University Health Knowledge on Oral Cavity Cancer

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Conhecimento de Universitários da Área da Saúde sobre o Câncer de Cavidade Oral

Conocimiento de Universitarios del Área de la Salud sobre el Cáncer de Cavidad Oral

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Abstract

Introduction: Head and neck cancer comprises a heterogeneous group of malignant neoplasms originating in the oral cavity, pharynx, larynx, paranasal sinuses, nasal cavity, salivary and thyroid glands. **Objective:** This study aimed to evaluate the knowledge of university students in the field of oral cancer. **Method**: A cross-sectional, descriptive, qualitative-quantitative study with a non-probabilistic convenience sample. The students received an online questionnaire with 24 applied questions that addressed the risk factors, symptomatology, clinical aspects, self-examination, prevention and treatment. **Results:** 110 university students from the health area (58 = first year and 52 = last year) participated in the study, distributed in physical therapy, dentistry, psychology, physical education, nursing, medicine and nutrition. Regarding the average number of correct answers to the questionnaires, the first-year students had an average of 77.65% (± 21.09) of correct answers, and the last year's college students 82.37% (± 19.88). The questions that obtained the lowest rates of correct answers were the ones related to the incidence of oral cancer in Brazil, where 43 (39%) were correct, and 52 (47.3%) of the academics are unaware of the age at which most cases are diagnosed. **Conclusion:** Although cancer of the oral cavity is increasing, forms of prevention and early diagnosis reserve greater chances of cure. From this study, we can conclude that the academics of health courses, especially in the last year, seem to be able to inform the population about cancer of the oral cavity.

Key words: Neoplasms; Head and Neck Neoplasms; Mouth Neoplasms; Academic Performance; Epidemiology.

Resumo

Introdução: O câncer de cabeça e pescoço engloba um grupo heterogêneo de neoplasias malignas originadas na cavidade oral, faringe, laringe, seios paranasais, cavidade nasal, glândulas salivares e tireoide. **Objetivo:** Este estudo buscou avaliar o conhecimento dos universitários da área da saúde sobre o câncer de cavidade oral. **Método:** Estudo do tipo epidemiológico, transversal, descritivo, quali-quantitativo com amostra não probabilística de conveniência. Os universitários receberam, via formulário on-line, um questionário com 24 questões aplicadas que abordavam os fatores de risco, sintomatologia, aspectos clínicos, autoexame, prevenção e tratamento. **Resultados:** Participaram do estudo 110 universitários da área da saúde (58 = primeiro ano e 52 = último ano), distribuídos nos cursos de fisioterapia, odontologia, psicologia, educação física, enfermagem, medicina e nutrição. Em relação à média de acertos dos questionários, os universitários do primeiro ano obtiveram 77,65% (±21,09) de acertos, e os universitários do último ano, 82,37% (±19,88). As questões que obtiveram menores taxas de acertos foram as relacionadas à incidência do câncer de boca no Brasil; 43 (39%) acertaram e 52 (47,3%) dos universitários desconhecem a idade em que maioria dos casos são diagnosticados. **Conclusão**: Apesar de o câncer de cavidade oral ser crescente, formas de prevenção e diagnóstico precoce reservam maiores chances de cura. A partir deste estudo, pôde-se concluir que os universitários dos cursos da área da saúde, principalmente do último ano, parecem estar aptos a informar à população a respeito do câncer de cavidade oral.

Palavra-chave: Neoplasias; Neoplasias de Cabeça e Pescoço; Neoplasias Bucais; Desempenho Acadêmico; Epidemiologia.

Resumen

Introducción: El cáncer de cabeza y cuello compreende um grupo heterogéneo de neoplasias malgnas que se originan em la cavidade oral. **Objetivo:** Este estudio buscó evaluar el conocimiento de los universitarios del área de la salud sobre el cáncer de cavidad oral. **Método:** Estudio del tipo epidemiológico, transversal, descriptivo, cual-cuantitativo con muestra no probabilística de conveniencia. Los académicos recibieron, a través del formulario en línea, un cuestionario con 24 preguntas aplicadas que abordaban los factores de riesgo, sintomatología, aspectos clínicos, autoexamen, prevención y tratamiento. **Resultados:** Participaron del estudio 110 universitarios del área de la salud (58 = primer año y 52 = último año), distribuidos en los cursos de fisioterapia, odontología, psicología, educación física, enfermería, medicina y nutrición. En cuanto a la media de aciertos de los cuestionarios, los universitarios del primer año obtuvieron una media del 77,65% (± 21,09) de aciertos, y los universitarios del último año 82,37% (± 19,88). Las cuestiones que obtuvieron menores tasas de aciertos fueron las relacionadas a la incidencia del cáncer de boca en Brasil; 43 (39%) acertaron y 52 (47,3%) de los académicos desconocen la edad en la cual la mayoría de los casos son diagnosticado. **Conclusión:** A pesar de que el cáncer de cavidad oral es creciente, formas de prevención y diagnóstico precoz reservan mayores posibilidades de curación. A partir de este estudio se pode concluir que los académicos de los cursos del área de la salud, principalmente del último año, parecen estar aptos para informar a la población acerca del cáncer de cavidad oral.

Palabras clave: Neoplasias; Neoplasias de Cabeza y Cuello; Neoplasias de la Boca; Rendimiento Académico; Epidemiología.

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INTRODUCTION

Cancer encompasses a set of innumerous different types of diseases that have a disorganized abnormal cell growth with invasive potential in tissues and organs [1]. Head and neck cancer comprehends a heterogeneous group of malignant neoplasms originated in the oral cavity, pharynx, larynx, paranasal sinuses, nasal cavity, salivary glands and tyreoid[2]. In this division, oral cancer, which corresponds to the mucosa of mouth and pharynx is predominant [3].

The incidence of head and neck cancer is of 550 thousand cases with approximately 300,000 deaths annually. Oral cavity cancer (OCC) is in the 15$^{th.}$ position among the most frequent neoplasms with an incidence of 299,051 new cases annually [4]. According to the" Instituto Nacional do Câncer José Alencar Gomes da Silva (INCA)[1]", it is estimated for 2018 and 2019, 600 thousand new cases for each year, being 11,200 of OCC and 3,500 in women. It is estimated 590 new cases of OCC for the state of Santa Catarina[1].

Topographically, OCC affects lips and inner mouth and may affect gums, jugal point, hard palate, tongue and buccal floor [1]. The manifestation may express as pain in the mouth, throat, mandibles or ear, sore mouth that does not heal, bump in the cheek or neck, difficulty to move the tongue, chew and swallow, change of voice, weight loss, among others. Within the main risk factors, are solar radiation, contamination of the mouth and throat by human papillomavirus – HPV [5] tobacco and alcohol abuse, with 30% increase of risk factor when consumption is associated [6].

Because of the aforementioned data and relevance of the disease, early diagnosis is important since, if properly treated, 80% of this type of cancer has cure[1]. The deficiency of the professional formation has been indicated as one of the causes of late diagnosis[7]. Considering cancer as public health problem[8], and given the importance and contribution of healthcare professionals as disseminators of knowledge, it is indispensable to know the level of knowledge of OCC such as prevention, forms of early detection and treatment, which can lead to more effective releases, better prognosis and increase of survival in this population[1,9].

Within this scenario, the study had the objective of assessing the knowledge of health university students about OCC in a southern university in the country.

METHOD

Epidemiological, cross-sectional, descriptive, quali-quantitative convenience non-probabilistic sample study.

Upon approval by the Ethics Research Institutional Review Board of "Universidade do Sul de Santa Catarina (Unisul), protocol number 86288218.9.0000.5369, all the 388 health university students (physiotherapy, nutrition, psychology, odontology, nursing and medicine) were invited after their respective coordinators approved and through an email sent only once to join the research. These students were regularly inscribed in the first and last year of the first semester of 2018. It were excluded the students younger than 18 years and those who did not respond and/or responded erroneously the questionnaire together with the Informed Consent Form signed electronically.

Collection was conducted in May 2018 through Google *Forms,* a self-applied questionnaire with 24 multiple choice closed questions. Each question has only one correct answer addressing specific themes about the knowledge of mouth cancer, such as etiology, epidemiology, risk factors, symptomatology, clinical aspects, treatment, prognostic, self-exam and prevention. The questionnaire was available for a period of 15 days together with the electronic receipt of acceptance of the Informed Consent Form (ICF).

Concomitantly to the collection, data were stored in a Microsoft Excel® spreadsheet and further exported to the statistical analysis software *Statistical Package for the Social Sciences* (SPSS®). It was performed a descriptive statistical analysis with relative frequency for presentation of the results.

RESULTS

It were evaluated 110 questionnaires responded correctly of a total of 388 health students invited, regularly inscribed at Unisul (first and last year) distributed in physiotherapy (31), medicine (14), odontology (14), physical education (6), psychology (19), nutrition (25) and nursing in May 2018.

Questions and answers to the questionnaires were divided in etiology of the mouth cancer, epidemiology, symptomatology, self-exam and prevention, and at last, cancer treatment for presentation of the results.

In Table 1, when asked about the existence of mouth cancer, 107 (97.3%) of the students recognized its existence and three (2.7%), of the first year, responded they were unaware.

About the definition of mouth cancer, 104 (94.5%) students responded correctly when they said that cancer is a disease, but it is not transmitted from one person to the other; only six (5.5%), five of the first year, ignored this affirmation. No doubts about whether cancer is a disease were expressed.

The questions about causes of cancer were responded by 98 (89.1%) of the university students; for them, the reason is the disorganized cells growth, but 12 (10.9%) were doubtful about the cause.

The cancer epidemiology-related aspects are shown in Table 2 where 96 (87.3%) students recognize that skin cancer is the most frequent in tropical countries and 14 (12.3%) were in doubt among lip, neck and lung, seven of the first and seven of the last year.

In relation to the prevalence of mouth cancer, 91 (82.7%) responded correctly when they said it is more common among men and only 52 (47.3.%) responded that the most common age range is between 40 and 60 years old; 29 (55.6%) responses were given by last year students. Only 43 (39%) of the students, 23 of the last year, responded correctly that the incidence of OCC is 11 per 100 thousand inhabitants among males and four per 100 thousand inhabitants in females.

Table 1. Absolute frequency (n) and relative frequency (%) about the etiology of oral cavity cancer

Table of frequencies	N1	%1	N2	%2	Ng	%g
Mouth cancer:						
It is not a disease	-	0	-	0	-	0
It is a disease. but it is not transmitted from one person to another	53	91.3	51	98.1	104	94.5
It is a disease and can be transmitted from one person to another	5	8.7	1	1.9	6	5.5
Cancer occurs because:						
Disorganized cells growth	51	87.9	47	90.3	98	89.1
Death of the cells	2	3.4	1	1.9	3	2.7
Volumetric increase of the cells	2	3.4	1	1.9	3	2.7
Attack of antibodies against strange bodies	2	3.4	2	3.8	4	3.6
Penetration of virus in the cells	1	1.8	1	1.9	2	1.8

Table 2. Absolute frequency (n) and relative frequency (%) about epidemiology of oral cavity cancer

Table of frequencies	N1	%1	N2	%2	Ng	%g
Table of frequencies	N1	%1	N2	%2	Ng	%g
In your opinion. what are the types of cancer. which occurs more frequently in tropical countries?						
Lips	1	1.8	4	7.6	5	4.5
Skin	51	87.9	45	86.5	96	87.3
Neck	-	0	2	3.8	2	1.8
Lung	6	10.2	1	1.9	7	6.4
For you. mouth cancer occurs more frequently:						
In males	45	77.5	46	88.4	91	82.7
In females	13	22.1	6	11.4	19	17.3
Do you know if mouth cancer exists?						
Yes	55	94.8	52	100	107	97.3
No	3	5.2	-	0	3	2.7
What is the incidence of mouth cancer in Brazil?						
11 per 100 thousand inhabitants in males and 3 per 100 thousand in females	20	34.4	23	44.2	43	39
4 per 100 thousand inhabitants in males and 11 per 100 thousand inhabitants in females	17	29.3	5	9.6	22	20
700 per 100 thousand inhabitants in males and 300 per 100 thousand inhabitants in females	16	27.5	19	36.5	35	31.8
300 per 100 thousand inhabitants in males and 700 per 100 mil inhabitants in females	5	8.6	5	9.6	10	9.0
In what age range the majority of mouth cancer are diagnosed?						
Below 20 years old	-	0	-	0	-	0
Between 20 and 30 years old	10	17.2	4	7.6	14	12.7
Between 30 and 40 years old	22	37.9	14	26.8	36	32.7
Between 40 and 60 years old	23	39.5	29	55.6	52	47.3
Older than 60 years	3	5.1	5	9.6	8	7.3

Table 3 points out that 83 (75.5%) of the students were aware that tobacco is the main risk factor for OCC. Nevertheless, only 58 (52.7%) knew that tobacco and alcohol are the main risk factors when associated. No doubts existed about health damages smoking habits provoke and that passive smoking can also be prejudicial. It is noteworthy that 82 (74.5%) of the students responded that a cigarette has more than 1,500 chemicals; last year students responded 42 alternatives.

About the most common skin for the appearance of face and mouth cancer, 58 (52.7%) students responded correctly while affirming that a very light skin strongly favors this type of cancer. The first year students indicated the majority of the cases, 33 (56.8%).

Table 4 shows that 101 (91.8%) of the students knew to respond that at first, mouth cancer is not painful and only six (11.5%) of the last year said the disease is painful.

About the complications that may arise about this type of cancer, 92 (84.4%) of the students said that the disease may imply in difficulty of speech, chewing, swallowing and fast weight loss is one of the disease's symptoms . Only six (5.5%) agreed that none of these responses were correct.

When asked about the perception of a change in the mouth for more than 15 days, 88 (80%) students would seek for a doctor or dentist to solve the problem, six (5.5%) would use some medication, 13 (11.8%) would wait more time, two (1.8%) would seek a local healer

Table 3. Absolute frequency (n) and relative frequency (%) of risk factors of oral cavity cancer

Table of Frequencies	N1	%1	N2	%2	Ng	%g
What is the main risk factor for mouth cancer?						
Alcohol	1	1.7	1	1.92	2	1.8
Solar exposure	6	10.3	4	7.6	10	9.1
Tobacco	42	72.4	41	78.7	83	75.5
Virus	2	3.4	2	3.8	4	3.6
Genetic heritage	7	12	4	7.6	11	1
What is the association between risk factors that considerably increases the odds of having mouth cancer?						
There is no risky association	-	0	-	0	-	0
Smoke and solar exposure	21	36.1	16	30.7	37	33.6
Solar exposure and alcohol	1	1.72	1	1.92	2	1.8
Smoke and alcohol	31	53.3	27	51.8	58	52.7
Virus and smoke	5	8.6	8	15.3	13	11.8
Alcohol and virus	0	0	0	0	0	0
Do you believe smoking is damaging to your health?						
Yes	58	100	52	100	110	100
No	-	0	-	0	-	0
Do you believe smoking near to another person can harm them?						
Yes	58	100	52	100	110	100
No	-	0	-	0	-	0
Do you believe there are safe doses for smoking?						
Yes	2	3.5	4	7.7	6	5.5
No	56	96.5	48	92.3	104	94.5
How many chemical substances a cigarette has?						
None	2	3.4	-	0	2	1.8
15	2	3.4	1	1.9	3	2.7
300	14	24	9	17.2	23	20.9
More than 1.500	40	68.9	42	80.7	82	74.5
What type of skin do you think influences more the appearance of lip and face cancer?						
Very light skin	33	56.8	25	48.1	58	52.7
Light skin	6	10.3	9	17.2	15	13.6
Dark skin	6	10.3	1	1.9	7	6.4
Any of the above	13	22.5	17	32.6	30	27.3

Table 4. Absolute frequency (n) and relative frequency (%) about the symptomatology and clinical aspects of oral cavity cancer

Table of frequencies	N1	%1	N2	%2	Ng	%g
At start. mouth cancer:						
Hurts too much	3	5.7	6	11.5	9	8.2
Does not hurt	55	94.3	46	88.4	101	91.8
Of the symptoms below. which one (s) do you think is related to mouth cancer?						
Difficulty to speak	1	1.9	-	0	1	0.9
Difficulty to chew	5	8.6	1	1.9	6	5.5
Difficulty to swallow	2	3.4	-	0	2	1.8
Fast weight loss	-	0	2	3.8	2	1.8
All the above	47	80.8	45	86.4	92	84.4
None of the above	3	5.1	4	7.6	7	5.5
If you have noticed some change in your mouth for more than 15 days in your mouth. what would you do?						
I wouldn't be worried about that	-	0	1	1.9	1	0.9
I would use some medication	3	5.1	3	5.7	6	5.5
I would wait more time to see whether it would disappear	7	12.2	6	11.5	13	11.8
I would go to the local healer	2	3.4	-	0	2	1.8
I would see a doctor or a dentist	46	79.2	42	80	88	80

and only one (0.9%) would not worry with changes for more than two weeks.

For mouth cancer prevention, ten students (9.1%) still believe that food bear no influence at all. However, 100 (90.9%) know that fruits and vegetables are proper for prevention. Have proper nourishment, do not smoke, do not drink and protect against sun are forms to prevent mouth cancer and this affirmative was indicated by 106 (96.4%) students.

It is important to emphasize that 76 (69.1%) of the university students are unaware of mouth self-exam; of these 42 (72.5%) are of the first year. For self-exam, a mirror and a well-lit room are the requests and 90 (81.8%) of the students concur with this affirmation. Only 11 (10%) said that what is needed only is someone to help. The other nine students (8.2%), eight (13.7%) of the first year, responded that it is necessary any dentist tool to do the self-exam.

In Table 5, when asked about the mouth cancer treatment, 109 (99.1%) students recognized that cancer has cure and 93 (84.5%) knew that surgery, radiotherapy and chemotherapy are treatment methods for this type of cancer.

At last, in relation to the mean of right answers to the questionnaire about OCC knowledge, the first year health students presented an arithmetic mean of 77.65 (± 21.09) of right responses and of the last year, 82.37 (±19.88).

DISCUSSION

The proposal of the study was to verify the knowledge college health students of the first and last year have about OCC. The results indicate that few students are unaware of OCC and despite a reduced number, it points out the necessity of more explanation about this type of cancer due to the increasing incidence. In relation to the epidemiological aspects and associated risk factors, the students showed there was a gap in how the disease is understood. According to Goldemberg et al.[9], the epidemiological indicators of OCC are related since the lack of education until the late diagnosis of the disease. Therefore, healthcare professionals should be aware of the epidemiological evidences and of the OCC-associated risk factors that can educate the population about this cancer, the fifth in incidence among all types of cancer in men, and seventh in women[7].

In a more recent study of Chen et al.[11] it was reported that OCC is the eighth most common type of cancer in the world. Still, this prevalence is not high if compared to other neoplasms; in China, it was reported that there are 21,413 new cases and 11,333 deaths by cancer in 2012[11,12]. In the Nordic countries, a cohort study compared the mouth and pharynx cancer risks in different occupations with data collected from 14.9 million people, having being encountered 28,623 tongue, oral cavity and pharynx cancer cases. For the majority of the cases, the high-risk occupations had their rates reduced and the low risk occupation had their rates increased after the adjustment because of tobacco and alcohol use as anticipated[13].

There was an increase of HPV-related OCC for men older than 50 years in regard to risk factors, but for women the incidence remained stable [14]. In the present study, the college students indicated OCC as the most

Table 5. Absolute frequency (n) and relative frequency (%) aboout self-examination and prevention of oral cavity cancer

Table of Frequencies	N1	%1	N2	%2	Ng	%g
Do you think the food you eat can help to prevent mouth cancer?						
Yes	51	87.9	49	94.2	100	90.9
No	7	12.1	3	5.8	10	9.1
What types of food can help in the prevention of mouth cancer?						
None					8	7.3
Fruits and vegetables	51	87.9	49	94.2	100	90.9
Red meat	-	0	-	0	-	0
Breads and pasta	-	0	-	0	-	0
Fat	1	1.72	1	1.92	2	1.8
Do you know what mouth self-exam is?						
Yes	16	27.5	19	36.5	34	30.9
No	42	72.5	33	63.5	76	69.1
What needs to be done to do the self-examination of the mouth?						
Some dentist instrument	8	13.7	1.92	1	9	8.2
A mirror and a well-lit room	45	77.5	45	86.5	90	81.8
Have someone to help	5	8.6	6	11.5	11	10
What needs to be done to prevent mouth cancer?						
Eat healthy food	-	0	-	0	-	0
Do not smoke	2	0	1	1.92	3	2.7
Do not drink	-	0	-	0	-	0
Protect from the sun	1	1.72	-	0	1	0.9
All the above	54	93.1	52	100	106	96.4
None of the above	-	0	-	0	-	0
For you. mouth cancer:						
Is incurable. I will suffer forever	1	1.8	0	0	1	0.9
Has cure. but I need to watch myself and monitor	57	98.2	52	100	109	99.1
Has cure and I can forget this problem forever	-	0	-	0	-	0
Have you ever heard of some of the methods used for cancer treatment?						
Surgery	4	6.8	-	0	4	3.6
Radiotherapy	1	1.72	-	0	1	0.9
Chemotherapy	5	8.6	2	3.8	7	6.4
All of the above	43	74.1	50	96.1	93	84.5
Psychiatry	-	0	-	0	-	0
None	5	8.6	-	0	5	4.5

common among men, probably for being more exposed to risk factors as emphasized by Moro et al.[15]. It is relevant to emphasize that, in the upcoming decades, the risk factor in oldest men with major OCC-related exponential growth will be HPV[16]. Chotipanich et al.[17] still suggest that smoking can aggravate HPV-related cancers, but that the virus, so far, has reduced influence over the neoplasms in comparison to other risk factors, as tobacco abuse.

The majority of the college students considered smoking as the main risk factor for mouth cancer and its association with alcohol. Bezerra et al.[18] reported a poor prognosis when OCC has risk factors with this association. Although tobacco and alcohol continue to be the predominant risk factors for OCC[11,19,20], the study of Domingos et al.[7] presented a response with lower association. The authors assessed the level of knowledge of mouth cancer at the odontology and nursing courses of Rio Grande do Norte state university and it was obtained a relevant percent of responses about tobacco. Alcohol was barely mentioned. Canevese et al.[20], while using the questionnaire without adaptations or modifications found this association as the most referenced as risk factor, corroborating our findings.

In the present study, it is beyond doubt that tobacco abuse and passive smoking are health damaging. This same conclusion was encountered by Canevese et al.[20], who

evaluated the knowledge of the users of a certain health basic unit in Rio Grande do Sul about mouth cancer through the questionnaire of Rodrigues[21], by the item response theory, and the participants were unanimous while saying that tobacco is health damaging, but some affirmed that smoking near someone is undamaging.

Even if the constant intake of fresh legumes, fruits, fishes and sea food is well established as oral cancer preventive [12,20], the findings of the present study corroborate the studies that utilized the questionnaire elaborated by the item response theory. Canevese et al.[20] noticed that there were individuals who do not credit a healthy diet to a factor of prevention against the disease. Nonetheless, Rodrigues[21] verified that the majority of the students asked believed that food could contribute for the prevention of mouth cancer.

When asked about the damages this type of cancer can cause to the patients, the majority of the college students concurred with the potential limitations and that initially it is painless. These results are consistent with the findings of Souza and Carvalho[22], when they affirmed that overall, mouth cancer is asymptomatic and in more advanced stages, pain may be present. Another frequent complication reported is the OCC-related malnourishment that sometimes can be related to trismus, which can impair the speech, the voice and sometimes, chewing and swallowing[24,25].

The university students interviewed reported they would seek for a doctor or dentist to verify the changes in the mouth with more than 15 days. According to a study of Cruz-Moreira[25], 81.8% of the studies evaluated in a catholic university of Ecuador were never screened for oral cancer. Silva[26] adds that the professionals are responsible for performing a detailed clinical exam to recognize and treat the injuries and be aware of the complementary exams for a diagnosis. Late referral is frequent and occur because of incomplete knowledge and inappropriate skills of the professionals [27,28].

Riveira[29] emphasizes that the knowledge healthcare providers have about OCC can significantly influence in the decline of the incidence rates of this type of cancer in the upcoming decades. A cohort study that had the objective of analyzing the specific survival of five years and associated factors to mouth cancer in Brazil observed that this rate (between 2002 and 2003) was 60%[30]. Corroborating these findings, the studies of Canevese et al.[20] and Rodrigues[21] emphasize that the two studies utilized the same questionnaire for this type of cancer and are curable, but needs attention and monitoring.

Even if oral cancer is not the most prevalent, it has a prognostic of mortality and mainly of morbidity in patients, essentially when discovered later after symptoms appear[12,28]. The late diagnosis, usually when tumors are deeper, has odds of being in an advanced staging of the disease. In these cases, the treatment for the patients is surgery and radiotherapy[28], as the university studies demonstrated, though Canevese et al.[20] have revealed that the individuals studied did not demonstrate they knew the association of the surgery with other treatments.

In the study of Domingos et al.[7], a questionnaire was applied for nursing and odontology students about the knowledge of mouth cancer; it was verified a significant difference among students in the first, intermediate and final graduation courses and the students of the final period showed less knowledge, different from the study where the university final students demonstrated more knowledge about the theme. Yet in the study of Domingos et al.[7], the students were asked about the source of the knowledge acquired and most of them mentioned the graduation, followed by TV ads or Internet, books, articles or newspapers.

Canevese et al.[20] showed that the knowledge users of a healthcare unit have is inappropriate in regard to the recognition of some risk factors, characteristics, prevalence , age range and incidence. In this context, the universities, as social institutions and the health courses should prepare skilled professionals to resolve the problems of public health[7]. It is mandatory to enhance actions towards healthcare to prevent, improve the indicators of survival[9,30], and reduce the occurrence of new cases, help the early diagnosis and avoid the overload of the health system preventing that resources for treatment and follow up of oncologic patients are properly managed [31].

One of the limitations was the necessity of the email to be sent only by the coordination of the courses, which may have implied in low adherence; another limitation was the student's adherence to respond to the questionnaire, which can diminish the external validity of the study.

Concluding, the majority of Unasul students is aware about OCC. However, it is suggested to deepen the knowledge about this infirmity.

CONTRIBUTIONS

All the authors participated of every phase of the manuscript and approval of the final version.

DECLARATION OF CONFLICT OF INTERESTS

There are no conflict of interests to declare.

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