

**UNIVERSIDADE PAULISTA – UNIP**

**AVALIAÇÃO DO CONHECIMENTO SOBRE CÂNCER DE  
BOCA: Comparação entre cirurgiões-dentistas  
recém-formados e com mais de 30 anos de formação**

Dissertação apresentada ao Programa de Pós-Graduação em Odontologia da Universidade Paulista – UNIP, para a obtenção do título de Mestre em Odontologia.

**GISELE PAVÃO SPAULONCI**

**SÃO PAULO**

**2017**

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## SUMÁRIO

	p.
1. Introdução .....	5
2. Artigo .....	7
3. Conclusão .....	33
4. Referências .....	34
5. Anexos .....	38

## RESUMO

O presente estudo avaliou o nível de conhecimento sobre o câncer bucal dos cirurgiões-dentistas da cidade de São Paulo, por meio de um questionário, e comparou o nível de conhecimento obtido entre os profissionais recém-formados e os graduados há mais de 30 anos.

Foram enviados 25.321 e-mails aos cirurgiões-dentistas cadastrados no banco de dados do Conselho Regional de Odontologia de São Paulo, dos quais, 20.154 e-mails foram corretamente entregues. Destes, 477 responderam à pesquisa, representando uma taxa de resposta de 2,36%. Desta amostra, foram comparados os 84 profissionais recém-formados (zero a cinco anos), com os 105 dentistas com mais de 30 anos de formação, utilizando-se o teste do qui-quadrado e adotando-se  $\alpha=0,05$ . Finalmente a regressão logística foi realizada e os resultados foram descritos.

Os resultados, segundo o nível de conhecimento, foram estatisticamente diferentes entre os grupos, sendo que 19% dos recém-formados obtiveram conceito A (ótimo), contra 6,7% dos graduados há mais de 30 anos.

A despeito de ter havido diferença estatística entre os grupos de profissionais estudados, demonstrando que dentistas recém-formados apresentam nível de conhecimento 2,1 vezes superior (OR=2,1, 1,1 - 3,9 95% CI,  $p=0,024$ ), verificou-se que 34,5% dos profissionais deste grupo têm nível de conhecimento regular ou insuficiente (C e D). Além disso, várias questões que abordam informações específicas em relação às características clínicas e de fatores de risco do câncer, mostram que ainda há lacunas no conhecimento, mesmo entre os profissionais mais jovens. Por isso, ainda há um grande espaço para novos trabalhos na área e atividades de informação sobre o câncer de boca.

## 1. Introdução

O câncer bucal é considerado um problema de saúde pública em todo o mundo, é o sexto mais frequente, sendo que dois terços ocorrem em países em desenvolvimento (1, 2).

O INCA estimou que no Brasil, no ano de 2016, a ocorrência de 11.140 casos novos de câncer da cavidade oral em homens e 4.350 em mulheres (3), sendo as regiões Sul e Sudeste as que devem apresentar as maiores taxas de incidência (3).

O tipo prevalente é o carcinoma espinocelular (3 - 5), considerado um câncer com prognóstico ruim (6), sendo que a taxa de sobrevivência em cinco anos é de 50% a 60% (1, 6, 7) e melhorias notáveis não têm ocorrido nas décadas recentes (5 - 7).

A sobrevida dos pacientes e suas sequelas funcionais estão relacionadas ao estadiamento no momento do diagnóstico (8), sendo que a detecção precoce e o tratamento imediato do câncer bucal reduzem as taxas de mortalidade (1, 2, 5, 9 - 11). Entretanto, estudos mostram que dois terços dos cânceres são diagnosticados em estágios avançados (III e IV) (2, 10, 12- 14). Este atraso no diagnóstico deve-se a fatores ligados aos pacientes (13- 15), aos profissionais (13, 14) e ao próprio sistema de saúde, pois a falta de diagnóstico precoce também tem sido associada ao difícil acesso aos serviços especializados, especialmente para pessoas que vivem longe das capitais (15). Outros estudos reconheceram o local do tumor e o grau de diferenciação significativamente associados ao alto risco de diagnóstico tardio, podendo ser explicados pelo fato de que a autopercepção e a autoexploração do paciente dependem da localização do tumor (6).

A escassez de profissionais e escolas de odontologia no Brasil pode ser descartada como um possível fator para este atraso (16), já que atualmente há mais de 280 mil graduados e 220 faculdades de Odontologia no país (17).

Levando em conta que o diagnóstico precoce é o principal passo para a redução da mortalidade por câncer, deve haver intervenções educativas junto à população, especialmente focadas nos grupos de risco, e aos profissionais, devendo incluir um conhecimento sólido da apresentação da doença (6).

O câncer de boca pode ser reconhecido em um estágio inicial por um exame tátil e visual. Além disso, os cirurgiões-dentistas são profissionais de saúde com um papel fundamental no aconselhamento dos pacientes sobre a detecção precoce da doença (18), o que justifica o papel do odontólogo neste campo preventivo, pois é o profissional com as maiores chances de identificar lesões assintomáticas em exames de rotina, podendo diagnosticar o tumor antes que ele comece a manifestar suas consequências devastadoras (19). Este fato justifica a importância da avaliação do conhecimento dos cirurgiões-dentistas quanto aos fatores de risco e procedimentos diagnósticos do câncer bucal.

Existem pesquisas realizadas em várias partes do mundo, que mostram lacunas no conhecimento dos cirurgiões-dentistas em relação ao câncer de boca (2, 14, 18, 20-25). No Brasil, já foram feitos diversos estudos, utilizando um questionário publicado por Dib et al. (19), que mostraram baixo nível de conhecimento dos profissionais sobre o assunto (8, 26- 29).

Pesquisas sugerem que profissionais jovens, recém-formados têm um conhecimento superior em comparação aos profissionais graduados há mais tempo (4, 25). A hipótese do estudo é que existam diferenças no conhecimento dos cirurgiões-dentistas em função do tempo de formado, no entanto, há dúvidas sobre se os mais jovens têm um nível de conhecimento superior por estarem mais próximos da graduação, ou se os profissionais mais experientes têm um nível de conhecimento superior, por terem mais tempo de prática clínica, considerando que estes profissionais graduados há mais de 30 anos já receberam informações dos estudos da década de 1980 que demonstravam aspectos sobre o câncer similares aos apontados em estudos atuais (30 - 32).

No Brasil, não temos conhecimento de estudos que avaliem essa diferença relacionada ao tempo de formado no conhecimento sobre câncer bucal. Desse modo, o objetivo do presente trabalho foi avaliar o conhecimento dos cirurgiões-dentistas em relação ao câncer bucal, por meio de um questionário validado na literatura, e comparar o nível de conhecimento obtido entre dois grupos de profissionais: cirurgiões-dentistas recém-formados (zero a cinco anos) e cirurgiões-dentistas graduados há mais de 30 anos.

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***Oral Cancer Knowledge Assessment: Newly graduates vs. Senior  
Dental Clinicians***

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## **Oral Cancer Knowledge Assessment: Newly graduates vs. Senior Dental Clinicians**

### **ABSTRACT**

The present study assessed the level of dentists' knowledge regarding oral cancer in the city of São Paulo, Brazil. A questionnaire was used to compare the level of knowledge among junior (newly graduated, 0 to 5 years of experience) and senior clinicians (with more than thirty years of experience). A total of 25,321 e-mails were sent to the dentists registered in the database of the Regional Dentistry Council of São Paulo, out of which, 20,154 e-mails were correctly delivered and 477 responses were received and accounted for in this study, which represented a response rate of 2.36%. This sample consisted of 84 newly graduates and 105 senior clinicians. Both groups were compared using the chi-square test with  $\alpha = 0.05$ . Subsequently, a logistic regression analysis was performed and the results were described herein. According to their knowledge level, the results were statistically different between the groups, with 19% of the newly graduates were evaluated with knowledge grade A (excellent) in comparison to 6.7% of senior clinicians with the same knowledge grade. In spite of the significantly different results between the groups, which indicated that newly graduates' knowledge regarding oral cancer was 2.1 times higher (OR = 2.1; 1.1-3.9 95% CI;  $p = 0.024$ ), 34.5% of the professionals in this group had regular or poor knowledge on the subject (C and D). In addition, several questions that addressed specific information relating to clinical characteristics and risk factors of oral cancer indicated that there still some knowledge gaps, even among junior professionals. Therefore, there is still a large need for further studies in the area and information activities addressing oral cancer.

*Keywords:* knowledge, oral cancer, dentists, time of experience

## INTRODUCTION

Oral cancer is considered a worldwide public health problem. It is the sixth most frequent type of cancer, and two out of three cases occur in developing countries.<sup>1,2</sup> The Brazilian National Cancer Institute (INCA) had estimated the occurrence of 11,140 new cases of oral cancer in men and 4,350 in women for 2016.<sup>3</sup> According to this estimation, the south and southeast regions would be the most affected, with the highest incidence rates.<sup>3</sup>

The most prevalent type of cancer is the squamous cell carcinoma.<sup>3-5</sup> It is considered to have poor prognosis,<sup>6</sup> with a five-year survival rate in 50 to 60% of cases.<sup>1,6,7</sup> It is worth mentioning that there has not been notable prognosis improvements in the recent decades.<sup>5-7</sup>

The patients' survival rate and the functional consequences are related to the disease staging at the time of diagnosis.<sup>8</sup> The early detection and the immediate treatment of oral cancer may reduce the mortality rates.<sup>1,2,5,9-11</sup> However, studies have demonstrated that two out of three cancers are diagnosed in advanced stages (III and IV).<sup>2,10,12-14</sup> This delay in diagnosis is due to factors related to patients,<sup>13-15</sup> health professionals,<sup>13,14</sup> and the health system, as the late diagnosis has also been associated to the difficult access to specialized services, especially for people who live away from large centers.<sup>15</sup>

The shortage of dental professionals and dental schools in Brazil may be ruled out as a possible factor for this delay,<sup>16</sup> given that there are currently more than 280,000 professionals and 220 dental schools in the country.<sup>17</sup>

The oral cancer may be identified at an early stage by means of visual and tactile examinations, and the dentists are key role health professionals in counselling patients about early detection of this disease.<sup>18</sup> The preventive role of these professionals relies on the fact that they have the greatest chances to identify asymptomatic lesions through routine examinations and to diagnose the disease before it starts unfolding, revealing its devastating consequences.<sup>19</sup> This fact emphasizes the importance of assessing the clinical professional knowledge regarding oral cancer risk factors and its diagnostic procedures.

Studies have been carried out in several parts of the world, indicating dentists' poor or lacking knowledge regarding oral cancer.<sup>2,14,18,20-25</sup> In Brazil, some studies have been performed using a questionnaire previously published in the study of Dib *et al.*<sup>19</sup>, which, at that time, demonstrated the low level of professional knowledge on this theme.<sup>8,26-29</sup>

Previous studies have suggested that junior professionals (newly graduates, 0 to 5 years of professional practice) had more knowledge in comparison to senior professionals

(above 30 years of experience).<sup>4,25</sup> The hypothesis of the present study is that there may be differences in dentists' knowledge due to the number of years of professional experience or seniority. However, there are doubts whether newly graduated dentists have more knowledge than seniors for being closer to their university experience period or if the most experienced professionals know more, for having more clinical practice years. In addition, it should be taken into consideration that professionals with 30 years of experience or more have received information from the studies carried out in the 1980s, which have indicated cancer aspects that are similar to those found in current studies.<sup>30-32</sup>

In Brazil, there are no studies that have assessed these differences justified by the time of experience with regard to oral cancer knowledge. Therefore, the objective of the present study was to assess dentists' knowledge about oral cancer by means of a literature-validated questionnaire, and to compare the knowledge level among two groups of professionals: junior or newly graduated dental clinicians vs. seniors.

## **MATERIALS AND METHODS**

The present study was approved by the Research Ethics Committee of Paulista University (UNIP), São Paulo, Brazil (Approval Report 1,543,946 - CAAE 54493716.8.0000.5512).

In this study, the database of the Regional Dentistry Council of São Paulo was accessed, which contained 28,671 listed professionals at the time of questionnaire submission, out of which 25,321 had their e-mails listed in their profile within the council database.

A questionnaire validated by Dib *et al.*<sup>19</sup> was modified and uploaded for online accessing using the Survey Monkey online platform (Survey Monkey Brazil Internet Ltd. São Paulo, Brazil). The e-mails with the invitation to participate in the study, along with the web link to access the questionnaire and a published consent form were distributed on July 2016 to the 25,321 listed dentists.

Out of all e-mails sent, 5,167 were not received due to outdated profile information or incorrect e-mail addresses in the profiles, and 20,154 e-mails were correctly received. After allowing one month for responses, the received data were fed into an Excel spreadsheet.

The participation was anonymous and no personal identification from the participants was registered.

The questionnaire consisted of 39 items divided into three parts. The first part covered for the participants' general characteristics regarding their clinical practice related to the disease and interest in the topic. Values were not attributed to the responses in the first part. The second part addressed the knowledge about the clinical characteristics of oral cancer occurrence through six questions. Each question was worth one point. The third part consisted of 17 questions regarding risk factors, along with the question about oral cancer identification and diagnosis stage and time, totalling four points.

Grades were attributed to each participant according to their knowledge level. The applied criteria were: A (excellent) for those who scored from 9 to 10 points; B (good) for those who scored from 7 to 8.99 points; C (regular) for those who scored 5 to 6.99 points; and D (poor) for those who scored below 4.99 points.

The variables "age" and "seniority" were categorized to perform the cross-tabulation of the questions, and compared according to the junior and senior dental clinicians' knowledge level.

The statistical analysis was carried out in two stages. First, the Pearson's Chi-square test was applied, with  $\alpha = 0.05$ , to detect possible associations. Subsequently, a multiple logistic regression analysis was performed to obtain the odds ratios and the confidence intervals. The SPSS 22 statistical program was used (Statistical Package for Social Sciences, IBM™, Chicago, USA).

## **RESULTS**

A total of 20,154 e-mails were sent; however, only 477 of them were replied, representing a response rate of 2.36%. The participants were grouped according to practice seniority, in order to compare 84 newly graduated dental clinicians with 105 senior dental. With this, the sample corresponded to 189 participants (Tables 1-6).

There was statistical difference in the variable "gender" according to seniority in the comparison between the two groups (Table 1). The percentage of junior female dental clinicians was 78.6%, whereas the percentage of senior female dental clinicians was 57.1% (Table 1).

Regarding knowledge level, there was statistical difference according to the participants' seniority. Among the newly graduated dental clinicians, 19% obtained grade A (excellent), whereas only 6.7% of the senior dental clinicians obtained the same grade (Table 1).

The assessment of the variable "qualification" showed that the results were also statistically different according to seniority (Table 1). Among the junior dental clinicians, 55.9% reported being general dental practitioners, 38.1% declared themselves specialists, and 6% had a Master's degree. On the other hand, among the senior dental clinicians, 56.2% reported being specialists, 21% were general dental practitioners, 15.2% had a Master's degree, and 7.6% held Ph.Ds. (Table 1). There was no statistical difference in the responses from both groups regarding the knowledge about the clinical characteristics of oral cancer (Table 2).

With regard to the risk factors of oral cancer development, there was statistical difference between the two groups of professionals in the responses relating to "low consumption of fruit and vegetables", "poor fitting of dentures", "poor dental status", "poor oral hygiene", and "consumption of hot beverages and food" (Table 3).

Table 4 shows the response frequencies according to the factors related to attitudes toward oral cancer diagnosis and the perception about the topic according to the participants' seniority.

The multiple logistic regression results analysis indicated that the oral cancer knowledge of junior dental clinicians was 2.1 times higher in comparison to the senior dental clinicians knowledge (OR = 2.1; 1.1-3.9 95% CI;  $p = 0.024$ ). In addition, it was found that the professionals who had graduated from public institutions were 2.3 times more aware about oral cancer (OR = 2.3; 1.2-4.3 95% CI;  $p = 0.013$ ). The participants who performed self-assessment and reported having satisfactory oral cancer knowledge (excellent or good) were 2.2 times more likely to have higher knowledge level (OR = 2.2; 1.2-4.2 95% CI;  $p = 0.013$ ) in comparison to the participants who reported regular or poor knowledge level (Table 5).

## DISCUSSION

Studies assessing dentists' knowledge, opinions, and practices relating to the prevention and early detection of oral cancer have been carried out in several countries.<sup>2,4,10,11,18,20-25,33-40</sup> The use of the internet and e-mails to obtain information has increased in recent years,<sup>2,20,41</sup> No articles have been found in Brazil with regard to the assessing of the dentists' oral cancer knowledge level considering and comparing their practice seniority, i.e., newly graduated professionals vs. senior professionals.

In contrast to the response rate observed in this study, a Japanese study,<sup>20</sup> which used the same electronic platform and sent 131 questionnaires, the response rate was 62.6%, represented by the 82 e-mails in response to the research. A Spanish study with 1,000 sent e-mails, had 795 acknowledged as received and 340 (42.7%) responded questionnaires.<sup>2</sup> In contrast, another Brazilian study,<sup>27</sup> sent 5,000 questionnaires via e-mail and the response rate was 1.4%, suggesting that the Brazilian professional population may be less partaking in scientific research, especially with respect to the elected method of data collection.

Therefore, it is natural to envision that Brazilian dentists have little interest in the subject. However, one possible explanation for the low response rate in the present study could be the excessive circulating advertising or spam, and the ease with which they can be ignored or discarded.<sup>2</sup> However, the authors agree with López-Jornet *et al.*<sup>2</sup> when they say that this sort of communication is faster and easier to manage, in addition to being less costly. Therefore, new efforts and resources should be made for e-mails to be taken into consideration in future research, so that important contents don't go unnoticed.

Despite the low response rates, the number of participants (477) represents an expressive sample in comparison to the ones found in literature.<sup>2,4,10,18,20,22-24,27-29,36,42</sup> Therefore, the present study provides significant information about the knowledge of dentists in São Paulo that may contribute to new projects.

Most of the study's participants were females (66.7%) (Table 1), fact that corroborates to other Brazilian studies' findings.<sup>26,28,29,42,43</sup>

According to the dentists' obtained knowledge level grades, there was statistical difference between newly graduated clinicians and senior dental clinicians (Table 1). Among junior dental clinicians, 19% obtained grade A (excellent) in comparison to 6.7% of senior dental clinicians. The results of the logistic regression analysis indicated that the knowledge

level of junior dental clinicians' was 2.1 times higher (OR = 2.1; 1.1-3.9 95% CI;  $p = 0.024$ ) (Table 5). This result is similar to other studies'.<sup>4,25</sup>

Although there was a significant difference between the two groups, the data analysis allowed to observe that there are many concepts that are still not well-defined amongst professionals of both groups, showing that there is much to be discussed on means to stimulate oral cancer knowledge building.

In the question about the anatomical region of higher oral cancer prevalence, 45.5% of participants did not know the answer (Table 2). Rocha-Buelvas *et al.*,<sup>24</sup> revealed that only a few professionals knew the most frequent location of oral malignance. This is disturbing, because if the professionals do not have the adequate knowledge about the most frequent locations of oral cancer development, the injury may go unnoticed during a routine examination and, thus, the disease diagnosis may be delayed or ignored.

Our study revealed that one-third of the respondents do not know about regional metastases (Table 2), which coincides with a study conducted in New York, USA;<sup>21</sup> and other studies found that less than 40% of dentists reported that they palpated patients' lymph nodes during the complete examination of oral cavities.<sup>11,44</sup> These data highlight the need to improve the professionals' level of knowledge about clinical characteristics and cancer screening, giving that lymph nodes palpation often aid in the diagnosis of the disease during its asymptomatic stage.

The questions regarding the risk factors of the disease (tobacco, alcohol, and HPV) were properly answered by the groups of professionals (Table 3), in opposition to a Japanese study,<sup>20</sup> in which alcohol and HPV were poorly identified as risk factors for oral cancer. It is possible that this study's results are due to massive campaigns about the dangers of cigarettes and alcohol.

An interesting aspect was the controversy about the trauma of poor denture fitting, since 60.7% of junior clinicians and 93.3% of senior clinicians reported that it was a risk factor (Table 3), demonstrating that, despite the statistical difference, more than 60% of the professionals took this controversial issue into consideration. Although from the scientific perspective the injuries caused by poor denture fitting do not cause cancer, these chronic injuries alter the oral environment, mask symptoms, and initial lesions may not be properly diagnosed. Therefore, the professionals should eliminate these traumatic factors in the maintenance of oral health.

In the current study, 54% of respondents answered that poor oral hygiene is a risk factor for oral cancer (Table 3). However, the role of poor oral hygiene is controversial and this study corroborates with the observations from Oji and Chukwuneke,<sup>45</sup> considering that only a major prospective study would provide appropriate information to scientifically clarify its impact in oral cancer genesis.

The low consumption of fruit and vegetables was considered as a risk factor for oral cancer by 40.2% of professionals (Table 3). It is believed that eating fruit and vegetables may reduce the risk of cancer, including oral cancer, because they play an important part as a protective factor. Shivappa *et al.*,<sup>46</sup> suggested a positive interaction between a pro-inflammatory diet with alcohol consumption and smoking in association with oral cancer. However, Dholam and Chouksey<sup>47</sup> found that a diet as a risk factor for oral cancer was not statistically significant. Moreover, this study agrees with Scully's<sup>5</sup> research that randomised clinical trials are needed to explore the effectiveness of dietary supplementation as chemoprevention to reduce the risk of oral cancer.

It is worth mentioning the importance appointed by the professionals regarding emotional stress. This issue was reported as a risk factor for oral cancer by 62.4% of dentists (Table 3). A recent study found an increased risk of oral cancer in patients who had suffered emotional stress. However, according to Dholam and Chouksey,<sup>47</sup> emotional stress is a modern life symptom and it may be responsible for delays in diagnosis due work and family related commitments, which probably generate patients' negligence towards their symptoms, but emotional stress would not be the core cause of oral cancer. Prospective studies with oral cancer patients would be necessary, excluding those who have scientifically proven risk factors, such as tobacco, alcohol consumption, and/or genetic factors, to show whether emotional stress alone could cause the disease.

The assessment of the variable "oral sex" indicated a considerable number of positive responses, being a risk factor for 55.6% of professionals (Table 3). Nevertheless, these results probably associate oral sex with the possibility of HPV infection, which is strongly related to oral cancer.<sup>3,7,48</sup> Therefore, it is essential to provide patients with information about HPV and regarding the importance of preventive methods during sexual intercourse, in addition to the possibility of vaccination as a method to prevent virus infection.

Considering the attitudes for the diagnosis of suspected lesions, since 17.9% of junior dental clinicians reported that they usually referred these cases to dental schools, compared to 2.4% of senior dental clinicians (Table 4). These results may be due to the fact that recent

graduates feel more familiar with those institutions, possibly due to their recent undergraduation.

When asked about oral cancer screening training during the undergraduation, 70.2% of the junior clinicians reported having received training, compared to 43.8% of senior clinicians (Table 4). This means that almost 30% of the professionals were not properly trained, demonstrating that much needs to be improved in that aspect, considering the importance and seriousness of the matter. A study conducted in Spain<sup>2</sup> found that dentists, who were trained on oral cancer during their undergraduation, were more likely to agree that they had updated knowledge. This finding corroborates with the ones of the present study, since 66% of the participants that “rated themselves with satisfactory knowledge level” (excellent or good) reported that they had been trained for the examination of oral cancer during their undergraduation studies ( $p = 0.002$ ) (Table 6). In addition, logistic regression analysis indicated that they were 2.2 times more likely to have greater knowledge about the disease (OR = 2.2; 1.2-4.2 95% CI;  $p = 0.013$ ) (Table 5).

The logistic regression analysis indicated that dentists who graduated from public institutions had 2.3 times more knowledge about oral cancer in comparison to from private institutions’ graduates (OR = 2.3; 1.2-4.3 95% CI;  $p = 0.013$ ) (Table 5), demonstrating that specific studies on the analysis of the curriculum of public and private universities may be object of further research.

Considering participation in “continuing education courses on oral cancer”, 39.2% of the professionals had attended a course on oral cancer in the previous year or in the last two years (Table 4). This result is disturbing, since the knowledge acquired during undergraduation tends to weaken with the absence of further knowledge support or updates.<sup>23</sup> Also, in the present study, 53% of the participants that reported satisfactory knowledge level (excellent or good), had attended a course on oral cancer in the last two years ( $p = 0.000$ ) (Table 6), coinciding with the study carried out by Hertrampf *et al.*,<sup>36</sup> which found that the perceptions and practice relating to early detection of oral cancer had improved, particularly in the group of dentists that had attended further educational courses, emphasizing that these programs improved dental professionals’ competence, findings in agreement with other studies.<sup>10,23-25</sup> In Spain, the professionals who had benefited from continuing education courses were 3.5 times more likely to perform biopsies in suspicious lesions and twice as likely to give advice about alcohol consumption to patients,<sup>43</sup> demonstrating the positive effect of further studies and professional update.

Therefore, it is necessary that the professionals have greater interest in continuing education courses, so that their knowledge and skills may be updated, contributing to the oral cancer prevention and minimizing practical failures regarding cancer screening, providing, when necessary, early disease detection.

The results of the present study demonstrated that, although the junior dental clinicians had a knowledge level 2.1 times higher compared to senior dental clinicians, there is still lack of knowledge about some topics related to risk factors and clinical characteristics of the disease.

Probably, these results may be explained by the fact that the information obtained by newly graduates was more updated, or due to the lack of practice in the area, more experienced dentists were not interested in the subject. Further studies conducted with a larger number of professionals are required to confirm the results of this study.

## **CONCLUSION**

The results demonstrated that, among the studied population, the newly graduates had a 2.1 times higher knowledge level in comparison to dentists who had more than 30 years of practice experience. However, when several factors regarding the knowledge of the risk factors and diagnostic procedures were individually assessed, the results indicated high rates of incorrect answers, demonstrating that there is room for further studies in the area and for oral cancer information activities. Therefore, oral cancer aspects must be emphasized, so that more people, clinicians and patients, become interested in the topic. This goal may be achieved through clarification campaigns, dental school's program improvement, and the encouragement of professionals in attending continuing education courses for better qualification.

## **CONFLICT OF INTEREST**

The authors have no financial interest in companies whose materials were included in the present study, nor any further interest that may present conflicts associated with this publication. Furthermore, there has been no significant financial support for this work that could have influenced its outcome.

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## TABLES AND FIGURES

**Table 1.** Distribution of number and percentages of responses regarding dentists' general characteristics according to responders' seniority.

Categorical Variables	Dental Clinicians		Total (%)	<i>p</i>	
	Junior	Senior			
<b>Grade obtained</b>	A (Excellent)	16 (19%)	7 (6.7%)	23 (12.2%)	<b>0.025*</b>
	B (Good)	39 (46.4%)	44 (41.9%)	83 (43.9%)	
	C (Regular)	20 (23.8%)	40 (38.1%)	60 (31.7%)	
	D (Poor)	9 (10.7%)	14 (13.3%)	23 (12.2%)	
<b>Gender</b>	Female	66 (78.6%)	60 (57.1%)	126 (66.7%)	<b>0.002*</b>
	Male	18 (21.4%)	45 (42.9%)	63 (33.3%)	
<b>Institution</b>	Public	29 (34.5%)	44 (41.9%)	73 (38.6%)	0.300
	Private	55 (65.5%)	61 (58.1%)	116 (61.4%)	
<b>Qualification</b>	General practitioner	47 (55.9%)	22 (21%)	69 (36.5%)	<b>0.000*</b>
	Specialist	32 (38.1%)	59 (56.2%)	91 (48.1%)	
	Master's degree	5 (6%)	16 (15.2%)	21 (11.1%)	
	Ph.D.	0 (0)	8 (7.6%)	8 (4.2%)	
		<b>84 (44.4%)</b>	<b>105 (55.6%)</b>	<b>189 (100%)</b>	

Note. \* *P* values lower than 0.05 indicate statistically significant results.

**Table 2.** Distribution of number and percentages of responses to specific questions about oral cancer knowledge according to responders' seniority.

Variables	Categories	Dental Clinicians		Total (%)	<i>p</i>
		Junior	Senior		
Most common cancer	Squamous cell carcinoma	57 (67.9%)	68 (64.8%)	125 (66.1%)	0.655
	Other	27 (32.1%)	37 (35.2%)	64 (33.9%)	
Most frequent anatomical region	Tongue	50 (59.5%)	53 (50.5%)	103 (54.5%)	0.215
	Other	34 (40.5%)	52 (49.5%)	86 (45.5%)	
Most common aspect Initial cancer	Painless ulcer	72 (85.7%)	90 (85.7%)	162 (85.7%)	1.000
	Other	12 (14.3%)	15 (14.3%)	27 (14.3%)	
Most common age group	More than 40 years old	75 (89.3%)	92 (87.6%)	167 (88.4%)	0.723
	Other	9 (10.7%)	13 (12.4%)	22 (11.6%)	
Most characteristic regional lymph node metastasis	Hard, painless, with or without mobility	58 (69%)	73 (69.5%)	131 (69.3%)	0.944
	Other	26 (31%)	32 (30.5%)	58 (30.7%)	
Diagnostic status in Brazil	Advanced	64 (76.2%)	87 (82.9%)	151 (79.9%)	0.256
	Other	20 (23.8%)	18 (17.1%)	38 (20.1%)	
Most common condition associated with cancer	Leukoplakia	62 (73.8%)	79 (75.2%)	141 (74.6%)	0.823
	Other	22 (26.2%)	26 (24.8%)	48 (25.4%)	
		<b>84 (44.4%)</b>	<b>105 (55.6%)</b>	<b>189 (100%)</b>	

Note. *P* values lower than 0.05 indicate statistically significant results; Other = one of the incorrect answers.

**Table 3.** Distribution of number and percentages of responses to specific questions addressing the knowledge about risk factors of oral cancer according to responders' seniority.

Variables	Categories	Dental Clinicians		Total (%)	p
		Junior	Senior		
Injected drug use	Yes	29 (34.5%)	30 (28.6%)	59 (31.2%)	0.380
	No	55 (65.5%)	75 (71.4%)	130 (68.8%)	
Had other type of cancer previously	Yes	70 (83.3%)	83 (79%)	153 (81%)	0.456
	No	14 (16.7%)	22 (21%)	36 (19%)	
Alcohol consumption	Yes	81 (96.4%)	105 (100%)	186 (98.4%)	0.051
	No	3 (3.6%)	0 (0)	3 (1.6%)	
Tobacco consumption	Yes	84 (100%)	105 (100%)	189 (100%)	.....
	No	0 (0)	0 (0)	0 (0)	
Family history of cancer	Yes	80 (95.2%)	100 (95.2%)	180 (95.2%)	1.000
	No	4 (4.8%)	5 (4.8%)	9 (4.8%)	
Emotional stress	Yes	47 (56%)	71 (67.6%)	118 (62.4%)	0.100
	No	37 (44%)	34 (32.4%)	71 (37.6%)	
Lower consumption of fruit and vegetables	Yes	26 (31%)	50 (47.6%)	76 (40.2%)	<b>0.020*</b>
	No	58 (69%)	55 (52.4%)	113 (59.8%)	
Oral sex	Yes	43 (51.2%)	62 (59%)	105 (55.6%)	0.280
	No	41 (48.8%)	43 (41%)	84 (44.4%)	
Poorly fitting dentures	Yes	51 (60.7%)	98 (93.3%)	149 (78.8%)	<b>0.000*</b>
	No	33 (39.3%)	7 (6.7%)	40 (21.2%)	
Poor dental status	Yes	37 (44%)	80 (76.2%)	117 (61.9%)	<b>0.000*</b>
	No	47 (56%)	25 (23.8%)	72 (38.1%)	
Consumption of spicy food	Yes	20 (23.8%)	36 (34.3%)	56 (29.6%)	0.117
	No	64 (76.2%)	69 (65.7%)	133 (70.4%)	
Poor oral hygiene	Yes	34 (40.5%)	68 (64.8%)	102 (54%)	<b>0.001*</b>
	No	50 (59.5%)	37 (35.2%)	87 (46%)	
Direct infection	Yes	9 (10.7%)	19 (18.1%)	28 (14.8%)	0.156
	No	75 (89.3%)	86 (81.9%)	161 (85.2%)	
Sun exposure	Yes	76 (90.5%)	86 (81.9%)	162 (85.7%)	0.094
	No	8 (9.5%)	19 (18.1%)	27 (14.3%)	
Hot beverages and food	Yes	34 (40.5%)	78 (74.3%)	112 (59.3%)	<b>0.000*</b>
	No	50 (59.5%)	27 (25.7%)	77 (40.7%)	
Obesity	Yes	14 (16.7%)	17 (16.2%)	31 (16.4%)	0.930
	No	70 (83.3%)	88 (83.8%)	158 (83.6%)	
HPV infection	Yes	71 (84.5%)	97 (92.4%)	168 (88.9%)	0.088
	No	13 (15.5%)	8 (7.6%)	21 (11.1%)	
		<b>84 (44.4%)</b>	<b>105 (55.6%)</b>	<b>189 (100%)</b>	

Note. \* P values lower than 0.05 indicate statistically significant results.

**Table 4.** Distribution of number and percentages of responses about attitudes toward diagnosis of cancer and perception about this issue according to responders' seniority.

Variables	Categories	Dental Clinicians		Total (%)	<i>p</i>
		Junior	Senior		
<b>Self-assessment of knowledge</b>	Excellent/good	46 (54.8%)	54 (51.4%)	100 (52.9%)	0.648
	Regular/Poor	38 (45.2%)	51 (48.6%)	89 (47.1%)	
<b>Performs cancer exam In the 1<sup>st</sup> appointment</b>	Yes	66 (78.6%)	90 (85.7%)	156 (82.5%)	0.199
	No	18 (21.4%)	15 (14.3%)	33 (17.5%)	
<b>Reason for not performing the exam</b>	Performed the exam	67 (79.8%)	88 (83.8%)	155 (82%)	0.551
	I do not know how to do it	8 (9.5%)	11 (10.5%)	19 (10.1%)	
	I do not think it is necessary	6 (7.1%)	5 (4.8%)	11 (5.8%)	
	I do not receive fees	3 (3.6%)	1 (1%)	4 (2.1%)	
<b>Referral of suspicious lesions</b>	Stomatology	53 (63.1%)	73 (69.5%)	126 (66.7%)	<b>0.007*</b>
	Myself	13 (15.5%)	19 (18.1%)	32 (16.9%)	
	Dental school	15 (17.9%)	3 (2.9%)	18 (9.5%)	
	Specialized hospital	2 (2.4%)	6 (5.7%)	8 (4.2%)	
	Physician	1 (1.2%)	4 (3.8%)	5 (2%)	
<b>Confidence level</b>	High	26 (31%)	40 (38.1%)	66 (34.9%)	0.407
	Low	55 (65.5%)	59 (56.2%)	114 (60.3%)	
	I do not know	3 (3.6%)	6 (5.7%)	9 (4.8%)	
<b>Training at the University</b>	Yes	59 (70.2%)	46 (43.8%)	105 (55.6%)	<b>0.001*</b>
	No	25 (29.8%)	55 (52.4%)	80 (42.3%)	
	I do not know	0 (0)	4 (3.8%)	4 (2.1%)	
<b>Attended a course on oral cancer</b>	Last year	17 (20.2%)	13 (12.4%)	30 (15.9%)	<b>0.006*</b>
	Two years ago	24 (28.6%)	20 (19%)	44 (23.3%)	
	More than two ago	19 (22.6%)	52 (49.5%)	71 (37.6%)	
	Never	14 (16.9%)	12 (11.4%)	26 (13.8%)	
	I do not remember	10 (11.9%)	8 (7.6%)	18 (9.5%)	
		<b>84 (44.4%)</b>	<b>105 (55.6%)</b>	<b>189 (100%)</b>	

Note. \* *P* values lower than 0.05 indicate statistically significant results.

**Table 5.** Association of the general characteristics and clinical practice of the dentists relating to the level of knowledge about oral cancer according to attributed grades (A = excellent; B = good).

Grades obtained (A = excellent; B = good)				
Characteristics	Categories	No. (%)	OR (95% CI)	Value of $p \chi^2$
Self-assessment of knowledge	Satisfactory	100 (52.9%)	2.2 (1.2 – 4.2)	<b>0.013*</b>
	Unsatisfactory	89 (47.1%)		
Time of Experience	Junior Dental Clinicians	84 (44.4%)	2.1 (1.1 – 3.9)	<b>0.024*</b>
	Senior Dental Clinicians	105 (55.6%)		
Graduation institution	Public	73 (38.6%)	2.3 (1.2 – 4.3)	<b>0.013*</b>
	Private	116 (61.4%)		
Attended a course on oral cancer	Two years ago	74 (39.2%)	1.5 (0.8 – 2.9)	0.234
	More than two years ago	115 (60.8%)		
	or Never			

*Note.* \*  $P$  values lower than 0.05 indicate statistically significant results. The time when the responder attended a course on oral cancer was an adjustment variable for the multiple logistic regression analysis.

**Table 6.** Distribution of number and percentages of responses relating to the dentists' general characteristics according to their self-assessment of oral cancer knowledge.

Variables	Categories	Self-assessment of the level of knowledge about oral cancer		Total (%)	<i>p</i>
		Satisfactory	Unsatisfactory		
<b>Institution</b>	Public	43 (43%)	30 (33.7%)	73 (38.6%)	0.190
	Private	57 (57%)	59 (66.3%)	116 (61.4%)	
<b>Time of experience</b>	Junior Dental Clinicians	46 (46%)	38 (42.7%)	84 (44.4%)	0.648
	Senior Dental Clinicians	54 (54%)	51 (57.3%)	105 (55.6%)	
<b>Qualification</b>	General practitioner	35 (35%)	34 (38.2%)	69 (36.5%)	0.648
	Graduated <sup>1</sup>	65 (65%)	55 (61.8%)	120 (63.5%)	
<b>Training at the university</b>	Yes	66 (66%)	39 (43.8%)	105 (55.6%)	<b>0.002*</b>
	No/I do not know	34 (34%)	50 (56.2%)	84 (44.4%)	
<b>Attended a course on oral cancer</b>	Two years ago	53 (53%)	21 (23.6%)	74 (39.2%)	<b>0.000*</b>
	More than two years ago/Never	47 (47%)	68 (76.4%)	115 (60.8%)	
<b>Grades obtained</b>	A-B (Excellent/Good)	67 (67%)	39 (43.8%)	106 (56.1%)	<b>0.001*</b>
	C-D (Regular/Poor)	33 (33%)	50 (56.2%)	83 (43.9%)	
		<b>100 (52.9%)</b>	<b>89 (47.1%)</b>	<b>189 (100%)</b>	

Note. \* *P* values lower than 0.05 indicate statistically significant results. The "Graduated" category refers to the participants that reported having specialization, Master's degree, and/or Ph.D.

**Figure 1.** Questionnaire applied to assess oral cancer knowledge (Survey Monkey Corporation).

\* 1. Age:  
(      )

\* 2. Gender:  
( ) Male  
( ) Female

\* 3. Time of experience:  
(            )

\* 4. Undergraduation institution:  
( ) Public  
( ) Private

\* 5. What is your highest qualification (general practitioner, specialist, Master's degree, Ph.D.) and in which area?

\* 6. What is your self-assessment of your level of oral cancer knowledge?  
( ) Excellent  
( ) Good  
( ) Fair  
( ) Poor

\* 7. Do you perform a dental examination to detect oral cancer in the first appointment of your patients?  
( ) Yes  
( ) No

\* 8. Explain why you do not perform oral cancer examination.  
( ) I perform the examination.  
( ) I do not know how to do it.  
( ) I do not think it is necessary.  
( ) I do not receive payment for the examination.

\* 9. When you detect malignancy suspected lesions, how do you refer the cases?  
( ) I perform the diagnostic procedures.  
( ) Dental surgeons specialized in stomatology.  
( ) Physicians  
( ) Dental schools  
( ) Specialized hospitals  
( ) When it is not the main patients' complaint, I wait until they ask for guidance.

\* 10. Which is the most common type of oral cancer?  
( ) Lymphoma  
( ) Squamous cell carcinoma  
( ) Kaposi's sarcoma  
( ) Ameloblastoma  
( ) Adenoma of salivary glands  
( ) I do not know

\* 11. Which is the most frequent anatomical region for oral cancer?  
( ) Tongue  
( ) Oral floor  
( ) Gingiva  
( ) Palate

- Jugal mucosa
- I do not know

\* 12. Among the mentioned issues, which is the most common aspect in patients with initial oral cancer?

- Abundant salivation
- Painless ulcer
- Hard nodule
- Intense pain
- I do not know

\* 13. Which is the predominant age group with oral cancer occurrence?

- Less than 18 years
- 18 to 39 years
- More than 40 years
- I do not know

\* 14. When the most characteristic cervical lymph node metastases in oral cancer are palpated, they are:

- Hard, painful, with mobility.
- Hard, painless, with or without mobility.
- Soft, painful, with mobility.
- Soft, painless, with or without mobility.
- I do not know.

\* 15. According to epidemiological data, which oral cancer stage is most frequently diagnosed in Brazil?

- Pre-malignant
- Early
- Advanced
- I do not know.

\* 16. Which of the following conditions is more commonly associated to oral cancer?

- Leukoplakia
- Pemphigus vulgaris
- Stomatitis
- Candidiasis
- Geographic tongue
- I do not know.

In questions 17 to 33 answer whether or not you consider the condition mentioned as a risk factor for oral cancer.

\* 17. Use of injectable drugs:

- Yes
- No

\* 18. Having previously had other types of cancer:

- Yes
- No

\* 19. Consumption of alcohol:

- Yes
- No

\* 20. Use of tobacco:

- Yes
- No

- \* 21. Family history of cancer:
  - Yes
  - No
- \* 22. Emotional stress:
  - Yes
  - No
- \* 23. Lower consumption of fruit and vegetables:
  - Yes
  - No
- \* 24. Oral sex:
  - Yes
  - No
- \* 25. Poorly fitting dentures:
  - Yes
  - No
- \* 26. Poor dental status:
  - Yes
  - No
- \* 27. Consumption of spicy food:
  - Yes
  - No
- \* 28. Poor oral hygiene:
  - Yes
  - No
- \* 29. Direct infection:
  - Yes
  - No
- \* 30. Sun exposure:
  - Yes
  - No
- \* 31. Hot beverages and food:
  - Yes
  - No
- \* 32. Obesity:
  - Yes
  - No
- \* 33. HPV infection:
  - Yes
  - No

\* 34. Do you consider your patients sufficiently informed about oral cancer (prevention and diagnosis)?  
 Yes  
 No  
 I do not know.

\* 35. What is your level of confidence in performing diagnostic procedures to detect oral cancer?  
 High  
 Low  
 I do not know.

\* 36. Do you consider that the university provided training on oral cancer examination during your undergraduate program?  
 Yes  
 No  
 I do not know.

\* 37. When was the last time you attended a continuing education course on oral cancer?  
 Last year  
 During the last two years.  
 More than two years.  
 Never  
 I do not remember.

\* 38. Are you interested in attending a continuing education course on oral cancer in the future?  
 Yes  
 No  
 I am not sure.

\* 39. According to your opinion, what is the level of importance of the dental surgeon in the prevention and early diagnosis of oral cancer?  
 High  
 Medium  
 Fair  
 Low  
 I do not know.

**Submit**

### **3. Conclusão**

Os resultados do presente estudo mostraram que, dentre a população estudada, os recém-formados apresentaram nível de conhecimento 2,1 vezes superior quando comparados aos cirurgiões-dentistas com mais de 30 anos de graduação.

Entretanto, quando avaliados individualmente, diversos pontos relacionados ao conhecimento sobre fatores de risco e de diagnóstico, mostram resultados com alto índice de respostas erradas, demonstrando que há um grande espaço para novos trabalhos na área e atividades de informação sobre o câncer de boca.

Portanto, revela-se necessário enfatizar a relevância do conhecimento sobre o câncer bucal para que mais pessoas tenham interesse, por meio de campanhas de esclarecimento e da melhora na grade curricular das faculdades, além de um incentivo à realização de cursos de educação continuada, para maior qualificação dos profissionais da área.

É importante também que se façam novos estudos com maior número de profissionais para comprovar os resultados obtidos no presente trabalho.

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## ANEXOS

Tabela 1: Distribuição do número e porcentagem de respostas de acordo com os fatores relacionados às características gerais dos participantes, segundo o tempo de formação, nas faixas de zero a cinco anos e de 30 anos ou mais.

Variáveis	Categorias	Tempo de formado		Total (%)	p
		0-5 anos	30 anos ou mais		
<b>Conceito obtido</b>	A (Ótimo)	16 (19,0)	7 (6,7)	23 (12,2)	<b>0,025*</b>
	B (Bom)	39 (46,4)	44 (41,9)	83 (43,9)	
	C (Regular)	20 (23,8)	40 (38,1)	60 (31,7)	
	D (Insuficiente)	9 (10,7)	14 (13,3)	23 (12,2)	
<b>Gênero</b>	Feminino	66 (78,6)	60 (57,1)	126 (66,7)	<b>0,002*</b>
	Masculino	18 (21,4)	45 (42,9)	63 (33,3)	
<b>Instituição</b>	Pública	29 (34,5)	44 (41,9)	73 (38,6)	0,300
	Privada	55 (65,5)	61 (58,1)	116 (61,4)	
<b>Titulação</b>	Clínico geral	47 (55,9)	22 (21,0)	69 (36,5)	<b>0,000*</b>
	Especialista	32 (38,1)	59 (56,2)	91 (48,1)	
	Mestre	5 (6,0)	16 (15,2)	21 (11,1)	
	Doutor	0 (0)	8 (7,6)	8 (4,2)	
		<b>84 (44,4)</b>	<b>105 (55,6)</b>	<b>189 (100,0)</b>	

\* : valores de p menores que 0,05 mostram resultados estatisticamente significantes.

**Tabela 2: Distribuição do número e porcentagem de respostas de acordo com as perguntas específicas relacionadas ao conhecimento sobre o câncer bucal, segundo o tempo de formação dos participantes, nas faixas de zero a cinco anos e de 30 anos ou mais.**

Variáveis	Categorias	Tempo de formado		Total (%)	p
		0-5 anos	30 anos ou mais		
<b><u>Câncer mais comum</u></b>	Carcinoma espinocelular	57 (67,9)	68 (64,8)	125 (66,1)	0,655
	Outros	27 (32,1)	37 (35,2)	64 (33,9)	
<b><u>Região anatômica mais frequente</u></b>	Língua	50 (59,5)	53 (50,5)	103 (54,5)	0,215
	Outros	34 (40,5)	52 (49,5)	86 (45,5)	
<b><u>Aspecto mais comum câncer inicial</u></b>	Úlcera indolor	72 (85,7)	90 (85,7)	162 (85,7)	1,000
	Outros	12 (14,3)	15 (14,3)	27 (14,3)	
<b><u>Faixa etária mais comum</u></b>	Acima de 40 anos	75 (89,3)	92 (87,6)	167 (88,4)	0,723
	Outros	9 (10,7)	13 (12,4)	22 (11,6)	
<b><u>Linfonodo mais característico em metástases regionais</u></b>	Duro, sem dor, com mob. ou não	58 (69,0)	73 (69,5)	131 (69,3)	0,944
	Outros	26 (31,0)	32 (30,5)	58 (30,7)	
<b><u>Estágio de diagnóstico no Brasil</u></b>	Avançado	64 (76,2)	87 (82,9)	151 (79,9)	0,256
	Outros	20 (23,8)	18 (17,1)	38 (20,1)	
<b><u>Condição mais associada ao câncer</u></b>	Leucoplasia	62 (73,8)	79 (75,2)	141 (74,6)	0,823
	Outros	22 (26,2)	26 (24,8)	48 (25,4)	
		<b>84 (44,4)</b>	<b>105 (55,6)</b>	<b>189 (100,0)</b>	

\* : valores de p menores que 0,05 mostram resultados estatisticamente significantes.

Outros: Em todas as variáveis as categorias “outros” refere-se a uma das respostas incorretas.

Tabela 3: Distribuição do número e porcentagem de respostas de acordo com as perguntas específicas relacionadas ao conhecimento sobre os fatores de risco para o câncer bucal, segundo o tempo de formação dos participantes, nas faixas de zero a cinco anos e de 30 anos ou mais.

Variáveis	Categorias	Tempo de formado		Total (%)	p
		0-5 anos	30 anos ou mais		
<u>Uso de drogas injetáveis</u>	Sim	29 (34,5)	30 (28,6)	59 (31,2)	0,380
	Não	55 (65,5)	75 (71,4)	130 (68,8)	
<u>Ter apresentado outro câncer anteriormente</u>	Sim	70 (83,3)	83 (79,0)	153 (81,0)	0,456
	Não	14 (16,7)	22 (21,0)	36 (19,0)	
<u>Consumo de álcool</u>	Sim	81 (96,4)	105 (100,0)	186 (98,4)	0,051
	Não	3 (3,6)	0 (0)	3 (1,6)	
<u>Consumo de tabaco</u>	Sim	84 (100,0)	105 (100,0)	189 (100,0)	.....
	Não	0 (0)	0 (0)	0 (0)	
<u>História familiar de câncer</u>	Sim	80 (95,2)	100 (95,2)	180 (95,2)	1,000
	Não	4 (4,8)	5 (4,8)	9 (4,8)	
<u>Stress emocional</u>	Sim	47 (56,0)	71 (67,6)	118 (62,4)	0,100
	Não	37 (44,0)	34 (32,4)	71 (37,6)	
<u>Baixo consumo de frutas e verduras</u>	Sim	26 (31,0)	50 (47,6)	76 (40,2)	<b>0,020*</b>
	Não	58 (69,0)	55 (52,4)	113 (59,8)	
<u>Sexo oral</u>	Sim	43 (51,2)	62 (59,0)	105 (55,6)	0,280
	Não	41 (48,8)	43 (41,0)	84 (44,4)	
<u>Próteses mal-adaptadas</u>	Sim	51 (60,7)	98 (93,3)	149 (78,8)	<b>0,000*</b>
	Não	33 (39,3)	7 (6,7)	40 (21,2)	
<u>Dentes em mau estado</u>	Sim	37 (44,0)	80 (76,2)	117 (61,9)	<b>0,000*</b>
	Não	47 (56,0)	25 (23,8)	72 (38,1)	
<u>Consumo de comidas condimentadas</u>	Sim	20 (23,8)	36 (34,3)	56 (29,6)	0,117
	Não	64 (76,2)	69 (65,7)	133 (70,4)	
<u>Higiene oral deficiente</u>	Sim	34 (40,5)	68 (64,8)	102 (54,0)	<b>0,001*</b>
	Não	50 (59,5)	37 (35,2)	87 (46,0)	
<u>Contágio direto</u>	Sim	9 (10,7)	19 (18,1)	28 (14,8)	0,156
	Não	75 (89,3)	86 (81,9)	161 (85,2)	
<u>Exposição solar</u>	Sim	76 (90,5)	86 (81,9)	162 (85,7)	0,094
	Não	8 (9,5)	19 (18,1)	27 (14,3)	
<u>Bebidas e comidas quentes</u>	Sim	34 (40,5)	78 (74,3)	112 (59,3)	<b>0,000*</b>
	Não	50 (59,5)	27 (25,7)	77 (40,7)	
<u>Obesidade</u>	Sim	14 (16,7)	17 (16,2)	31 (16,4)	0,930
	Não	70 (83,3)	88 (83,8)	158 (83,6)	
<u>Infecção por HPV</u>	Sim	71 (84,5)	97 (92,4)	168 (88,9)	0,088
	Não	13 (15,5)	8 (7,6)	21 (11,1)	
		<b>84 (44,4)</b>	<b>105 (55,6)</b>	<b>189 (100,0)</b>	

\*: valores de p menores que 0,05 mostram resultados estatisticamente significantes.

Tabela 4: Distribuição do número e porcentagem de respostas de acordo com os fatores relacionados a atitudes frente ao diagnóstico do câncer e percepção sobre o assunto, segundo o tempo de formação dos profissionais, nas faixas de zero a cinco anos e de 30 anos ou mais.

Variáveis	Categorias	Tempo de formado		Total (%)	p
		0-5 anos	30 anos ou mais		
<u>Autoavaliação do conhecimento</u>	Ótimo/bom	46 (54,8)	54 (51,4)	100 (52,9)	0,648
	Regular/insufic.	38 (45,2)	51 (48,6)	89 (47,1)	
<u>Realiza exame de câncer na 1ª consulta</u>	Sim	66 (78,6)	90 (85,7)	156 (82,5)	0,199
	Não	18 (21,4)	15 (14,3)	33 (17,5)	
<u>Motivo de não realizar</u>	Realizo o exame	67 (79,8)	88 (83,8)	155 (82,0)	0,551
	Não sei como fazer	8 (9,5)	11 (10,5)	19 (10,1)	
	Não acho necessário	6 (7,1)	5 (4,8)	11 (5,8)	
	Não recebo honorários	3 (3,6)	1 (1,0)	4 (2,1)	
<u>Encaminhamento de lesões suspeitas</u>	Esp. estomato	53 (63,1)	73 (69,5)	126 (66,7)	0,007*
	Eu mesmo	13 (15,5)	19 (18,1)	32 (16,9)	
	Fac. Odontologia	15 (17,9)	3 (2,9)	18 (9,5)	
	Hosp. especializ.	2 (2,4)	6 (5,7)	8 (4,2)	
	Médico	1 (1,2)	4 (3,8)	5 (2,0)	
<u>Nível de confiança</u>	Alto	26 (31,0)	40 (38,1)	66 (34,9)	0,407
	Baixo	55 (65,5)	59 (56,2)	114 (60,3)	
	Não sei	3 (3,6)	6 (5,7)	9 (4,8)	
<u>Treinamento na faculdade</u>	Sim	59 (70,2)	46 (43,8)	105 (55,6)	0,001*
	Não	25 (29,8)	55 (52,4)	80 (42,3)	
	Não sei	0 (0)	4 (3,8)	4 (2,1)	
<u>Há quanto tempo assistiu a curso sobre câncer bucal</u>	Ano passado	17 (20,2)	13 (12,4)	30 (15,9)	0,006*
	Últimos 2 anos	24 (28,6)	20 (19,0)	44 (23,3)	
	Mais de 2 anos	19 (22,6)	52 (49,5)	71 (37,6)	
	Nunca	14 (16,9)	12 (11,4)	26 (13,8)	
	Não lembro	10 (11,9)	8 (7,6)	18 (9,5)	
		<b>84 (44,4)</b>	<b>105 (55,6)</b>	<b>189 (100,0)</b>	

\*: valores de p menores que 0,05 mostram resultados estatisticamente significantes.

Tabela 5: Associação das características gerais e prática clínica dos participantes, em relação ao nível de conhecimento sobre o câncer de boca, segundo os conceitos A e B (ótimo e bom) obtidos.

<b>Conceito obtido (A e B) (ótimo e bom)</b>				
<b>Características</b>	<b>Categorias</b>	<b>n (%)</b>	<b>OR (95% C. I.)</b>	<b>Valor de p <math>\chi^2</math></b>
<b><u>Autoavaliação do conhecimento</u></b>	Satisfatório	100 (52,9)	2,2 (1,2 – 4,2)	<b>0,013*</b>
	Insatisfatório	89 (47,1)		
<b><u>Tempo de formado</u></b>	0-5 anos	84 (44,4)	2,1 (1,1 – 3,9)	<b>0,024*</b>
	30 anos ou mais	105 (55,6)		
<b><u>Instituição de graduação</u></b>	Pública	73 (38,6)	2,3 (1,2 - 4,3)	<b>0,013*</b>
	Privada	116 (61,4)		
<b><u>Há quanto tempo assistiu a curso sobre câncer bucal</u></b>	Até 2 anos	74 (39,2)	1,5 (0,8 – 2,9)	0,234
	Mais de 2 anos/nunca	115 (60,8)		

\*: valores de p menores que 0,05 mostram resultados estatisticamente significantes.

A variável “Há quanto tempo assistiu a curso sobre câncer bucal”, foi uma variável de ajuste no modelo de regressão logística múltipla.

Tabela 6: Distribuição do número e porcentagem de respostas de acordo com os fatores relacionados às características gerais dos participantes, segundo a autoavaliação do nível de conhecimento sobre o câncer de boca.

Variáveis	Categorias	Autoavaliação do nível de conhecimento sobre câncer		Total (%)	p
		Satisfatório	Insatisfatório		
<b><u>Instituição</u></b>	Pública	43 (43,0)	30 (33,7)	73 (38,6)	0,190
	Privada	57 (57,0)	59 (66,3)	116 (61,4)	
<b><u>Tempo de formado</u></b>	0-5 anos	46 (46,0)	38 (42,7)	84 (44,4)	0,648
	Mais de 30 anos	54 (54,0)	51 (57,3)	105 (55,6)	
<b><u>Titulação</u></b>	Clínico geral	35 (35,0)	34 (38,2)	69 (36,5)	0,648
	Pós-Graduado <sup>1</sup>	65 (65,0)	55 (61,8)	120 (63,5)	
<b><u>Treinamento na faculdade</u></b>	Sim	66 (66,0)	39 (43,8)	105 (55,6)	<b>0,002*</b>
	Não /Não sei	34 (34,0)	50 (56,2)	84 (44,4)	
<b><u>Há quanto tempo assistiu a curso sobre câncer bucal</u></b>	Até 2 anos	53 (53,0)	21 (23,6)	74 (39,2)	<b>0,000*</b>
	Mais de 2 anos/nunca	47 (47,0)	68 (76,4)	115 (60,8)	
<b><u>Conceito obtido</u></b>	A-B (ótimo/bom)	67 (67,0)	39 (43,8)	106 (56,1)	<b>0,001*</b>
	C-D (regular/insuf.)	33 (33,0)	50 (56,2)	83 (43,9)	
		<b>100 (52,9)</b>	<b>89 (47,1)</b>	<b>189 (100,0)</b>	

: valores de p menores que 0,05 mostram resultados estatisticamente significantes.

A categoria "Pós-Graduado<sup>1</sup>" refere-se aos participantes que declararam possuir especialização, mestrado ou doutorado.

## PARECER CONSUBSTANCIADO DO CEP

## DADOS DA EMENDA

**Título da Pesquisa:** Avaliação do conhecimento dos cirurgiões-dentistas sobre o câncer bucal.

**Pesquisador:** GISELE PAVÃO SPAULONCI

**Área Temática:**

**Versão:** 2

**CAAE:** 54493716.8.0000.5512

**Instituição Proponente:** Universidade Paulista - UNIP / Vice-Reitoria de Pesquisa e Pós Graduação

**Patrocinador Principal:** Financiamento Próprio

## DADOS DO PARECER

**Número do Parecer:** 1.543.946

**Apresentação do Projeto:**

A apresentação do projeto é adequada, permitindo analisar seus aspectos éticos.

**Objetivo da Pesquisa:**

O intuito do estudo é claro e adequado para o projeto.

**Avaliação dos Riscos e Benefícios:**

O presente projeto apresenta riscos mínimos, tendo como benefícios, contribuir para a reformulação nos cursos de graduação, como para incentivo na realização de cursos de educação continuada em relação ao câncer bucal.

**Comentários e Considerações sobre a Pesquisa:**

O presente projeto trata-se de uma pesquisa onde serão estudados cirurgiões-dentistas, aos quais lhes será enviado um questionário para ser preenchido. Após coleta dos resultados, os dados obtidos serão submetidos à análise descritiva e estatística, por meio do teste do qui-quadrado, segundo variantes de interesse.

**Considerações sobre os termos de apresentação obrigatória:**

Os termos da apresentação obrigatória estão adequadamente elaborados.

**Recomendações:**

Nenhuma recomendação.

**Conclusões ou Pendências e Lista de Inadequações:**

Não existem pendências ou inadequações.

**Considerações Finais a critério do CEP:**

Nada a ser acrescentado

Ao término da pesquisa é obrigatória a entrega do relatório final.

**Este parecer foi elaborado baseado nos documentos abaixo relacionados:**

Tipo Documento	Arquivo	Postagem	Autor	Situação
Informações Básicas do Projeto	PB_INFORMACOES_BASICAS_703920_E1.pdf	25/04/2016 22:01:50		Aceito
Folha de Rosto	folha_de_rosto.pdf	25/04/2016 12:43:55	GISELE PAVÃO SPAULONCI	Aceito
Outros	resolucao_03_2014_crosp.pdf	22/04/2016 16:24:50	GISELE PAVÃO SPAULONCI	Aceito
TCE / Termos de Assentimento / Justificativa de Ausência	termo_de_consentimento_questionario_eletronico.pdf	22/04/2016 16:21:04	GISELE PAVÃO SPAULONCI	Aceito
Orçamento	orcamento.jpg	22/04/2016 16:19:47	GISELE PAVÃO SPAULONCI	Aceito
Projeto Detalhado / Brochura Investigador	projeto_de_pesquisa_corrigido.doc	22/04/2016 16:15:55	GISELE PAVÃO SPAULONCI	Aceito
Outros	intencao_da_pesquisa.jpg.jpg	23/03/2016 20:43:00	GISELE PAVÃO SPAULONCI	Aceito
Outros	carta_de_apresentacao.jpg	23/03/2016 20:41:23	GISELE PAVÃO SPAULONCI	Aceito
Outros	termo_de_compromisso_do_pesquisador.jpg	23/03/2016 20:33:52	GISELE PAVÃO SPAULONCI	Aceito

**Situação do Parecer:**

Aprovado

**Necessita Apreciação da CONEP:**

Não

SAO PAULO, 13 de Maio de 2016

Assinado por:  
MENDEL ABRAMOWICZ  
(Coordenador)

Endereço: Rua Dr. Barcalar, 1212  
Bairro: Vila Clementino CEP: 04.026-002  
UF: SP Município: SAO PAULO  
Telefone: (11)5586-4090 Fax: (11)5586-4073 E-mail: cep@unip.br

\* 1. Idade:

\* 2. Sexo:

Masculino

Feminino

\* 3. Tempo de Formado:

\* 4. Formado em Instituição:

Pública

Privada

\* 5. Qual a sua maior titulação (clínico geral, especialista, mestre, doutor...) e em qual área?

\* 6. Em relação ao seu nível de conhecimento sobre câncer bucal, qual a sua autoavaliação?

Ótimo

Bom

Regular

Insuficiente

\* 7. Na primeira consulta odontológica de seus pacientes, você realiza exame odontológico procurando identificar o câncer bucal?

Sim

Não

\* 8. Porquê você não realiza o exame de câncer bucal?

Realizo o exame

Não sei como fazer

Não acho necessário

Não recebe honorários pelo procedimento

\* 9. Quando você encontra lesões suspeitas de malignidade, como você encaminha o caso?

Eu mesmo tomo os procedimentos diagnósticos

Conselho dentista especialista em Estomatologista

Médico

Faculdade de Odontologia

Hospital Especializado

Não sendo a queixa principal do paciente, espero que o mesmo se manifeste pedindo orientação

\* 10. Qual o tipo de câncer mais comum na boca?

Linfoma

Carcinoma Espinocelular

Sarcoma de Kaposi

Ameloblastoma

Adenoma de Glândula Salivar

Não sei

Figura 2: Questionário utilizado para avaliar o conhecimento sobre câncer bucal, utilizando-se uma plataforma eletrônica (SurveyMonkey Corporation).

- \* 11. Qual a região anatômica mais frequente para o câncer bucal?
- Língua
  - Soalho de boca
  - Gingiva
  - Palato
  - Mucosa Jugal
  - Não sei
- \* 12. Dentre os citados, qual o aspecto mais comum em pacientes com câncer de boca INICIAL?
- Salivação abundante
  - Úlcera indolor
  - Nódulo duro
  - Dor intensa
  - Não sei
- \* 13. Qual a faixa etária mais comum para ocorrência de câncer de boca?
- Menos de 18 anos
  - 18 a 39 anos
  - Acima de 40 anos
  - Não sei
- \* 14. O linfonodo mais característico em metástase cervicais, em câncer bucal, quando palpado, apresenta-se:
- Duro, dolorido com mobilidade
  - Duro, sem dor, com mobilidade ou não
  - Mole, dolorido, com mobilidade
  - Mole, sem dor, com mobilidade ou não
  - Não sei
- \* 15. No Brasil, os dados epidemiológicos mostram que o câncer bucal é diagnosticado mais frequentemente em qual estágio?
- Pré-maligno
  - Precoce
  - Avançado
  - Não sei
- \* 16. Das seguintes condições, qual a mais comumente associada ao câncer bucal?
- Leucoplasia
  - Pênfigo Vulgar
  - Estomatite
  - Candidíase
  - Língua Geográfica
  - Não sei

Figura 3: Questionário utilizado para avaliar o conhecimento sobre câncer bucal, utilizando-se uma plataforma eletrônica (SurveyMonkey Corporation).

\* 17. Nas questões de 17 a 33 assinale se você considera a condição apresentada como fator de risco para o câncer bucal:

17. Uso de drogas injetáveis:

Sim

Não

\* 18. Ter apresentado outro câncer previamente:

Sim

Não

\* 19. Consumo de álcool:

Sim

Não

\* 20. Consumo de Tabaco:

Sim

Não

\* 21. História familiar de Câncer:

Sim

Não

\* 22. Estresse emocional:

Sim

Não

\* 23. Baixo consumo de frutas e verduras:

Sim

Não

\* 24. Ato do Sexo oral:

Sim

Não

\* 25. Próteses mal adaptadas:

Sim

Não

\* 26. Dentes em mau estado:

Sim

Não

\* 27. Consumo de comidas condimentadas:

Sim

Não

\* 28. Higiene oral deficiente:

Sim

Não

Figura 4: Questionário utilizado para avaliar o conhecimento sobre câncer bucal, utilizando-se uma plataforma eletrônica (SurveyMonkey Corporation).

\* 29. Contágio direto:

Sim

Não

\* 30. Exposição Solar:

Sim

Não

\* 31. Bebidas e comidas quentes:

Sim

Não

\* 32. Obesidade:

Sim

Não

\* 33. Infecção por HPV:

Sim

Não

\* 34. Você considera que seus pacientes estão suficientemente informados sobre o câncer bucal (aspectos preventivos e de diagnóstico)?

Sim

Não

Não sei

\* 35. Qual seu nível de confiança para realizar procedimentos diagnósticos para o câncer bucal?

Alto

Médio

Não sei

\* 36. Em sua opinião, sua Universidade realizou treinamento para o exame de câncer bucal, durante o curso de graduação?

Sim

Não

Não sei

\* 37. Qual foi a última vez que você assistiu a um curso de educação continuada sobre câncer bucal?

Há um ano

Durante os últimos 2 anos

Mais de 2 anos

Nunca

Não lembro

\* 38. Você se interessa em assistir um curso de educação continuada sobre câncer bucal no futuro?

Sim

Não

Não tenho certeza

\* 39. Na sua opinião, qual o nível de importância do cirurgião-dentista na prevenção e no diagnóstico precoce do câncer bucal?

Alta

Média

Regular

Baixa

Não sei

Figura 5: Questionário utilizado para avaliar o conhecimento sobre câncer bucal, utilizando-se uma plataforma eletrônica (SurveyMonkey Corporation).