

DOI: 10.21767/2254-6081.1000102

# Knowledge and Practice of the Breast Self-Exam on Students from a Public University in Lima

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## Abstract

**Objective:** The study was intended to determine the knowledge and practice of breast self-examination amongst college students of the Professional Academic School of Human Medicine and the Faculty of Education at a public University in Lima, Peru.

**Materials and methods:** We performed a quantitative, cross-sectional, qualitative and phenomenological study, which consisted of surveying (124) students in total, (108) from the Professional Academic School of Human Medicine and (16) from the Faculty of Education, additionally performing in-depth semi-structured interviews of an intentional sample of (13) students of the Professional Academic School of Human Medicine and the Faculty of Education.

**Results:** The subject knowledge was associated with the practice of the breast self-examination among the students; in this regard, we found a  $P < 0.05$  of 0.031. Among the (124) students, 89.59% reported knowledge about the subject and 62.10% reported practicing the habit of self-examination. However, 64% of the respondents from the Professional Academic School of Human Medicine and 62% from the Faculty of Education did not report performing breast self-examination in the appropriate cycle. Nonetheless, (93%) of the respondents from the Professional Academic School of Human Medicine specializing in obstetrics and gynecology, as well as (100%) of the Faculty of Education, Biology and Chemistry respondents, correctly carry out the palpation on their breasts. Maternal presence in the cancer screenings is important for the practice of breast self-examination among the students of the Professional Academic School of Human Medicine. Furthermore, the influence of televised media is an important determinant of the discussion that the students of the Faculty of Education have with their mothers, on the habit of self-exploration of the breasts.

**Keywords:** Knowledge; Practices; Self-examination; Breast; College; Students

## Introduction

The breast self-exam (BSE) in women is a topic fairly addressed by the professions of nursing and medicine, prioritizing breast cancer [1-5] prevention by assuming that this illness has an increasing tendency on these days, and it is also the second pathology in the world [6]. In Peru, it is the second cause of morbidity, after cervical cancer; in Lima, it has the first place on this indicator [6-8].

The BSE is a process that develops the woman by herself in a mirror, it consists to bring her arms towards to the back of the neck, alternating hands under the head in a opposite way, which permits, thorough inspection and observation, palpate with the fingertips circular shape breasts, including the underarm area, trying to locate precociously any suspicious tumor.

The breast self-exam is very useful in countries on process of development, where the cost of a mammogram is expensive and could not be done in bulk This exam allows us discover if it exists tumors from 1 cm avoiding in this way women go to the doctor with tumors bigger than 5 cm, which unfortunately is present in 85% of patients in specialized care [8]. However, the academic discussion of self-exam as to its effectiveness is maintained, because it fails to reveal tumors smaller than 1 cm; why mammography is considered the best diagnostic test since discovered lesions from 12 mm [9].

In Peru, some investigations reveal that do not exist any association between knowledge and practice of the BSE; in other words, women who know how to make the BSE is approximated 87%, but only 18% of them put in practice the BSE in a regular way, once a month, seven days after her menstrual cycle [3].

However, we found a study of the ENDES in 2008, where it is indicated that 34.6% of Peruvian women between 20 to 49 years old performed the SBE. Variables associated to perform breast self-examination were the following: women between 30 to 49 years of age, income from low to high, the quantity of children (from one to two), and a clinical breast exam by a health professional [9].

The aim of this study was to analyze the presence of the association between knowledge and practice of BSE in a public college of medicine and education in Lima whose ages are

between 22 to 24 years old. We also wanted to inquire the perception, the methods to be used in the detection, and also some favorable aspects, such as social, cultural, and psychological features in the learning and practice of BSE.

## Methods and Materials

We conducted a quantitative study, cross-sectional, qualitative and phenomenological in Medicine and Education College in 2012. In college who had an average age of 23.43 + 0.18, the average age for students in Medicine College was 23.72 + 0.18 and the Education College was 21.56 + 0.46. We excluded in the quantitative design to the students who did not want to participate on the investigation, but we included students from the Medicine College of the 5<sup>th</sup> and 6<sup>th</sup> year of the Gynecology and Obstetrics specialty, and also from Education, Biology and Chemistry, who were on the Anatomy course.

The demographic data like age, marital status, other realized activities, number of children and lactating were collected, and it was found minimum percentages in the following variables: married, cohabiting, different activities to study and children. Information of medicine students and education students were collected from the Unique Register of Registered University Female Students (2009-I) and the Office of Statistics (2009), respectively.

A survey in which we requested the names and telephone numbers as a reference to be located later in the qualitative design; for being an observational study it was not sent to the Ethics Committee, but it was read the consent of the 13 students; requesting their verbal authorization to perform and record until the saturation point of information. Immediately, we transcribed the interviews, according to the categories previously raised, in the guide interview and those that were emerging from the speech of students.

In the case of the surveys, we considered students who know and practice the technique of BSE; over a score of 4 to 6 correct answers, the students know and practice this procedure properly. If they got an incorrect record from 0 to 3, this means that they have no knowledge or practice of that method.

If we refer to the instrument, this was validated during the course Seminar Thesis IV, Doctorate in Health Sciences, through the evaluation of five expert judges. Croombach Alpha coefficient 0.632 was calculated from a pilot sample of 20 college students. This allowed confirming the reliability of the questionnaire responses.

We calculated the absolute and relative frequencies for variables, knowledge, practices and power, which is then tabulated in tables and graphs projected with MS Excel 2007 program and the SPSS version 20 for data analysis was used. Also, the Chi-square test was used for the bivariate analysis. It was considered as statistically significant data those values of  $p < 0.05$  with a confidence level of 95%.

For a qualitative analysis, we analyzed the categories of knowledge: influence of the mother or father, role of media

and the learning of the students. Subsequently, a reference was made for the importance of technical, emotional aspects and reasons why the BSE is not made.

We attended software as Atlas version 2.4 for a qualitative scan of the data.

## Results

Let's refer to the most relevant findings in the quantitative and qualitative aspects.

We found an association between knowledge and practices of BSE in 124 college students. The 89.59% know about it, also 62.10% practiced this procedure ( $p < 0.032$ ).

The 64% of the medicine students and the 62% of education students did not perform the BSE at the right time; this denotes that the practice of this technique was not effective. However, the 93% of medicine students and 100% of education students performed palpation of the breast properly.

As for the qualitative information of the medicine students, they mentioned that it was essential that their mothers were attending with oncology controls, this behavior served as their model to practice BSE, however education students were determinant in the habit of BSE, the influence of television programs and discussion space they expend with their mothers.

Another result of the investigation was that medicine students, thanks of the training, they receive in their college, in the course of Gynecology and Obstetrics, are informed of the risks factors of breast cancer, where they assume that because they are young, and because they did not have a family history with this pathology, they did not practice BSE.

*"I think that at my age injuries that I can have are benign, if I wanted to detect any early injury, in my case it would be a ecography, for my age, and from a certain age with the mammography, I palpate myself and try to find it out injuries, I don't check myself by the breast self-exam, I have not taken care of it because of risk factor (...)" (Medicine student, 21 years old).*

On the other hand, professors of that course emphasize the teaching of this practice to patients, not to the students of the Faculty of Medicine, because it is not at the curriculum of courses.

*"(...) Our professors teach us about how to do a test and also how to teach someone her own breast exam in the subjects that are part of the course... They teach us about prevention of breast cancer, it is not a class, it is a workshop that is not in the curriculum, then it would be good place, and that we are in medical school, right?" (Medicine student, 21 years old).*

The college students from Education argue that in the workshops of biology and chemistry, only references to sexually transmitted diseases (STD) and tuberculosis transmission; we did not talk about breast cancer and detection methods that generate doubts about the timing and

actual practice, existing gaps in information and importance of this method.

*"(...) In my school I have never heard about it. It was said that will be a screening campaign or how it should be the prevention of cancer, I am from of the specialty of biology and chemistry (...) but yes about issues as tuberculosis and sexually transmitted diseases"(Education student, 22 years old).*

On the other hand, we found that there is no relationship between academic training that gives them the college and the own practice of BSE; considering that they attribute particular importance to the information that their respective faculties should provide them; however, the knowledge they receive from their aforementioned specialties are inconclusive.

*"(...) they had not taught me, more or less I know thanks to what I had read, but in the gynecology course with a teacher or patient, recently we learn this knowledge" (Medicine student, 23 years old).*

In order to integrate quantitative and qualitative results in our study, we found that students because they lack the habit of self-exam; they demand the need of learning this technique.

## Argument

If it is true that the BSE is an auto-diagnostic method for detection of breast cancer, it is on early stages like countries on a process of development; it is not yet recommended by the academic societies; on the other hand, is practical and useful, since it does not reduce the capacity of mortality than the cancer has [9-20]. However, the study of Romaní [9] starts the possibility of reevaluating the effectiveness of BSE; taking into account the risk-benefit; the lack of coverage of mammography for having a no accessible population by geography, prevailing for the author, the method of self-care, which allows you to go to the doctor and get an early detection.

But also another Canadian study emphasizes that doctors, even though they know the guidelines and evidence of BSE, they prefer to keep their practices routinely, teaching this procedure, in which women doing the BSE have more possibilities to go to an imaging diagnostic tests and biopsies after detecting a tumor [15].

In our study, we found that 62.10% of the college students with an average age of 23 years practiced the BSE. Thus, only 34.6% of Peruvian women between 20 and 49 years performed the BSE, while 42.4% reported they just knew how it is done [9]. Coincidentally some studies were made on the north of Peru, specifically in the city of Sullana-Piura, Bolivia and Brazil reported that 8% to 45% of women did not make the self-exam [3-11]. Another study of ENDES in 2003 said that in the district of Comas in Lima, less than 15% the BSE develops regularly and the ones that make the test of mammography just a percentage of 8% [9].

Note that in reference of the education level was found that was not the determined factor to realize the BSE. Either, as to the residence area; rural or urban, in the multivariate analysis,

it was not associated with educational level, as Romaní indicated [9]. In another investigation in Argentina, about the influence of the college education in the realization of the self-exam is concluded that there are no significant differences in college students and no college students, in the application of the technique of self-exploration [10]. However, it was found that college students noted as an important factor the contribution of knowledge that could provide them their school in teaching BSE.

From another perspective with reference to the level of instruction and practice of BSE, it was found that in the college students there is a need to question on why they should be made the BSE at least once month [16], taking into consideration that there is a study of Pérez [12] in Mexico, where he argues that the school must create a culture of health in their students; so it is mandatory to review programs on curriculum to identify the contents and learning activities regarding breast health, prevention, early detection of breast cancer in the family environment and those to whom they are providing care.

In that sense, Romaní [9] gives the proposal of the *National Plan for Strengthening and Cancer Control in Peru*: needed primary care programs, aimed to the early detection of breast cancer, to reduce its incidence and mortality in a 30% in the next ten years. This plan is aimed for women aged between 40 years and under that age, with one or more risk factors.

Therefore, it is recommended that in a national level should be promoted from the secondary level the implementation of the BSE, from a joint work between the Health and Education Ministry.

On the other hand, our study found that 64% of students in the medicine college and 62% of the education students do not perform self-exam in the appropriate period. Thus, Saenz and Sánchez [13] argue that the Alcides Carrión Hospital in Lima, it was found that in women between 15 and 45 years the BSE was not practiced at the right time, but every six months. It is noteworthy that 93% of Medicine Students and 100% of the Education students; however, do not know the period in which the self is made; effect known as breast tenderness correctly. On the contrary, Toralva [14] says that 67% of women of a Mothers Club level of primary education, in a marginal area in Lima, did not know areas of the breast that should practice self.

It is worth mentioning that there is a limitation in our study, to the extent that it is not possible to generalize the results of the population, in terms of these two faculties, since, in the Faculty of Education; the sample is meager.

## Conclusion

In conclusion, this study shows that university have knowledge in an 89.59% but 62.10% did not practice the BSE. Moreover, this percentage was found that 39.47% of the Medicine School and 55.56% of Education School not have the habit. In this regard, and psychological, anthropological, literature [17-19], partly it explains this phenomenon, arguing

that cultural practices, such as breast self-exam, are taught and require functional group or society, which they belong to persist time and individual suits them. In addition, it is noted that habits are consolidated not only through its consistent practice, but also for acts that incorporate learning in their implementation in a coordinated and volitional way.

The results of this research bring to mind a metaphor well known in ancient Greece culture. An old man comes to witness the Olympics and is located between the Spartans who have no room; the Athenians call and offer an excellent place to watch the Spartans applaud the fact. The Athenians say: "I know, but do not practice".

## Acknowledgement

To the doctors Miguel Oliveros Donohue, Eduardo Gotuzzo Herencia y Ricardo Terukina Terukina for their guidance and critical revision on this research.

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