ABSTRACT

The role of Basic Health Care (BHC) professionals is essential in the primary and secondary prevention of breast cancer. The aim of this study was to characterize BHC professionals in the Health Regions of a federative unit and to assess their knowledge about breast cancer. This was a prospective study carried out with BHC professionals from the state of Goiás. Phase 1 – Preparation of material and training of the team. Phase 2 – Agreement of actions between executing team and coordination of health regions. Phase 3 – Presentation of project at the collegiate meeting. Phase 4 – Qualification of BHC professionals with different learning methods and application of questionnaires, evaluating the contribution of the action. A total of 1,133 professionals were included; mean age was 36.3 years, and they were predominantly women (87.6%), working as community health agents (59.2%) and at public service (76.3%). Only 53.8% of professionals identified the female sex as a risk factor for breast cancer, while 90% identified family history as an important factor for the development of the disease. Important changes in physical examination that can occur in patients with the disease, such as skin retraction, skin bulging and nipple injury, were mentioned as a risk factor only by 35.3%, 31.3% and 39.7%, respectively. BHC professionals who participated in the project had less than ten years of professional experience and significant restrictions of knowledge about primary and secondary prevention of breast cancer. They still experience difficulties in accessing mammography and specialized care.

KEYWORDS: breast neoplasms; primary prevention; community health planning; health education; health promotion.

INTRODUCTION

In Brazil, standardized breast cancer mortality rates between 1980 and 2016 ranged from 9.2 to 12.4 deaths per 100,000 women. This represents an increase of 33.6% in the period analyzed and reflects an upward trend in all regions of the country. It should be noted that mortality rates are strongly related to access to health services and the quality of care offered to women with breast cancer. Thus, one of the main strategies to improve morbidity and mortality is diagnosis in early stages of the disease.

Reducing mortality from breast cancer is one of the priorities of the National Policy for Comprehensive Women’s Health Care, provided for in the National Plan for Primary Care. Primary Health Care (PHC) is characterized by health actions, at individual and collective levels, covering health promotion and protection, disease prevention, diagnosis, treatment, rehabilitation, and health maintenance.

One of the foundations of PHC is the valuation of health professionals through encouragement and constant monitoring of their education and training as an essential strategy for the effectiveness of health education actions. Prevention and early detection of breast cancer have been identified as essential and in need of intensification. Thus, a scientific basis for health professionals involved in this process are necessary so that they can also assume an educational role and offer the population information that is useful for the prevention of breast cancer.

Strategies for health education actions must suit the profile of PHC professionals in each region. However, there is little information about the characterization of PHC staff in Federation Units. Another important matter is the lack of information about the experience of professionals in carrying out educational activities.

The aim of this study was to characterize the PHC professionals in the Health Regions of a Federation Unit and to assess...
their knowledge about breast cancer and the difficulties they face in daily practice.

METHODS
This was a prospective study whose target population was PHC health professionals of the state of Goiás. For this study, professionals involved in the early detection of breast cancer were considered to be the community health agents (CHA), the nurses and nursing technicians, physicians and mammography technicians.

The State of Goiás and Regional Health Boards
The state of Goiás is divided into 18 regional health boards according to the Master Plan for Regionalization. These boards intermediate the administration between the State Health Department (SES-GO) and the municipalities.

Methodology and Data Collection
This study was divided into four phases: planning of the executing team at SES-GO, creating strategies to raise awareness in the health regions; meetings with coordinators of health regions to agree on the actions to be developed by the project; presentation of the project for the health region at the collegiate meeting; conduction of a training course and application of semi-structured questionnaires with open and closed questions as a strategy for data collection.

Phase 1
The executing team planned the training activities, which involved the preparation of teaching material and data collection instruments, training of the working group to standardize pedagogical intervention strategies, awareness of the SES-GO coordination board on the importance of the participation of health professionals in the training course, preparation of a timeline of activities according to the number of professionals registered in each health region, and development of training activities.

Phase 2
Meetings were held with the coordinators of the regional health boards to agree on the actions to be carried out by the project, with representatives from the Mastology Program of Clinical Hospital of Universidade Federal de Goiás (HC/UFG), from the project “Liga da Mama”, from the Faculty of Medicine, Nursing and Psychology at UFG, from the Association of Breast Cancer Patients, from the Regional Center for Nuclear Sciences of the Midwest, from the Superintendence of Sanitary and Environmental Surveillance of the State of Goiás, and from the Department of Sanitary Surveillance of Goiânia.

Phase 3
Presentation of the project at the collegiate meeting that takes place monthly under the organization of the regional health boards, where a representative of each city that makes up the board was present and all health actions to be carried out were defined.

Phase 4
On a date defined by the coordination of the regional health board and the project, as many health professionals as possible were transferred to the regional headquarters. Then, professionals were trained on a pedagogical approach with focus on health education. The pedagogical proposal adopted for this project was the methodology of problematization. This teaching method is based on the recipient’s prior knowledge, which could be proven or reformulated during the theorization of information, in a way to provide them with instruments to intervene in the reality from which the problem was extracted.

The proposal of pedagogical intervention involves:
- Presentation of the team and proposal of the training course project;
- Presentation of the proposal of the training course project;
- Integration technique with musical presentation;
- Application of a characterization questionnaire to health professionals;
- Discussion in small groups using guiding questions of a questionnaire addressing knowledge about risk factors, signs and symptoms, primary and secondary breast cancer prevention actions;
- Theoretical approach on risk factors, signs and symptoms and actions for primary and secondary breast cancer prevention, relating it to the information previously provided by the groups;
- Discussion in small groups to identify the difficulties and eases of health professionals for breast cancer prevention and early detection;
- Presentation of a summary by each group through a spokesperson;
- Workshops on self-examination with handling of the “Mammiga” Didactic Model and clinical examination of breasts;
- Assessment of the contribution of the training course to the practice of health professionals by means of a questionnaire.

Inclusion and exclusion criteria
All health professionals linked to the respective regional health boards of the state of Goiás were invited to participate in the study. Those who completed the training course and filled in the questionnaires in full were included. Professionals who did not accept to participate in the study were excluded.

Statistical analysis
The data collected were tabulated by double typing and analyzed using the Microsoft Excel program (Microsoft, Redmond, Washington, United States), version 2007. An exploratory analysis was performed using descriptive statistics and measures such as means, and absolute frequencies and percentages.
Ethical matters
This study is part of a line of research developed by the Brazilian Network for Research in Mastology, approved by the Research Ethics Committee of HC/UFG, under protocol number 037/2011. All good clinical practice recommendations by the National Health Council resolution nº 466/2012 and the Helsinki Convention were followed. All individuals invited and who agreed to participate in this study signed an Informed Consent Form.

RESULTS
The study included 1,133 PHC professionals linked to nine regional health boards in the state of Goiás. The mean age of professionals was 36.3 (± 9.8) years, ranging from 17 to 78 years. Women were predominant (87.6%), as well as CHA (59.2%), public-sector professionals (76.3%) and professionals with less than five years of training (37.0%). Other demographic and professional characteristics of the sample are described in Table 1.

Regarding risk factors for breast cancer, most professionals identified correctly the relevance of the female sex (53.8%), age (78.1%) and family history (90.0%). On the other hand, breast tenderness and breast cysts were considered risk factors for 47.7% and 58.0% of the professionals interviewed, respectively (Table 2).

Among changes in physical examination that can occur in patients with breast cancer, the presence of a nodule was reported by almost the entire sample (95.4%). Skin retraction, skin bulging and nipple injury was reported by 35.3%, 31.3% and 39.7%, respectively (Table 2).

Table 3 shows the difficulties and challenges experienced by PHC users and professionals in relation to the prevention and diagnosis of breast cancer (the percentage of access to consultations is high, in contrast to the percentage of access to the breast cancer screening exam, which is low; knowledge of the professional; body exposure; participation in educational groups).

DISCUSSION
This study is the result of a pioneering initiative in the state of Goiás encompassing individual and collective awareness, pedagogical intervention and professional training on various matters related to breast cancer. It identified demographic, professional, educational and assistance characteristics of PHC professionals in the state.

The characterization of professionals linked to PHC is fundamental for understanding some variables related to breast cancer screening and early diagnosis. The predominance of CHA in this study corresponds to the recommendations for the family health strategy, but the number of physicians who participated in the project was proportionally small compared to other professionals. This reflects the difficulty in training physicians and the low adherence to health education initiatives. This may be
related to several factors such as inadequate remuneration, multiple working hours, quality of training offered and commonly used methodology\textsuperscript{11}. There was also a predominance of professionals without complete higher education, which may have contributed to the unfavorable performance when it comes to theoretical knowledge about breast cancer.

In the last 15 years, the national regulations that define CHA’s attributions started to prioritize operational activities, such as registering the local population to the detriment of educational, social and health promotion activities\textsuperscript{5,12,13}. Many of these professionals experience limited access to specific training\textsuperscript{14}. Thus, the work routine in primary health care in Brazil does not encourage...

<table>
<thead>
<tr>
<th>Questionnaire 1</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monthly income (in minimum wages)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 minimum wage</td>
<td>282</td>
<td>24.9</td>
</tr>
<tr>
<td>2 minimum wages</td>
<td>327</td>
<td>28.9</td>
</tr>
<tr>
<td>3 or more minimum wages</td>
<td>506</td>
<td>44.7</td>
</tr>
<tr>
<td>N/A</td>
<td>18</td>
<td>1.6</td>
</tr>
<tr>
<td>Religion</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Catholic</td>
<td>715</td>
<td>63.1</td>
</tr>
<tr>
<td>Protestant</td>
<td>326</td>
<td>28.8</td>
</tr>
<tr>
<td>Spiritist</td>
<td>50</td>
<td>4.4</td>
</tr>
<tr>
<td>Other</td>
<td>27</td>
<td>2.4</td>
</tr>
<tr>
<td>N/A</td>
<td>15</td>
<td>1.3</td>
</tr>
<tr>
<td>Professional data</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Time since graduation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt; 5 years</td>
<td>419</td>
<td>37.0</td>
</tr>
<tr>
<td>5–10 years</td>
<td>335</td>
<td>29.6</td>
</tr>
<tr>
<td>&gt; 10 years</td>
<td>307</td>
<td>27.1</td>
</tr>
<tr>
<td>N/A</td>
<td>72</td>
<td>6.4</td>
</tr>
<tr>
<td>Years of professional background</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt; 5 years</td>
<td>399</td>
<td>35.2</td>
</tr>
<tr>
<td>5–10 years</td>
<td>355</td>
<td>31.3</td>
</tr>
<tr>
<td>&gt; 10 years</td>
<td>321</td>
<td>28.3</td>
</tr>
<tr>
<td>N/A</td>
<td>58</td>
<td>5.1</td>
</tr>
<tr>
<td>Relationship with the institution</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Approved in public tender</td>
<td>864</td>
<td>76.3</td>
</tr>
<tr>
<td>Hired</td>
<td>222</td>
<td>19.6</td>
</tr>
<tr>
<td>Volunteer</td>
<td>33</td>
<td>2.9</td>
</tr>
<tr>
<td>N/A</td>
<td>14</td>
<td>1.2</td>
</tr>
<tr>
<td>Works somewhere else</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>130</td>
<td>11.5</td>
</tr>
<tr>
<td>No</td>
<td>966</td>
<td>85.3</td>
</tr>
<tr>
<td>N/A</td>
<td>37</td>
<td>3.3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Questionnaire 2</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1- What are the risk factors for developing breast cancer?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Being a woman</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>609</td>
<td>53.8</td>
</tr>
<tr>
<td>No</td>
<td>524</td>
<td>46.2</td>
</tr>
<tr>
<td>Being over 40 years old</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>885</td>
<td>78.1</td>
</tr>
<tr>
<td>No</td>
<td>248</td>
<td>21.9</td>
</tr>
<tr>
<td>Woman who never got pregnant</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>460</td>
<td>40.6</td>
</tr>
<tr>
<td>No</td>
<td>673</td>
<td>59.4</td>
</tr>
<tr>
<td>Cases of breast cancer in 1st degree relatives</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>1,020</td>
<td>90.0</td>
</tr>
<tr>
<td>No</td>
<td>113</td>
<td>10.0</td>
</tr>
<tr>
<td>Alcohol use</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>453</td>
<td>40.0</td>
</tr>
<tr>
<td>No</td>
<td>680</td>
<td>60.0</td>
</tr>
<tr>
<td>Menarche before age 12 and last menstruation after age 55</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>220</td>
<td>19.4</td>
</tr>
<tr>
<td>No</td>
<td>913</td>
<td>80.6</td>
</tr>
<tr>
<td>Breast pain</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>541</td>
<td>47.7</td>
</tr>
<tr>
<td>No</td>
<td>592</td>
<td>52.3</td>
</tr>
<tr>
<td>Breast cyst</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>657</td>
<td>58.0</td>
</tr>
<tr>
<td>No</td>
<td>476</td>
<td>42.0</td>
</tr>
<tr>
<td>Obesity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>333</td>
<td>29.4</td>
</tr>
<tr>
<td>No</td>
<td>800</td>
<td>70.6</td>
</tr>
<tr>
<td>First child after 34 years old</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>251</td>
<td>22.2</td>
</tr>
<tr>
<td>No</td>
<td>882</td>
<td>77.8</td>
</tr>
<tr>
<td>Smoking</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>747</td>
<td>65.9</td>
</tr>
<tr>
<td>No</td>
<td>386</td>
<td>34.1</td>
</tr>
<tr>
<td>2- What are the complaints and/or changes that may suggest breast cancer?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spontaneous outflow of bloody nipple secretion</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>791</td>
<td>69.8</td>
</tr>
<tr>
<td>No</td>
<td>342</td>
<td>30.2</td>
</tr>
<tr>
<td>Nodule</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>1,081</td>
<td>95.4</td>
</tr>
<tr>
<td>No</td>
<td>52</td>
<td>4.6</td>
</tr>
</tbody>
</table>

Table 1. Continuation.

Table 2. Knowledge of health professionals about risk factors, prevention and diagnosis of breast cancer (n = 1133). Goiânia, Clinical Hospital, Universidade Federal de Goiás, 2020.

Continue...
or favor the continuing education of professionals, being limited to specific courses and training initiatives. These strategies contrast with the results of a study conducted in Petrópolis (RJ), where an initiative to train health professionals resulted in the improvement of several public health indicators15.

Strategies like the one developed in Rio de Janeiro show the relevance of training PHC professionals for more effective actions. In this study, the verification of inappropriate concepts related to breast cancer risk factors, prevention and diagnosis among health professionals possibly translates into inadequate guidance for the population. However, only 33% of health professionals recognize that their knowledge about the subject needs improvement.

The identification of breast cancer etiological factors is important for the primary prevention of the disease16. In our study, the assessment showed satisfactory knowledge by health professional regarding some risk factors, such as age and family history16. On the other hand, breast tenderness and breast cysts were considered risk factors by about half of the professionals interviewed, which is an inadequate concept and can cause concern in the population. Furthermore, they can lead to unnecessary referrals and saturation of secondary and tertiary services, compromising resolvability17.

Considering the modifiable risk factors, the number of professionals who do not associate obesity and alcohol consumption with increased risk for breast cancer stands out. Studies conducted in the city of Goiânia (GO), in agreement with the literature, identified that alcohol consumption18 and the amount of abdominal fat increase the risk of breast cancer19. Therefore, it should be emphasized that the identification of these risk factors contributes to specific strategies for breast cancer primary prevention16,19.

The diagnostic workup for breast cancer is multimodal and must be adapted to the different clinical presentations of the disease. In early stages, it is commonly asymptomatic and presents no changes upon physical examination. Therefore, signs such as skin retraction, skin bulging and nipple injury are indicative of locally advanced disease and must be promptly recognized and properly managed20. In our study, only 30% of professionals identified these changes as suspected breast cancer, which could perpetuate a late diagnosis of the disease. Currently, in Brazil, these and other alterations in the self-examination and/or clinical examination of the breasts are responsible for about 50% of breast cancer diagnoses21, reinforcing the importance of primary health professionals in the early diagnosis of the disease.

Barriers to accessing infrastructure are one of the daily adversities for secondary prevention. According to our findings, access to mammography was the main difficulty faced in the consolidation of preventive practices, both by users (71.5%) and health professionals (63.4%), a fact that goes against the number and the adequate distribution of mammography devices in the state, although there is low mammographic production22-24. In addition, the distribution of breast cancer professionals in the state is also disproportionate in relation to the population distribution, with 43 breast cancer specialists registered in Goiânia and only ten professionals registered in the countryside of the state25,26, which explains the difficulty identified in accessing specialized services.

Table 2. Continuation.

<table>
<thead>
<tr>
<th>Questionnaire 2</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin retraction</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>400</td>
<td>35.3</td>
</tr>
<tr>
<td>No</td>
<td>733</td>
<td>64.7</td>
</tr>
<tr>
<td>Bulging of the skin</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>355</td>
<td>31.3</td>
</tr>
<tr>
<td>No</td>
<td>778</td>
<td>68.7</td>
</tr>
<tr>
<td>Nipple injury</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>450</td>
<td>39.7</td>
</tr>
<tr>
<td>No</td>
<td>683</td>
<td>60.3</td>
</tr>
</tbody>
</table>

3- What breast cancer prevention measures do you consider most important?

<table>
<thead>
<tr>
<th>Monthly self-examination, annual clinical examination and annual breast resonance</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>108</td>
<td>9.5</td>
</tr>
<tr>
<td>No</td>
<td>1,025</td>
<td>90.5</td>
</tr>
<tr>
<td>Monthly self-examination, annual clinical examination and annual mammography</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>1,008</td>
<td>89.0</td>
</tr>
<tr>
<td>No</td>
<td>125</td>
<td>11.0</td>
</tr>
<tr>
<td>Monthly self-examination, annual clinical examination and annual ultrasound</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>196</td>
<td>17.3</td>
</tr>
<tr>
<td>No</td>
<td>937</td>
<td>82.7</td>
</tr>
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</table>

4- What strategies do you use to guide the users of your Health Unit?

<table>
<thead>
<tr>
<th>Individual consultation</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>637</td>
<td>56.2</td>
</tr>
<tr>
<td>No</td>
<td>496</td>
<td>43.8</td>
</tr>
</tbody>
</table>

Educational group meetings

| Yes | 586 | 51.7 |
| No  | 547 | 48.3 |

Home care

| Yes | 735 | 64.9 |
| No  | 398 | 35.1 |

None

| Yes | 8   | 0.7  |
| No  | 1,125 | 99.3 |

Other

| Yes | 82  | 7.2  |
| No  | 1,051 | 92.8 |
Table 3. Difficulties and challenges experienced by users and Primary-Care professionals in relation to the prevention and diagnosis of breast cancer (n = 1,099). Goiânia, Clinical Hospital, Universidade Federal de Goiás, 2020.

<table>
<thead>
<tr>
<th>Questionnaire 3</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Regional boards</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Estrada de Ferro (Catalão)</td>
<td>65</td>
<td>5.9</td>
</tr>
<tr>
<td>West I (Iporá)</td>
<td>181</td>
<td>16.5</td>
</tr>
<tr>
<td>West II (São Luís de Montes Belos)</td>
<td>152</td>
<td>13.8</td>
</tr>
<tr>
<td>Serra da Mesa (Uruaçu)</td>
<td>134</td>
<td>12.2</td>
</tr>
<tr>
<td>North (Porangatu)</td>
<td>79</td>
<td>7.2</td>
</tr>
<tr>
<td>North surroundings (Formosa)</td>
<td>128</td>
<td>11.6</td>
</tr>
<tr>
<td>Northeast II (Posse)</td>
<td>89</td>
<td>8.1</td>
</tr>
<tr>
<td>Southwest I (Rio Verde)</td>
<td>154</td>
<td>14.0</td>
</tr>
<tr>
<td>Southwest II (Jataí)</td>
<td>117</td>
<td>10.6</td>
</tr>
</tbody>
</table>

1 - What difficulties do you identify in carrying out breast cancer prevention actions in your municipality?

<table>
<thead>
<tr>
<th>Knowledge about the topic</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
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<tr>
<td>No</td>
<td>736</td>
<td>67.0</td>
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</table>

<table>
<thead>
<tr>
<th>Support from local institution</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>371</td>
<td>33.8</td>
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<tr>
<td>No</td>
<td>728</td>
<td>66.2</td>
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</table>

<table>
<thead>
<tr>
<th>Lack of educational material</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
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<td>Yes</td>
<td>598</td>
<td>54.4</td>
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<tr>
<td>No</td>
<td>501</td>
<td>45.6</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Referral for a mammography service</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>699</td>
<td>63.6</td>
</tr>
<tr>
<td>No</td>
<td>400</td>
<td>36.4</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Referral for a specialized service</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>611</td>
<td>55.6</td>
</tr>
<tr>
<td>No</td>
<td>488</td>
<td>44.4</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Other</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>92</td>
<td>8.4</td>
</tr>
<tr>
<td>No</td>
<td>1,007</td>
<td>91.6</td>
</tr>
</tbody>
</table>

2 - What facilities do you identify in breast cancer prevention actions?

<table>
<thead>
<tr>
<th>Knowledge about the topic</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>611</td>
<td>55.6</td>
</tr>
<tr>
<td>No</td>
<td>488</td>
<td>44.4</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Support from local institution</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>418</td>
<td>38.0</td>
</tr>
<tr>
<td>No</td>
<td>681</td>
<td>62.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Lack of educational material</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>395</td>
<td>35.9</td>
</tr>
<tr>
<td>No</td>
<td>704</td>
<td>64.1</td>
</tr>
</tbody>
</table>

Table 3. Continuation.

<table>
<thead>
<tr>
<th>Questionnaire 3</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Referral for a mammography service</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>400</td>
<td>36.4</td>
</tr>
<tr>
<td>No</td>
<td>699</td>
<td>63.6</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Referral for a specialized service</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>238</td>
<td>21.7</td>
</tr>
<tr>
<td>No</td>
<td>861</td>
<td>78.3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Other</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>86</td>
<td>7.8</td>
</tr>
<tr>
<td>No</td>
<td>1,013</td>
<td>92.2</td>
</tr>
</tbody>
</table>

3 - What difficulties do the users of your service face for breast cancer prevention?

<table>
<thead>
<tr>
<th>Access to the women’s annual consultation at the health unit</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>185</td>
<td>16.8</td>
</tr>
<tr>
<td>No</td>
<td>914</td>
<td>83.2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Access to mammography</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>786</td>
<td>71.5</td>
</tr>
<tr>
<td>No</td>
<td>313</td>
<td>28.5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Access to medical consultation in a specialized service</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>705</td>
<td>64.1</td>
</tr>
<tr>
<td>No</td>
<td>394</td>
<td>35.9</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Myths and taboos about breast cancer</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>376</td>
<td>34.2</td>
</tr>
<tr>
<td>No</td>
<td>723</td>
<td>65.8</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Difficulty in exposing the body for breast examination</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>357</td>
<td>32.5</td>
</tr>
<tr>
<td>No</td>
<td>742</td>
<td>67.5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Other</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>54</td>
<td>4.9</td>
</tr>
<tr>
<td>No</td>
<td>1,045</td>
<td>95.1</td>
</tr>
</tbody>
</table>

4 - What makes breast cancer prevention easier for users of your unit?

<table>
<thead>
<tr>
<th>Access to the women’s annual consultation at the health unit</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>743</td>
<td>67.6</td>
</tr>
<tr>
<td>No</td>
<td>356</td>
<td>32.4</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Home care by the family health team</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>646</td>
<td>58.8</td>
</tr>
<tr>
<td>No</td>
<td>453</td>
<td>41.2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Participation in educational group meeting</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>508</td>
<td>46.2</td>
</tr>
<tr>
<td>No</td>
<td>591</td>
<td>53.8</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Other</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>72</td>
<td>6.6</td>
</tr>
<tr>
<td>No</td>
<td>1,027</td>
<td>93.4</td>
</tr>
</tbody>
</table>
Another point to be highlighted is the perception of health professionals about the difficulties experienced by users in breast cancer prevention. In addition to factors related to the flow of assistance, around 30% of users are still susceptible to myths and taboos about the disease, as well as personal restrictions to expose their bodies to breast examinations. These data reinforce the need for educational actions aimed at the lay population, whose misinformation can restrict breast cancer screening and early diagnosis. In recent years, in response to this social demand, the Brazilian Society of Mastology has taken on a leading role creating various booklets and educational campaigns in various media. The training of health professionals appears, then, as a path to be followed to ensure better assistance to the population served by the health professionals. Nevertheless, basic care also represents a privileged space for the development of permanent health education. Together, the data presented in this study reinforce the need for investments in the structure of basic health care and in the team's continuing education, providing comprehensive care to the individual, health promotion and early diagnosis of breast changes. As a result, these measures could facilitate the diagnostic process of breast cancer and possibly improve the oncological outcomes of the disease.

CONCLUSION

The PHC professionals of the state of Goiás who participated in this project had, for the most part, completed high school and less than ten years of professional experience. They showed to have limitations regarding knowledge about primary and secondary prevention of breast cancer, as well as experience difficulties in care activities mainly related to access to mammography and to specialized services.

AUTHORS’ CONTRIBUTION

R.M.S.R.: Conceptualization, Funding acquisition, Investigation, Methodology, Investigation, Project administration, Supervision, Validation, Visualization, Writing — revision & editing. D.C.N.R.: Conceptualization, Data curation, Formal analysis, Investigation, Visualization, Writing — original draft, Writing — revision & editing. R.S.C.: Data curation, Formal analysis, Investigation, Writing — revision & editing. L.R.S.: Investigation, Validation, Writing — original draft, Writing — revision & editing. S.H.F.: Data curation, Formal analysis, Investigation, Writing — revision & editing. P.H.A.P.: Methodology, Validation, Writing — revision & editing. N.A.M.A.: Conceptualization, Data curation, Visualization, Writing — revision & editing.

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