



LEVEL OF KNOWLEDGE ON RISK FACTORS AND PREVENTIVE MEASURES FOR BREAST CANCER IN HEALTH SCIENCE STUDENTS

NIVEL DE CONOCIMIENTO SOBRE LOS FACTORES DE RIESGO Y LAS MEDIDAS PREVENTIVAS DEL CÁNCER DE MAMA EN ESTUDIANTES DE CIENCIAS DE LA SALUD

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ABSTRACT

Introduction: breast cancer is one of the most common cancers worldwide and in Peru. Health students need to know preventive measures and risk factors. **Objective:** to assess the level of knowledge about risk factors and prevention measures for breast cancer in students of the private medical school, 2019. **Methods:** a quantitative, descriptive cross-sectional study was conducted with a sample of 319 students from the Faculty of Medicine of the Universidad Católica Santo Toribio de Mogrovejo in 2019, who have been enrolled in one of the professional schools. We used a questionnaire consisting of 18 questions, 5 items that addressed sociodemographic data, and 13 measured the level of knowledge about risk factors and preventive measures of breast cancer. Descriptive statistics were used. **Results:** After exclusion, there were 292 students, 72% were women. The mean age was 20.5, 23.6% were from the second year. The least known risk factors were drinking alcohol, being over 45 years of age, menarche before 12 years of age, and menopause after 55 years of age, and the least known prevention measures were: correct age for mammography 71% and frequency for self-examination 63% in a higher percentage. **Conclusion:** knowledge about risk factors and breast cancer prevention measures was adequate.

Key words: knowledge; Breast cancer; Risk factors; Primary prevention (source: MeSH NLM).

RESUMEN

Introducción: El cáncer de mama es uno de los cánceres más comunes a nivel mundial y en el Perú, por ello es importante que los estudiantes en salud conozcan las medidas preventivas y factores de riesgo. **Objetivo:** Evaluar el nivel de conocimiento sobre los factores de riesgo y medidas de prevención para el cáncer de mama en estudiantes de la escuela de medicina de una universidad privada, 2019. **Métodos:** Estudio cuantitativo, descriptivo de corte transversal, se contó con una muestra de 319 estudiantes de la Facultad de Medicina de la Universidad Católica Santo Toribio de Mogrovejo en el año 2019, que hayan estado matriculados en alguna de las escuelas profesionales. Se utilizó un cuestionario que constó de 18 preguntas, 5 ítems que abordaron datos sociodemográficos y 13 midieron el nivel de conocimiento sobre los factores de riesgo y medidas de preventivas del cáncer de mama. Se usó estadística descriptiva. **Resultados:** Después de la exclusión, se contó con 292 estudiantes, 72% fueron mujeres. La media de edad fue 20,5. 23,6 % fueron de segundo ciclo. Los factores de riesgo menos conocidos fueron beber alcohol, tener más de 45 años, menarquia antes de los 12 años y menopausia después de los 55 años, asimismo, las medidas de prevención menos conocidas fueron: edad correcta para realizar mamografía 71% y frecuencia para realizar autoexamen 63% en mayor porcentaje. **Conclusión:** El conocimiento sobre factores de riesgo y medidas de prevención de cáncer de mama fue adecuado.

Palabras clave: Conocimiento; Cáncer de mama; Factores de riesgo; Prevención primaria (fuente: DeCS BIREME).

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INTRODUCTION

Breast cancer (BC) is the most common cancer that is distributed worldwide as of 2018⁽¹⁾. Incidence rates are high in the most developed countries, while rates in the least developed countries are low but increasing⁽²⁾. BC is the most common cancer among women. It affects 2.1 million women each year and also causes the highest number of cancer-related deaths among women. In 2018, an estimated 627,000 women died of BC or about 15% of all cancer deaths among women. While rates are increasing among women in more developed regions, they are increasing in almost all regions of the World⁽³⁾. In Lima, the incidence increased in older women up to 76% in the 1990s, reporting that mortality from breast cancer in older women was 59, 112, and 103 per 100,000, for the years 1990, 1994-1997, and 2010-2012 respectively⁽⁴⁾. There is inadequate knowledge and inappropriate practices related to mammography as a procedure for the investigation of BC⁽⁵⁾. It is, therefore, necessary to increase studies on preventive measures among health personnel, especially since they are in contact with patients and make their transmission of knowledge timely⁽⁶⁾. The lack of knowledge about this cancer means that relevant educational programs are needed to improve the level of knowledge of women on this topic⁽⁷⁾.

For early detection, mammography is recommended annually, a procedure that in developing countries is not available to everyone, due to the lack of mammograms and the cost of conducting them, therefore, the practice of self-examination becomes a tool for early detection more accessible to the entire population^(8,9). Prevention remains the cornerstone of the fight against BC worldwide⁽¹⁰⁾. Breast self-examination, although not shown to be effective in reducing mortality⁽¹¹⁾, it is still recommended as a general approach to increase breast health awareness and, therefore, allow early detection of any abnormalities⁽¹²⁾. It is useful to better document the knowledge of women about breast cancer and its prevention, so the objective of this research is to determine the knowledge about risk factors and prevention measures for breast cancer in students of a faculty of Health Sciences of a private university in northern Peru.

METHODS

Design and setting

A quantitative, descriptive cross-sectional study was conducted in the Faculty of Medicine of the

Universidad Católica Santo Toribio de Mogrovejo.

Population and sample

The population of this study was 319 students from the Faculty of Medicine of the Universidad Católica Santo Toribio de Mogrovejo in 2019. These students were enrolled in one of the professional schools, either dentistry, psychology, nursing, and medicine during the study period. There was an approximation of the total population of students of the Faculty of Medicine. Stratified random sampling was performed with proportional affixing, taking as strata each professional school. The sample size was calculated from an expected prevalence of 24%¹², with a margin of error of 5%; obtaining a minimum sample size of 220 participants.

Variables and instruments

We used a questionnaire consisting of 18 questions, 5 items that addressed the sociodemographic data, and 13 measured the level of knowledge about risk factors and preventive measures of breast cancer. The instrument went through a substantive validation through experts, which consisted of an oncologist, an internist, a general practitioner, a gynecologist, and a public health specialist. According to the sociodemographic aspects, the variables considered were: age, gender, with or without children, professional academic school, and academic cycle. With regard to knowledge about risk factors for BC, the factors evaluated were: drinking alcohol, age, smoking, early menarche, and late menopause, family and personal history, obesity, and gender. It was considered "knowledge" when the answer was correct, and "unfamiliarity" when it was not. With regard to the level of knowledge about preventive measures, questions related to correct age for mammography, the frequency for mammography, the frequency for self-examination, the relationship of menstruation and self-examination, criteria for self-examination and breastfeeding were assessed.

Procedure

Classroom visits were made during class hours, subject to authorization by the teacher in charge of the classroom at the time of the survey. Informed consent was given to students over the age of 18, similarly, students under the age of 18 were given informed consent and informed consent for their parents as soon as the opportunity was given. Surveys were conducted only after the informed consent process. The questionnaire was self-applied in an



average time of 20 minutes, after a brief explanation. In the end, they were given an informative diptych on the preventive measures of breast cancer, which encouraged the performance of a breast self-examination regularly.

Statistical analysis

Descriptive statistics were used, tests of measures of central tendency and dispersion were performed for the analysis of quantitative variables, while absolute and relative frequencies were calculated for qualitative variables. Tabulation and data processing were developed using the STATA statistical software version 14.

Ethical aspects

The study protocol was reviewed and approved by the Ethics Committee of the School of Medicine of the Universidad Católica Santo Toribio de Mogrovejo. The surveys were completely anonymous and no information was provided regarding data that would allow the identification of individuals.

RESULTS

319 students were surveyed, 27 surveys were discarded because the questionnaire was not

properly completed. The sample consisted of 292 students of Health Sciences, 210 were women (72 %), and 82 men (28 %). The age range was between 17 and 29 years, with a mean age of 20.5 with a standard deviation of 2.7 years. 4 % had at least one child, the largest sample was made up of sophomore students (23.63%), sixth cycle (21.58%), and eighth cycle (21.58) (Table 1).

Table 2 shows that the least known risk factors for breast cancer acquisition by medical school students were: drinking alcohol, being over 45 years of age, menarche before 12 years of age, and menopause after 55 years of age. As well as the level of knowledge about risk factors for cancer development of university students according to the academic cycle.

Table 3 shows the level of knowledge about preventive measures of breast cancer in students Health Sciences according to the academic cycle, it can be seen that there is a higher level of knowledge about the preventive measure of criteria for self-examination (82%), followed by breastfeeding (58%), the frequency for mammography (52%), the relationship of menstruation and self-examination (46%), the frequency for self-examination (37%) and correct age for mammography (29%).

Table 1. Percentage of health science students from a private university in Northern Peru, according to academic cycle.

Cycle	Frequency	Percentage
2	69	23.63
4	50	17.12
5	4	1.37
6	63	21.58
8	63	21.58
10	27	9.25
12	16	5.48
Total	292	100



Table 2. Level of knowledge about risk factors for breast cancer in students of health sciences in a private university in Northern Peru, according to an academic school.

	Nursing		Medicine		Dentistry		Psychology		Total	
	know	Unk- nown	Meet	Unk- nown	Meet	Unk- nown	Meet	Unk- nown	Meet	Unk- nown
Drinking alcohol	37	44	54	29	17	28	54	56	162	157
%	45%	55%	65%	35%	38%	62%	33%	67%	51%	49%
Age	46	35	55	27	18	26	39	44	158	132
%	57%	43%	67%	33%	41%	59%	47%	53%	54%	46%
Smoking	63	18	68	15	36	9	64	19	231	61
%	78%	22%	82%	18%	80%	20%	77%	23%	79%	21%
Early Menar- che and Late Menopause	46	35	52	31	20	25	43	40	161	131
%	57%	43%	63%	37%	44%	56%	52%	48%	55%	45%
Family history and personal	76	5	82	1	39	6	65	18	262	30
%	94%	6%	99%	1%	87%	13%	78%	22%	90%	10%
Obesity	56	25	54	29	6	24	40	43	156	121
%	69%	31%	65%	35%	13%	53%	48%	52%	56%	44%
Gender	76	5	78	5	39	6	78	5	271	21
%	94%	6%	94%	6%	87%	13%	94%	6%	93%	7%
Participants	81		83		45		83		292	
%	27.7%		28.4%		15.4%		28.4%		100.0%	

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Table 3. Level of knowledge about preventive measures for breast cancer in health science students from a private university in Northern Peru, according to academic school.

	Nursing		Medicine		Dentistry		Psychology		Total	
	Know	Unk-nown	Know	Unk-nown	Know	Unk-nown	Know	Unk-nown	Know	Unk-nown
Correct age for mammo-graphy	19	62	47	36	7	38	11	72	84	208
%	23%	77%	57%	43%	16%	84%	13%	87%	29%	71%
Frequency of mammo-graphy	42	39	60	23	19	26	30	53	151	141
%	52%	48%	72%	28%	42%	58%	36%	64%	52%	48%
Frequency for self-exa-mination	33	48	35	48	12	33	27	56	107	185
%	41%	59%	42%	58%	27%	73%	33%	67%	37%	63%
Relationship of mens-truation and self-exami-nation	39	42	44	38	21	24	30	53	134	157
%	48%	52%	54%	46%	47%	53%	36%	64%	46%	54%
Criteria for practicing self-exami-nation	66	15	77	6	30	15	67	16	240	52
%	81%	19%	93%	7%	67%	33%	81%	19%	82%	18%
Breastfee-ding	59	22	60	23	15	30	34	49	168	124
Respon-dents	81		83		45		83		292	
%	27,7%		28,4%		15,4%		28,4%		100,0%	

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DISCUSSION

The Latin American population is diverse in its genetic, cultural, environmental, and ancestral composition⁽¹³⁾. In this study, family history and being a woman were the risk factors that achieved the highest percentage of knowledge among students in the four schools, with 90 and 94% respectively; compared to a study conducted at the Universidad de Santander, in Colombia it presents as the most

known risk factors smoking (76.8 %) and family history (66.8%), coinciding with this study where these were also the most recognized with 79% and 90% respectively. Among the unknown factors found were those related to hyperestrogenic states such as early menarche and late menopause with 14.4% and 7.6%, respectively in the study conducted in Colombia and 55% in this study⁽¹⁴⁾. With regard to the knowledge of prevention measures such as breast self-examination, in a study conducted



in Colombia, with students of health professional careers from four universities, it was observed that a large proportion of respondents know how breast self-examination is performed, slightly less than half recognized that it should be performed monthly, while in our study only 37% answered correctly; with regard to the self-examination-post-menstruation relationship, it was observed that in our study a higher knowledge was achieved (46 %), while in the Colombian study knowledge of 31.6% was obtained in the aforementioned study, both results show low levels of knowledge⁽¹⁵⁾.

In addition, in a similar study conducted by Gutiérrez Delgado et al. to students of the health sciences, it was determined that there is the knowledge (91%) regarding the procedure to perform breast self-examination, while, on the monthly frequency to perform the self-test was obtained, some uncertainty (53,6%) as in the relationship self-test-post-menstruation (32,4%), these results are similar to those obtained in the present study, where it was determined that all schools have good knowledge about the procedure to perform the self-exam, medicine with 93%, dentistry with 67%, nursing with 81%, psychology with 81%; and, with respect to the frequency of self-examination, certain ignorance was obtained, with dentistry being the school with the lowest percentage (73%)⁽¹⁶⁾.

In Peru, a study was conducted by Vilca Tapullima et al., in students, where the lack of knowledge (40.4%) about breast cancer risk factors was determined, with the least knowledge: early menarche (24.6%), family history (14.9%) and drinking alcohol (25.4%); in addition, it was known that 47.4% did not consider having preventive attitudes to these factors. Our results showed that students know about the risk factors to which they may be exposed, having the greatest knowledge about the risk of having a family and personal history with cancer (90%) and sex (93%)⁽¹⁷⁾.

The limitations of the study lie in the fact that no stratification has been carried out in years of study, which prevents showing whether there is, in more advanced students, a greater knowledge, unlike in younger students. It is recommended to expand the sample size and expand it to other universities with different types of teaching, as well as apply new data collection methods. Young women should be helped to acquire habits of health that facilitate early diagnosis of BC and develop strategies to raise awareness of the relevance of this problem.

CONCLUSION

Knowledge about risk factors and breast cancer prevention measures was adequate, the least known risk factors were: drinking alcohol 49%, age 46%, early menarche, and late menopause 45%, obesity 44%, smoking 21%, family and personal history 10% and gender 7%. The least known prevention measures were correct age for mammography 71%, frequency for self-examination 63%, the relationship of menstruation and self-examination 54%, the frequency for mammography 48%.%, breastfeeding 42% and criteria for self-examination 18%.

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