, Mato Grosso do Sul, in the period from August 2011 to August 2012. The study was carried out in all the 27 Family Health Care Centers (*Unidades Básicas de Saúde da Família – UBSF*) located in the urban area of Campo Grande, totaling 64 ESF teams.

The initial sample of the present study included all the 128 health professionals – 64 doctors and 64 nurses working in the ESF and responsible for actions related to early detection of BC. However, some professionals who for some reason were not in the UBSF or refused to participate in the study were excluded, which resulted in a final sample of 109 professionals: 54 doctors and 55 nurses.

The research used a previously developed self-administered and structured questionnaire. The professionals were identified through contact with managers of the UBSF and then contacted and invited to participate in the study; after that, researchers scheduled visits for the application of the research instrument.

The questionnaire contained questions that sought to assess sociodemographic variables and knowledge and practice regarding early detection of BC in PHC; the results obtained from doctors and nurses were then compared.

The association between vocational training of interviewees and other variables was assessed using the Chi-squared test. The results from other variables assessed were presented using descriptive statistics or tables and graphs. Statistical analysis was performed using SPSS version 20.0 or SigmaPlot version 12.5, with a significance level of 5%[14].

All participants were informed about the objectives and the methodology of the research. Those who agreed to participate signed the free informed consent form as recommended by Resolution 466/2012 of the National Health Council. The study was approved by the Research Ethics Committee of the Federal University of Mato Grosso do Sul (*Universidade Federal de Mato Grosso do Sul*) under Opinion No. 1719.

RESULTS

The questionnaire was answered by 109 professionals: 49.5% were doctors and 50.5% were nurses. Doctors' age ranged 23-60 years with a mean age of 35.26±1.48 years (mean±standard error of the mean). Nurses' age ranged 25-59 years with a mean age of 36.31±1.28 years. There was no significant difference between doctors and nurses with regard to age (Student's t-test, p=0.598). Most of the population was composed of female professionals, both among doctors (51.9%) and among nurses (89.1%) (p<0.001).

Among participants, 72.2% of doctors and 89.1% of nurses had received specific training to carry out actions related to the BC. Among the doctors and nurses who received training, 24.1% and 36.4%, respectively, reported that it was insufficient (p=0.064).

Participants' opinions diverged about the most indicated exam for early detection of BC. It was observed that 28% of doctors and 45.3% of nurses reported breast self-examination (BSE) while 22% of doctors and 41.5% of nurses reported CBE. Mammography was considered the most indicated method for early detection of BC by 50% of doctors and 13.2% of nurses (p<0.001). These results are shown in Figure 1.

With regard to the performance of CBE in the ESF routine, almost all of the professionals considered themselves qualified for performing the exam. The CBE was reported as a safe method for early detection of BC by 58.5% of doctors and 81.5% of nurses (p=0.017). Although they feel qualified to perform the CBE and consider it a reliable test for early detection of BC, such examination is offered to women during routine clinical visits by 61.1% of doctors and 51.9% of nurses (p=0.438). When asked about the situations in which the CBE is prioritized and carried out, 90.9% of nurses and 35.2% of doctors (p<0.001) reported carrying out the exam during the Pap smear. Additionally, 72.2% of doctors and 49.1% of nurses carry out the CBE in women with signs and symptoms, such as lumps, pain, nipple discharge, and others (p=0.013). The results regarding professionals' conduct in relation to the CBE are shown in Table I.

There was no significant difference between the answers of doctors and nurses (p>0.05) with regard to the factors that influence the quality of the CBE. The time that professionals spend on the examination and the frequency in which they carry out the examination in women are the most reported factors. The data are shown in Table II

In addition to actions aimed at the diagnosis of BC, the present study also assessed the frequency in which ESF doctors and nurses follow up women after the diagnosis of BC and also during and after treatment carried out at other levels of care of the health system. As shown in Figure 2, 92.7% of nurses and 77.4% of doctors (p=0.048) reported following up with women.
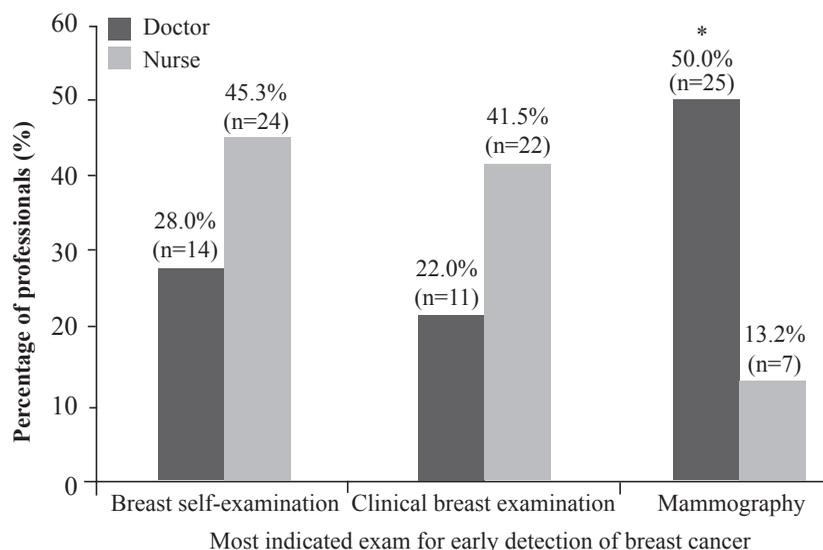
Figure 1 - Distribution of professionals according to the most appropriate types of exams for early detection of breast cancer. Campo Grande, Mato Grosso do Sul, 2012.
*p<0.05, Chi-squared test.

Table I - Distribution of professionals according to situations in which they prioritize/carry out the clinical breast examination and their perception regarding this examination. Campo Grande, Mato Grosso do Sul, 2012.

| Variable | Professional | | p-value | Total |
	Doctor % (n)	Nurse % (n)		
The clinical examination is considered reliable for early detection of breast cancer (n=107)				
No	41.5 (22)	18.5 (10)	0.017	29.9 (32)
Yes	58.5 (31)	81.5 (44)		70.1 (75)
Carries out the clinical examination during routine consultations (n=108)				
No	38.9 (21)	48.1 (26)	0.438	43.5 (47)
Yes	61.1 (33)	51.9 (28)		56.5 (61)
Situations in which the clinical breast examination is prioritized/carried out				
Always (n=109)				
No	81.5 (44)	89.1 (49)	0.262	85.3 (93)
Yes	18.5 (10)	10.9 (6)		14.7 (16)
All the women undergoing Pap smear test (n=109)				
No	64.8 (35)	9.1 (5)	<0.001	36.7 (40)
Yes	35.2 (19)	90.9 (50)		63.3 (69)
Women with family history of breast cancer (n=109)				
No	53.7(29)	52.7 (29)	0.919	53.2 (58)
Yes	46.3 (25)	47.3 (26)		46.8 (51)
Women with lumps, pain, nipple discharge and other symptoms (n=109)				
No	27.8 (15)	50.9 (28)	0.013	39.4 (43)
Yes	72.2 (39)	49.1 (27)		60.6 (66)
Other situations (n=109)				
No	94.4 (51)	92.7 (51)	0.715	93.6(102)
Yes	5.6 (3)	7.3 (4)		6.4 (7)
Consider themselves qualified to carry out the examination in the health center (n=109)				
No	1.9 (1)	0.0 (0)	0.311	0.9 (1)
Yes	98.1 (53)	100.0 (55)		99.1(108)
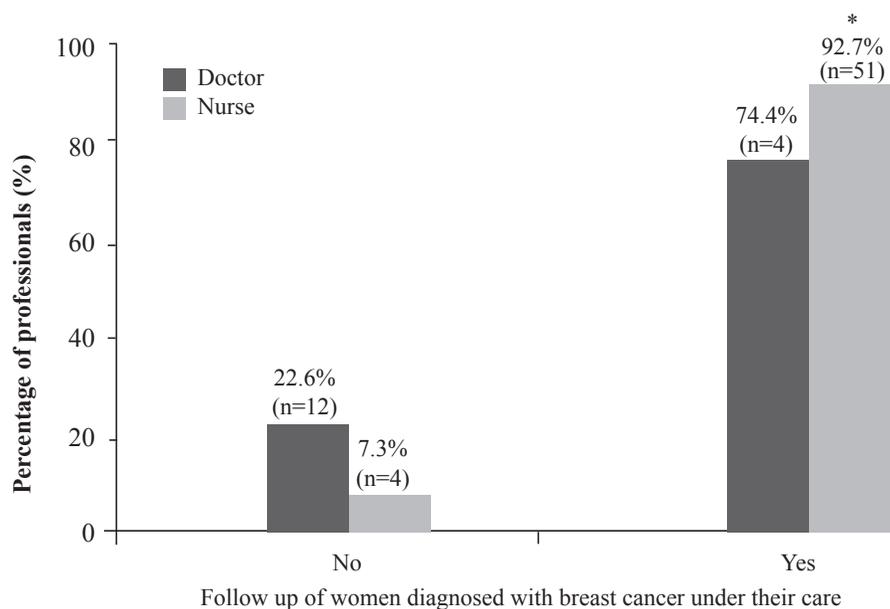
Figure 2 - Distributions of professionals in relation to the follow up of women diagnosed with breast cancer under their care. Campo Grande, Mato Grosso do Sul, 2012.
*p<0.05, Chi-squared test.

Table II - Distribution of professionals according to the factors affecting the quality of the clinical breast examination. Campo Grande, Mato Grosso do Sul, 2012 (n=109).

Variable	Professional		p-value	Total
	Doctor % (n)	Nurse % (n)		
Professional specialization in Gynecology and Obstetrics				
No	85.2 (46)	89.1 (49)	0.542	87.2 (95)
Yes	14.8 (8)	10.9 (6)		12.8 (14)
Time spent on the examination				
No	42.6 (23)	52.7 (29)	0.290	47.7 (52)
Yes	57.4 (31)	47.3 (26)		52.3 (57)
Continuous training				
No	59.3 (32)	50.9 (28)	0.381	55.0 (60)
Yes	40.7 (22)	49.1 (27)		45.0 (49)
Length of time working in the ESF				
No	87.0 (47)	94.5 (52)	0.175	90.8 (99)
Yes	13.0 (7)	5.5 (3)		9.2 (10)
Frequency of clinical breast examinations in their patients				
No	48.1 (26)	47.3 (26)	0.927	47.7 (52)
Yes	51.9 (28)	52.7 (29)		52.3 (57)
Other factors				
No	96.3 (52)	98.2 (54)	0.547	97.2 (106)
Yes	3.7 (2)	1.8 (1)		2.8 (3)

ESF: Estratégia de Saúde da Família (Family Health Strategy)

DISCUSSION

Health care provided in PHC is essential for the prevention and early detection of diseases such as BC as it is directly related to the decrease in mortality and health disorders in the population[15].

With regard to training on actions related to BC, most of the doctors and nurses included in this study had received specific training. This result is a much higher number compared to that found in a study conducted in the city of Mossoró, Rio Grande do Norte, in which only 12.1% of doctors and less than half of nurses (44.7%) had received such training[16]. It is important to clarify that professional training activities should be carried out continuously regardless of the frequency of new cases of the disease[17,18]. Although most respondents had received training, the majority considered it insufficient for the development of actions aimed at early detection of breast cancer, which may reflect, for example, the reduced number of examinations, such as the CBE, carried out by the professionals.

In another study that aimed to assess the performance of CBE by nurses working in the ESF, it was demonstrated that most of the study participants had technical and theoretical knowledge for the development of actions related to early detection of BC and that such knowledge was considered essential to the context of primary care for the effective implementation of health promotion and disease prevention[19]. It is suggested that the degree of knowledge of professionals – but mostly their confidence in performing the CBE – may be related to both its efficacy and its availability in the routine of facilities.

Early detection of BC through mammography is recommended for women aged 50 to 69 years every two years, and annual CBE is recommended for all women over age 40. Women at high risk of developing BC should perform mammography and CBE annually[10,20]. Doctors and nurses working in the ESF should be aware of these recommendations given their decisive role in the screening and early detection process.

There is a growing interest in different strategies to detect BC in early stages[3] and several studies have shown the association between the mammographic screening of the population and the reduction in BC mortality[21-23]. Currently, mammography is considered the most effective method for early detection of BC[24], identifying a significant number of lesions *in situ*, which results in a better prognosis and a greater chance of cure[3]; however, the CBE is a complementary action in this process, ensuring greater sensitivity to screening and early detection.

The CBE requires a short time dedicated by professionals and has a lower cost when compared to mammography[25]. It is worth mentioning that the implementation of mammographic screening in all the Brazilian territory is not a reality due to the lack of infrastructure and favorable economic conditions for mammography and screening of women with non-palpable lesions, even after significant advances in policies and programs designed to increase the access to mammography[3,26].

Although mammography is the most indicated test for early detection of BC – due to its high degree of sensitivity, which allows to detect the disease in early stages[1] – only half of doctors and the minority of nurses participating in the present study considered the mammography the most indicated examination for early detection of the disease. These data are consistent with those found in another study in which it was observed that the percentage of doctors who reported mammography as the most indicated method for early detection of BC was higher than the percentage of nurses[16].

A study conducted in India found that it is possible to detect 8.1 cases per every thousand women with BC at early stages and more than double, 21.7 cases per every thousand women, in more advanced stages BC through CBE. It was also observed that there was a high rate of BC at early stages that was not detected through this examination[27]. These results show that the CBE cannot be considered the most effective method for early detection of BC, and its recommendation has been reviewed by organizations such as the American Cancer Society and by Brazil's Ministry of Health, especially because of the high rate of false positive results[13].

Although doctors outnumber nurses in relation to mammography as the best method for early detection, yet there is a small number of professionals who have the proper knowledge on the subject, considering that BC is the cancer with the highest mortality rate among women[1] and that most professionals included in this study reported having received training on the subject.

The lack of knowledge about the examination is of great concern when considering the two professional categories included in the study; and it is even worse when comparing the answers between doctors and nurses. In a study conducted with various health professionals in Nigeria on BC, doctors demonstrated greater knowledge

about screening for mammography compared to nurses and other categories[28].

The National Primary Health Care Policy (*Política Nacional de Atenção Básica*)[11] defines the duties of doctors and nurses in the ESF for the care of the family. In the case of women at risk or who developed BC, these professionals should follow the guidelines published by the Ministry of Health[10,13,20].

The lack or little knowledge of professionals working in the first contact of women with the health care service (PHC), as observed in the present study, influence decision-making regarding the appropriate conduct for each situation. The indication of inadequate examinations delays diagnosis, which has a direct impact on the chances of cure and increased survival of women with BC[3,18].

The CBE is recognized for its importance as the first method of diagnostic assessment of palpable breast lesions and it is also recommended in several countries as a screening method. In Brazil, the CBE has been recommended as a BC screening strategy that should be carried out annually in women over the age of 40; it is part of the comprehensive health care for women and it is indicated in all clinical consultations regardless of age[20]. Among the doctors and nurses who participated in the present study, nearly all reported not carrying out the CBE in all consultations.

A study conducted in Manchester in 2011 found that 1 out of every 2,000 women was diagnosed with BC after the CBE (0.5/1000); in contrast, 1 out of every 193 women undergoing mammography was diagnosed with BC (5.2/1000). Thus, it can be noted that mammography has a greater degree of sensitivity in relation to the CBE; however, 5.5% of the cases presented false negative results in the mammography and had the BC detected through the CBE[25]. Thus, it is important to note that there is no evidence that the CBE can be used alone for early detection of BC[12,25]. The two methods complement each other and are of great importance, especially in countries like Brazil where mammography is not readily accessible to all women, with a persistent inequality in the opportunities for early diagnosis of the disease[25,29].

It is noteworthy that the degree of sensitivity of the CBE will depend mostly on the professional's experience, which will guarantee greater accuracy in the detection of BC[30]. Although nearly all doctors and nurses have reported feeling qualified to carry out the CBE, the majority reported not offering this examination in routine consultations. The results demonstrate that a significant number of nurses carry out the CBE only in women undergoing the Pap test and less than half carry out the examination due to breast complaints such as lumps, pain, nipple discharge and other symptoms. Different results were identified among the doctors – more than half reported carrying out CBE in symptomatic women and a few reported carrying out the examination in women undergoing the Pap test. The prioritization of the CBE only in women who seek the health care service with signs and symptoms demonstrates a troubling reality as symptomatic BC indicates more advanced stages of disease progression[31].

Another strategy for early detection of BC assessed in the present study was the BSE, which, although not recommended as a BC detection method, is encouraged to educate women about the overall health of breasts so they can identify changes and seek a health professional to carry out the appropriate assessment. Regarding the BSE, although it has been recommended in the past 70 years, studies have not identified differences in the impact on mortality rates; additionally, it has led to an increased number of biopsies of benign lesions and a false sense of security[1,29,32]. However, other studies have found that women who performed BSE were at lower risk of being diagnosed with BC in more advanced stages[29,32]. This is mainly due to the knowledge their own body, which is acquired by women while performing the BSE[5]. In the present study, the nurses' practice was different from the current recommendations regarding BC screening given that most nurses considered BSE the most appropriate method for early detection of the disease. In contrast, doctors considered mammography the best screening method.

The increasing rates of breast cancer incidence and mortality among women[1] point to the need for permanent qualification and upgrade proposals targeted to PHC professionals; these proposals should reverberate actions that are consistent with the best evidence available for women's health care.

The expansion of actions aimed at promoting health and the effective screening, early detection and treatment of BC should be pursued by all actors (professionals, managers and population) involved in fighting this disease considering its magnitude as a public health problem.

CONCLUSION

The results of the present study showed significant differences in both the knowledge and practice regarding actions for early detection of BC in the FHS. Doctors had a greater knowledge about mammography as the most appropriate method to detect BC at an early stage when

compared to nurses. Regarding the practice, the CBE is more often carried out by doctors in women with breast signs and symptoms while nurses report carrying out such examination more often during the Pap smear test.

ACKNOWLEDGEMENTS

We would like to thank Professor Albert Schiavetto de Souza, the Municipal Health Secretariat of Campo Grande and the Scientific Initiation Program UFMS/CNPQ.

REFERENCES

1. Instituto Nacional de Câncer José Alencar Gomes da Silva. Estimativa 2016: incidência de câncer no Brasil [Internet]. Rio de Janeiro: INCA; 2015 [accessed on 2016 May 10]. Available from: http://www.inca.gov.br/estimativa/2016/estimativa-2016-v11.pdf

2. Lauter DS, Berlezi EM, Rosanelli CLSP, Loro MM, Kolankiewicz ACB. Câncer de mama: estudo caso controle no Sul do Brasil. Rev Ciência Saúde. 2014;7(1):19-26.

3. Rodrigues JD, Cruz MS, Paixão AN. Uma análise da prevenção do câncer de mama no Brasil. Ciênc Saúde Coletiva [Internet]. 2015 [accessed on 2016 May 10];20(10):3163-76. Available from: http://www.scielo.br/scielo.php?script=sci_arttext&pid=S1413-81232015001003163&lng=pt

4. Ministério da Saúde (BR), Secretaria de Atenção à Saúde, Departamento de Atenção Básica. Rastreamento [Internet]. Brasília: Ministério da Saúde; 2010. (Série A. Normas e Manuais Técnicos) (Cadernos de Atenção Primária, n. 29) [accessed on 2016 May 10]. Available from: http://bvsms.saude.gov.br/bvs/publicacoes/caderno_atencao_primaria_29_rastreamento.pdf

5. Yilmaz D, Bebis H, Ortabag T. Determining the awareness of and compliance with breast cancer screening among Turkish residential women. Asian Pac J Cancer Prev [Internet]. 2013 [accessed on 2016 May 10];14:3281-8. Available from: http://www.apocpcontrol.org/paper_file/issue_abs/Volume14_No5/3281-88%2011.3%20Demet%20Yilmaz.pdf

6. Tucunduva LTCM, Sá VHLC, Koshimura ET, Prudente FVB, Santos AF, Samano EST, et al. Estudo da atitude e do conhecimento dos Médicos não Oncologistas em relação às medidas de prevenção e rastreamento do Câncer. Rev Assoc Med Bras. 2004;50(3):257-62.

7. Barreto ASB, Mendes MFM, Thuler LCS. Avaliação de uma estratégia para ampliar a adesão ao rastreamento do câncer de mama no Nordeste brasileiro. Rev Bras Ginecol Obstet. 2012;34(2):86-91.

8. Oliveira AM, Pozer MZ, Silva TA, Parreira BDM, Silva SR. Ações extensionistas voltadas para a prevenção e o tratamento do Câncer Ginecológico e de Mama: relato de experiência. Rev Esc Enferm USP. 2012;46(1):240-5.

9. Gonçalves LLC, Travassos GL, de Almeida AM, Almeida AMDN, Gois CFL. Barriers in health care to breast cancer: perception of women. Rev Esc Enferm USP. 2014;48(3):394-400.

10. Ministério da Saúde (BR), Secretaria de Atenção à Saúde, Departamento de Atenção Básica. Controle dos cânceres do colo do útero e da mama [Internet]. Brasília: Ministério da Saúde; 2013. (Cadernos de Atenção Primária, n. 13) [accessed on 2016 May 10]. Available from: http://bvsms.saude.gov.br/bvs/publicacoes/controle_canceres_colo_utero_2013.pdf

11. Ministério da Saúde (BR), Secretaria de Atenção à Saúde, Departamento de Atenção Básica. Política Nacional de Atenção Básica [Internet]. Brasília: Ministério da Saúde; 2012 [accessed on 2016 May 10]. Available from: http://189.28.128.100/dab/docs/publicacoes/geral/pnab.pdf

12. Starfield B. Atenção Primária: equilíbrio entre necessidades de saúde, serviços e tecnologia [Internet]. Brasília: UNESCO; 2002 [accessed on 2016 May 10]. Available from: http://bvsms.saude.gov.br/bvs/publicacoes/atencao_primaria_p1.pdf

13. Instituto Nacional de Câncer José Alencar Gomes da Silva. Diretrizes para a detecção precoce do câncer de mama no Brasil [Internet]. Rio de Janeiro: INCA; 2014 [acesso em 2016 Maio 10]. Disponível em: http://www2.inca.gov.br/wps/wcm/connect/4da965804a4414659304d3504e7bf539/Diretrizes+Detec%C3%A7%C3%A3o+Precoce+Ca+Mama+2015.pdf?MOD=AJPERES&CACHEID=4da965804a4414659304d3504e7bf539

14. Shott S. Statistics for health professionals. London: W. B. Saunders Company; 1990.

15. Aráujo GF Junior, Davim RMB. Breast self-examination practiced by nursing professionals in family health units. J Nurs UFPE . 2012;6(4):759-65.

16. Jácome EM, Silva RM, Gonçalves MLC, Collares PMC, Barbosa IL. Detecção do câncer de mama: conhecimento, atitude e prática dos médicos e enfermeiros da Estratégia Saúde da Família de

Mossoró, RN, Brasil. Rev Bras Cancerol [Internet]. 2011 [accessed on 2016 May 10]; 57(2):189-98. Available from: http://www.inca.gov.br/rbc/n_57/v02/pdf/06_artigo_deteccao_cancer_mama_conhecimento_atitude_pratica_medicos_enfermeiros_estrategia_saude_familia_mossoro_RN_brasil.pdf

17. Tesser CD, Garcia AV, Vedrusco AV, Argenta CE. Estratégia saúde da família e análise da realidade social: subsídios para políticas de promoção da saúde e educação permanente. Ciênc Saúde Coletiva [Internet]. 2011 [accessed on 2016 May 10];16:4295-306. Available from: http://www.scielo.br/pdf/csc/v16n11/a02v16n11.pdf

18. Lourenço TS, Mauad EC, Vieira RAC. Barreiras no rastreamento do câncer de mama e o papel da enfermagem: revisão integrativa. Rev Bras Enferm [Internet]. 2013 [accessed on 2016 May 10];66(4):585-91. Available from: http://www.scielo.br/scielo.php?script=sci_arttext&pid=S0034-71672013000400018&lng=en. http://dx.doi.org/10.1590/S0034-71672013000400018.

19. Gonçalves LLC, Barros ACS, Inagaki ADM, Abid ACF. Avaliação da prática do exame clínico pélvico e de mamas realizados por enfermeiros. Rev Min Enferm [Internet]. 2009 [accessed on 2016 May 10];13:244-8. Available from: http://www.reme.org.br/artigo/detalhes/186

20. Instituto Nacional de Câncer José Alencar Gomes da Silva. Controle do Câncer de Mama: Documento de Consenso [Internet]. Rio de Janeiro: INCA; 2004 [accessed on 2016 May 10]. Available from: http://www.inca.gov.br/publicacoes/Consensointegra.pdf

21. Moyer VA, U.S. Preventive Services Task Force. Risk assessment, genetic counseling, and genetic testing for BRCA-related cancer in women: U.S. Preventive Services Task Force recommendation statement. Ann Intern Med [Internet]. 2014 [accessed on 2016 May 10];160(4):271-81. Available from: http://annals.org/article.aspx?articleid=1791499

22. Nguyen MN, Larocque D, Paquette D, Irace-Cima A. Quebec breast cancer screening program: A study of the perceptions of physicians in Laval, Que. Can Fam Physician. [Internet]. 2009 [accessed on 2016 May 10];55(6):614-20. Available from: http://www.cfp.ca/content/55/6/614.full.pdf+html

23. Leite FMC, Amorim MHC, Marques GMT, Vilela APM. Estratégia de saúde da família e o rastreamento do câncer de mama. Espaç Saúde (Online) [Internet]. 2011 [accessed on 2016 May 10];12(2):1-9. Available from:http://www.uel.br/revistas/uel/index.php/espacoparasaude/article/view/9170/pdf.

24. Puliti D, Zappa M. Breast cancer screening: are we seeing the benefit? BMC Medicine. 2012; 10:106.

25. Maurice A, Evans G, Affen J, Greenhalgh R, Duffy SW, Howell A. Surveillance of women at increased risk of breast cancer using mammography and clinical breast examination: further evidence of benefit. Int J Cancer [Internet]. 2011 [accessed on 2016 May 10];131:417–25. Available from: http://onlinelibrary.wiley.com/doi/10.1002/ijc.26394/epdf

26. Silva GA, Teixeira MTB, Aquino EML, Tomazelli JG, Silva IS. Acesso à detecção precoce do câncer de mama no Sistema Único de Saúde: uma análise a partir dos dados do Sistema de Informações em Saúde. Cad Saúde Pública. 2014;30(7):1537-50.

27. Sankaranarayanan R, Ramadas K, Thara S, Muwonge R, Prabhakar J, Augustine P, Venugopal M, Anju G, Mathew BS. Clinical Breast Examination: Preliminary Results from a Cluster Randomized Controlled Trial in India. J Natl Cancer Inst [Internet]. 2011 [accessed on 2016 May 10];103(19):1476-80. Available from: http://jnci.oxfordjournals.org/content/103/19/1476.long

28. Akhigbe AO, Omuemu VO. Knowledge, attitudes and practice of breast cancer screening among female health workers in a Nigerian urban city. BMC Cancer [Internet]. 2009 [accessed on 2016 May 10];9:203. Available from: http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2709903/pdf/1471-2407-9-203.pdf.

29. Miller AB, Baines CJ. The role of clinical breast examination and breast self-examination. Prev Med. 2011;53(3):118-20.

30. McDonald S, Saslow D, Alciati MH. Performance and Reporting of Clinical Breast Examination: A Review of the Literature. CA Cancer J Clin [Internet]. 2004 [accessed on 2016 May 10];54(6):345-61. Available from: http://onlinelibrary.wiley.com/doi/10.3322/canjclin.54.6.345/epdf

31. Thuler LC. Considerações sobre a prevenção do câncer de mama feminino. Rev Bras Cancerol [Internet] 2003 [accessed on 2016 May 10];49:227-38. Available from: http://www.inca.gov.br/rbc/n_49/v04/pdf/revisao1.pdf

32. Erdem Ö, Toktaş İ. Knowledge, attitudes, and behaviors about breast self-examination and mammography among female primary healthcare workers in Diyarbakır, Turkey. Biomed Res Int. 2016;2016:1-6.

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