

# Knowledge and practices on gynecological care for medical students: breast self-exam and Pap test

## Abstract

**Objective:** To evaluate the knowledge and practices of students from the 1st to 3rd year of the medical course of the State University of Pará on breast self-examination and prevention of cervical cancer.

**Method:** This is an epidemiologic, quantitative and descriptive study in which data were collected with a questionnaire formulated by authors and it was applied to students. The chi-square test and the G-test were used in data statistic.

**Results:** There was a higher prevalence of single women (97.7%), aged 20 to 21 years old (40%), who never became pregnant (97.7%). Evaluating the results of Pap smear, 89.2% of students reported knowing about the exam, and more than a half were never submitted to it (67.7%). In the analysis of Breast Self-Examination, 97.7% of the population studied was conscious of the test, and 99.2% correctly know its purpose. The university (29.9%) and television (28.3%) are the major knowledge providers about the exam. 53.8% did not know the correct recommendation of when to start self-examination of the breasts.

**Conclusion:** Even most of the students in the 1st to the 3rd year of the medical course, who are familiar with the exams, present a lack of updated and more specific information regarding pre-examination care, the age group in which each one is indicated and the way in which they are performed, since much of the information is obtained through teachers and not in accordance with national and international guidelines.

**Keywords:** medical, students, breast self, examination, papanicolaou, test, national, women

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## Introduction

Currently, cancer is highly explored and seen as a major public health problem in the world. In Brazil, among different types of cancer that affect women, breast cancer and cervical cancer are the most frequent disturbances among gynecological cancers.<sup>1</sup> Although there is a very high rate of cancer incidence. The cancer mortality reduction was being observed; especially in young women.<sup>2</sup> Authors relate this fact with an increase in early neoplastic lesions detection as well as treatment efficiency. It became possible through breast cancer screening programs such as mammography which cause a breast cancer mortality reduction and an early lesion detection in subclinical forms, what happens primarily in European countries.<sup>3</sup>

Sometimes, women are encouraged to do breast self-examination as a form of early detection. It shows the importance of women active participation that receives specific guidance about exam techniques. Despite this, Thomas et al.<sup>4</sup> concluded that breast self-examination did not cause an increase in breast cancer mortality rates and only increases unnecessary biopsies number with a benign result. However, there are benefits related to a method that can predict a presence of small tumor or lesions still confined in the mammary gland. Therefore, it can be advised breast self-examination may be done always when women feel comfortable for this. Early detection of small tumors predict a less violent and painful treatment and, unlike this, late diagnosis decreases the chances of cure and it is responsible for increased mortality rates.<sup>5-7</sup>

About cervical cancer, high incidence corresponds to women between thirty to thirty-nine years old. Pap smear screening for cervical cancer begins at twenty-five years old and should be done

annually until two negative results are obtained. After this, screening can be done every three years. The main risk factor is associated with an infection by Human Papilloma Virus (HPV) and its prevalence occurs before twenty-five years old when the development of intraepithelial lesions can begins (because of it, screening begins at this age). These lesions need a specialized follow-up because they are cancer-related cellular changes, although major of them present spontaneous regression.<sup>8-10</sup>

Primary care for women health may be based on humanization and prevention. Thus, it is indispensable a good guidance given to patients about the importance of undergoing a Pap smear screening for cervical cancer and breast self-examination.<sup>5</sup> However, the reality is different from what is expected and it is strongly related to education level. Sometimes women do not take these exams because do not know how to do or think it is not really necessary.<sup>11</sup> Therefore, it is important evaluates the situation of medical students about knowing and practicing this specific health care for the purpose of know if what is learned at the university has been done for their own health and if they are able to guide others. From this, should be done interventions with these students in order to enrich the information and to improve quality of life of those who they will handle in academic life.

## Methods

This is an epidemiologic, quantitative, descriptive study with a cross-sectional design; performed at Universidade do Estado do Pará. All procedures were according to ethical standards of the institutional and/or National Research Committee according to Helsinki Declaration and its later amendments or comparable ethical standards. The study received ethical approvals from the Human Subjects

Review Committee of Universidade do Estado do Pará (UEPA) under the protocol 1.781.117. All participants provided written consent to participate. The research data consisted of 130 female students from first to the third year of medicine course that agreed to participate in the study. The casuistry was calculated by Biostat 5.0. Program. After ethical committee’s approval, students from first to the third year of UEPA’s medical course were invited to participate in the research in a period from April to May of 2017. Those who have signed the consent were able to fill the questionnaires. All of the female students from first to the third year of Universidade do Estado do Pará medical course that agreed to participate are included in the research. Students who had refused to participate were excluded. Questionnaires were applied to evaluate variables such as age, marital status, previous pregnancy and the knowledge about breast self-exam and Pap smear screening for cervical cancer. Those questionnaires were based on Neto & Paz<sup>11</sup> & Souza et al.,<sup>12</sup> and were filled by the students themselves. Correction of the answers was according to Basic Attention Registry for the Control of Uterine and Cervical Cancers<sup>3</sup> and to Brazilian Guidelines for the Screening of Cervical Cancer.<sup>13</sup>

The statistical analyses were performed using Biostat 5.0 Program. The chi-square test was used to evaluate the significance of associations between categorical variables and G-test for continuous variables.

## Results

Data analysis of 130 participants showed that the average age was 20.1 (±2.3) years old. Only 2.3% were married and 97.7% never had any previous pregnancy (Table 1).

**Table 1** Students’ clinical-epidemiological profile from 1st to 3rd year of Universidade do Estado do Pará medical course, from April to May of 2017

General data	Absolute number (AN=130)	Percentage
Age (years)		
16 a 17	12	9,2%
18 a 19	44	33,8%
20 a 21	52	40%
>=22	22	16,9%
Media±Standard deviation	20.1±2.3	
Previous pregnancy		
Yes	3	2,3%
Not	127	97,7%
Marital status		
Single	127	97,7%
Married	3	2,3%

\*p < 0.0001 Chi-square test  
Source: Research’s Record

About Pap smear screening for cervical cancer, 89.2% answered that knew the exam, but only 4.6% knew about pre-examination care. 32.3% of participants had already undergone a Pap smear test and 19% of them had taken the exam four or more times. When questioned about the importance of doing the exam, 84.6% answered correctly, but only 3.8% showed a right knowledge about being submitted to a Pap smear test (Table 2).

**Table 2** Knowledge about Pap smear screening for cervical cancer of students from 1st to 3rd year of Universidade do Estado do Pará medical course from April to May of 2017

Questions asked	Absolute number (AN=130)	Percentage
Have you ever heard about Pap smear screening for cervical cancer?		
Yes*	116	89,2%
Not	14	10,8%
Have you ever submitted to Pap smear screening for cervical cancer?		
Yes	42	32,3%
Not*	88	67,7%
The frequency of submission to Pap smear screening for cervical cancer (AN=42)		
One	13	31%
Two	14	33,3%
Three	7	16,7%
Four or more	8	19%
Pre-examination care		
Wrong / Do not Know / Does not report*	71	54,6%
Confused	30	23,1%
Partially	23	17,7%
Right	6	4,6%
Do you know about the importance of this exam?		
Right*	110	84,6%
Wrong	11	8,5%
Do not know	9	6,9%
Knowledge about ideal frequency to be submitted to Pap smear screening for cervical cancer		
Partially*	91	70,0%
Wrong	19	14,6%
Right	5	3,8%
Do not know	15	11,5%

\*p < 0.0001 Chi-square test  
Source: Research’s Record

In relation to breast self-examination, 97.7% of the women had heard about it and the main knowledge provider was University (29.9%) and Media (28.3%). 99.2% answered correctly about the exam purpose, however, 53.8% answered incorrectly about the moment when this exam should be started. When the researchers questioned the reason for not to take the exam, 32.94% said it is not necessary, 25.9% did not say the reason and 8.2% assumed laziness or neglect as justification (Table 3).

**Table 3** Knowledge about breast self-examination of students from 1st to 3rd year of Universidade do Estado do Pará medical course from April to May 2017

Questions asked	Absolute number (AN=130)	Percentage
Have you ever heard about breast-self examination?		
Yes*	127	97,7%
Not	3	2,3%
Knowledge provider about the exam (AN=127)		
University*	38	29,9%
Media*	36	28,3%
Internet	16	12,6%
Mother	15	11,8%
Doctor	14	11,0%
Campaigns	10	7,9%
School	5	3,9%
Knowledge about the purpose of the exam		
Right**	129	99,2%
Did not answer	1	0,8%
Knowledge about the moment when this exam should be started		
Wrong*	70	53,8%
Do not know	23	17,7%
Right	37	28,5%
Reason for not to take the exam (AN=85)		
Did not answer*	22	25,9%
Do not know how to do	9	10,6%
Negligence / Sloth	7	8,2%
Think it is not necessary	28	32,94%
Forgetfulness	10	11,80%
Other	9	10,6%

\*p < 0.0001 Chi-square test, \*\*p < 0.0001 G-test  
Source: Research's Record

## Discussion

Among the students from 1st to 3rd year of Universidade do Estado do Pará medical course, age range and marital state agree to others researches found in literature, that also make an investigation on university women groups.<sup>11,14</sup> A low pregnancy rate in casuistry studied can be explained by a women low age prevalence and high education level, as demonstrated by Miranda-Ribeiro e Garcia (2016).<sup>15</sup>

It was observed a high knowledge about Pap smear that could be seen in general women population, without being from health academic area, as demonstrated by Mendes et al.,<sup>16</sup> Although, there is an extremely low knowledge concerning pre-examination care.

Among the frequently wrong answers, stands out a very common recommendation by gynecologists: sexual abstinence some days before the exam. However, Brazilian Health Ministry<sup>5</sup> affirmed, even usual, the recommendation just justified when was used condoms with spermicidal lubricants, because in practice, spermatozoids presence does not compromise microscopy evaluation and this information was not reported by participants. Other relevant data is the high women percentage that confounds the answer about Pap smear pre-examination care, in other words, answered as if the question refers about the pre-examination care that professionals have to take to patient security, and not self-care. It is important to evaluate from the perspective of Chitto Gauer et al.,<sup>17</sup> who demonstrates that caregivers many times neglect self-care in detriment of others. The statistic high level of women who never were submitted to a Pap smear found in this research is not a negative result. National Institute of Cancer<sup>13</sup> recommends that this exam has to be done only by women from 25 to 64 years old and shows that are low evidence about the importance of screening outside this age group. In this way, the data from this research is not worrisome, since just 16,9% of women are on age range equal or over 22 years old. In contrast, this data disagree with others studies found in the literature described by Okamoto et al.,<sup>18</sup> whose study shows that 88% women from health academic area had already done Pap smear, although women are from the same age range as this research. When the importance of being submitted to Pap smear was questioned, the majority of participants answered correctly. It demonstrates a satisfactory knowledge level among the studied population, which agree with Souza et al.,<sup>12</sup> who shows that 86% of interviewed students from health area answered correctly about the exam importance.

A very limited part of the students answered correctly the question about ideal frequency to be submitted to a screening for cervical cancer. However, 70% do not relate that after two consecutive negative results the exam has to be repeated only every 3 years. This recommendation is from National Institute of Cancer<sup>13</sup> and shows that being submitted to unnecessary exams do not bring benefits for women. Before the evaluation of breast-self cancer examination results, it is necessary to remember that clinical randomized trials did not demonstrate reduced breast cancer mortality by means of self-examination. In addition, it was demonstrated that it culminates with an increase of unnecessary biopsies number.<sup>19</sup> Brazilian Health Ministry<sup>5</sup> recommends that women perform breast self-palpation with no specific technique just to recognize some possible change and know their body better whenever they feel comfortable with doing this examination. Despite this, many recent papers still indicate the systematized practice of breast self-examination used as an efficient instrument to help breast cancer early diagnosis.<sup>20,21</sup>

Analyzing the results of breast self-examination, it was found that most of the interviewed knew the exam and can say its finality. University and television are the major knowledge providers. Many studies had demonstrated similar data around the world.<sup>11,22,23</sup> It shows the high importance of communication media to propagate healthcare information. When asked about the reason to do not do the breast self-exam, 32,9% said it is not necessary, however, the researchers did not found in the literature any similar data. The hypothesis is that since most of them knew the exam only in university, they received orientations according to the new international guidelines that do not recognize the exam as a diagnoses investigative strategy. This data does not agree with others as Nde et al.,<sup>23</sup> & Neto e Paz<sup>11</sup> who shows forgetfulness was the most common factor to do not do this exam. It is

worth noting that, although most of women students of medical course had heard about both exams, they often receive the information but is not able to analyze critically based on scientific evidence and put into practice. It may be related to the way that knowledge is passed into universities, often limited to demonstrate only the exams importance or technique of them and no additional information about frequency and pre-examination care. It is very important an approach change of women's health issues so that students can aggregate knowledge in the best way in order to put into practice for their own health and patients' health.

## Conclusion

This study concludes that, although a large part of women students of medical course has some knowledge about Pap smear and Breast cancer self-examination. It still lacks more updates and specific information, mainly about Pap pre-examination care, age-range that the exams should be started and the way they should be performed. It possible happens because information is not obtained in accordance with national and international guidelines.

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## Conflicts of interest

The author declares there are no conflicts of interest.

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