

Oral health care in university students: hygiene habits, knowledge and self-perception to promote health

Cuidados com saúde bucal em estudantes universitários: hábitos de higiene, conhecimento e autopercepção para promover saúde

Cuidado de la salud bucal en universitarios: hábitos de higiene, conocimientos y autopercepción para promover la salud

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Abstract

Objective: To investigate the behaviors, frequency and means used by university students regarding self-perception of oral hygiene, as well as the importance of care and knowledge about oral pathologies, as a strategy for the practice of a health-promoting university. **Material and Methods:** This is a qualitative research, which used the survey method and was carried out with university students from a private institution. As a research instrument, it consists of a questionnaire. For descriptive statistical analyses, mean, standard deviation and percentage were considered; a significant value of $p \leq 0.05$ was also considered. Qualitative analyzes were presented and discussed in light of the literature on health promotion. **Results:** 121 university students participated in the study. With a greater predominance of students from the dentistry course, aged between 22 and 26 years and female. 50.4% say they are satisfied with their oral health; 56.2% think they currently need dental treatment; 62.8% brush their teeth 3 times a day, mostly 43% after lunch and 28.9% after dinner. 25.6% sometimes have gum bleeding when brushing their teeth. 56.2% say they sometimes use dental floss. 86.8% of participants have no impact on quality of life regarding oral health. Regarding the knowledge of oral pathologies, most participants do not have knowledge about oral pathologies. **Considerations:** It was possible to perceive that the level of knowledge of the participants about pathologies and pathological alterations requires attention in the dissemination of information among academics.

Keywords: Oral health; Pathology; College students; Lifestyle.

Resumo

Objetivo: Averiguar os comportamentos, a frequência e os meios utilizados pelos estudantes universitários quanto a autopercepção frente a higienização bucal, bem como a importância do cuidado e o conhecimento sobre as patologias bucais, como estratégia para prática de uma universidade promotora de saúde. **Material e Métodos:** Trata-se de uma pesquisa de natureza qualitativa, que utilizou-se do método survey e que foi realizada com estudantes universitários de uma instituição privada. Como instrumento de pesquisa se constitui de um questionário. Para as análises estatísticas descritivas considerou-se a média, o desvio padrão e percentual; considerou-se, ainda, o valor significativo de $p \leq 0,05$. As análises qualitativas foram apresentadas e discutidas à luz da literatura sobre promoção da saúde. **Resultados:** Participaram do estudo 121 universitários. Com maior predomínio dos acadêmicos do curso de odontologia, idade entre 22 a 26 anos e do sexo feminino. 50,4% dizem estarem satisfeitos com o estado da saúde bucal; 56,2% acham que necessita de tratamento dentário atualmente; 62,8% escovam os dentes 3 vezes ao dia, em sua maioria 43% após o almoço e 28,9% após o jantar. 25,6% às vezes tem sangramento gengival ao escovar os dentes. 56,2% afirmam às vezes fazer o uso do fio dental. 86,8% dos participantes não possui nenhum impacto na qualidade de vida em relação à saúde bucal. Sobre o conhecimento das patologias bucal a maioria dos participantes não possuem conhecimento sobre patologias bucais. **Considerações:** Foi possível perceber que o nível de conhecimento dos participantes sobre as patologias e alterações patológicas requerem uma atenção na disseminação da informação entre os acadêmicos.

Palavras-chave: Saúde bucal; Patologia; Universitários; Estilo de vida.

Resumen

Objetivo: Investigar los comportamientos, frecuencia y medios utilizados por estudiantes universitarios en cuanto a la autopercepción de la higiene bucal, así como la importancia del cuidado y conocimiento sobre las patologías bucales, como estrategia para la práctica de una universidad promotora de salud. **Material y Métodos:** Se trata de una investigación cualitativa, que utilizó el método de encuesta y se realizó con estudiantes universitarios de una institución privada. Como instrumento de investigación, consiste en un cuestionario. Para los análisis estadísticos descriptivos se consideró media, desviación estándar y porcentaje; también se consideró un valor significativo de $p \leq 0,05$. Los análisis cualitativos fueron presentados y discutidos a la luz de la literatura sobre promoción de la salud. **Resultados:** Participaron del estudio 121 estudiantes universitarios. Con mayor predominio de estudiantes de la carrera de odontología, con edades entre 22 y 26 años y del sexo femenino. El 50,4% dice estar satisfecho con su salud bucal; el 56,2% piensa que actualmente necesita tratamiento odontológico; El 62,8% se cepilla los dientes 3 veces al día, en su mayoría el 43% después del almuerzo y el 28,9% después de la cena. El 25,6% presenta en ocasiones sangrado de encías al cepillarse los dientes. El 56,2% dice que a veces usa hilo dental. El 86,8% de los participantes no tienen impacto en la calidad de vida en cuanto a la salud bucal. En cuanto al conocimiento de patologías bucales, la mayoría de los participantes no tienen conocimientos sobre patologías bucales. **Consideraciones:** Se pudo percibir que el nivel de conocimiento de los participantes sobre patologías y cambios patológicos requiere atención en la difusión de información entre los académicos. **Palabras clave:** Salud bucal; Patología; Estudiantes universitarios; Estilo de vida.

1. Introduction

In order to maintain the standard of normality of oral structures, namely healthy gums and healthy teeth, with regard to oral health care, basic habits such as brushing, flossing, use of products containing fluoride and, mainly, periodic visits to the dentist are required. dental surgeon. In this way, encouraging healthy practices that prevent possible diseases such as caries, gingivitis, periodontitis and in extreme cases may lead to the chance of losing one of the dental elements, thus causing low self-esteem and social isolation (Meira et al., 2018).

Therefore, maintaining the periodic practice of healthy oral hygiene habits increases the potential of keeping the teeth and oral cavity healthier. Therefore, it is important to consider that a good condition of oral health care will not only impact the way the person perceives himself aesthetically, but it will also help in a better diction and enable better chewing, avoiding oral discomforts (Salles et al., 2021).

Deficiency, or even absence of oral hygiene will develop the proliferation of bacteria that cause inflammation. In some more severe cases, oral cancer and bacterial endocarditis may develop, with an increase in the bacterial population in the mouth, a part will fall into the bloodstream and may reach the heart, which may lead to death (Meira et al., 2018; Salles et al., 2021).

According to a study carried out with 1,170 students from the 7th grade of municipal education in Gravataí, Rio Grande do Sul, Brazil. Females had a higher frequency of brushing than males. Among all the students studied in the research, 77.8% brushed their teeth 3 times or more a day, 31.9% used dental floss and 68.9% went to the dentist annually, 50% of them consulted for curative reasons (Freddo et al., 2008). The study carried out with 33 university students who smoke reveals that, on average, for every 3.2% they need care (Antoniassi Junior, et al., 2016).

In this sense, oral health issues in Brazil have been guided by policies that require attention to the maintenance, prevention and promotion of care. However, in the past they were quite exclusive, prioritizing specific groups and excluding part of the population. Seeking to overcome this inequality, guidelines were created for the National Oral Health Policy (PNSB), in which it can be mentioned as one of the pillars, Brazil Strident, which, in addition to expanding dental services, was also very important in influencing the creation of other programs in other areas of health. This program goes beyond the three basic levels of health. It is important to emphasize that the Health Care Networks (RAS) are organized horizontally, so there is no degree of importance between the different points of the network to offer oral health care (Brasil, 2012) due to a more broad concept of health.

Given this, health care actions require a broader understanding than the definition of health as the absence of disease, but health as an outcome of the combination of different biological, psychological, social, economic, educational, lifestyle and factors. mainly access to health services (Silva et al., 2018) in order to promote health.

In this perspective, health care is based on a set of individual and collective strategies that also occur in the university context as a means of producing care. According to the authors Guerra, et al., (2021), socioeconomic changes in recent years have resulted in a change in the population profile that enrolls in universities. Thus, highlighting the need to promote discussions, investigations that offer possibilities of care for academics, revealing their social responsibility to the internal community.

The research proposed here intends to investigate the oral health condition of university students in view of the investigation of habits regarding oral health care. In view of the data obtained through the research, you will be able to observe if there are greater propensities to develop pathologies resulting from poor quality of oral hygiene. The work may serve to highlight these possible focuses to even provide a possible action to promote oral health care in the university environment. Through practices that facilitate the dissemination of information, mainly aimed at niches with the worst conditions of oral health care.

In accordance with what was explained in the justification, the present research has as a guiding parameter the desire to answer the following question: What do students of a university in a city in the interior of Minas Gerais know about oral pathologies, and about health care and, finally, what can the university contribute to health promotion practices based on the self-perception of university students? It is believed that the lack of information is a very decisive point for the development of several pathologies. Many university students have access to very superficial and even distorted information about oral health and unhealthy habits for oral hygiene, which can lead to various pathologies. Exposing the advantages of oral hygiene to students can be a way of motivating them for their own perceptions about the case.

Therefore, this research has social relevance, as it is able to identify certain groups that are more likely to develop pathologies resulting from bad oral habits, and to be able to promote actions in the university environment aimed at bringing information and even diagnosing present problems. Another relevant point of this study is the articulation with which this research proposal interconnects with the 2030 Agenda in the 17 Sustainable Development Goals and the 169 goals, which announce the scale and ambition for a universal agenda, with regard to Goal 3 to ensure healthy lives and promote well-being for all at all ages.

Specifically, target 3.d strengthen the capacity of all countries, particularly developing countries, for early warning, risk reduction and management of national and global health risks. Furthermore, Goal 4 aims to ensure inclusive and equitable quality education and promote lifelong learning opportunities for all. In particular target 4.7 which sets out ensuring that all learners acquire the knowledge and skills necessary to promote sustainable development, including but not limited to through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship, and appreciation of cultural diversity and the contribution of culture to sustainable development (United Nations, 2015).

In view of these considerations, the work presented here becomes plausible and relevant, both from an academic point of view to investigate the condition of oral health care, as well as to launch possibilities for repercussive actions in the field of health promotion on campus. university, involving students as a result of the practice of a health-promoting university. Given this, the present research aims to investigate the behaviors, frequency and means used by university students regarding self-perception regarding oral hygiene, as well as the importance of care and knowledge with oral pathologies, as a strategy for the practice of a promoting university. of health. Namely, i identify the profile of research participants; identify the main hygiene habits used by the participants; and raise strategies that could promote awareness-raising actions on university campuses in

promoting oral health.

2. Methodology

This is a qualitative research that used the *Survey* method according to the study by Paranhos et al. (2014) to produce the description and reflection on the findings identified on the oral health condition and oral hygiene habits of university students.

The study was carried out with university students from a private non-profit Institution of Higher Education (HEI) in the Alto Paranaíba region, state of Minas Gerais-Brazil. The IES currently has 26 higher education courses, distributed in three Institutes: Health, Education and Science and Technology. Totalling 2670 students enrolled in the 1st semester of 2022.

The research sample was composed using the snowball technique, which is a non-probabilistic sampling method constituted intentionally and for convenience; that by making the students' email list available and the contact made with the coordinators of the available courses, students will be sensitized to participate in the study. However, in order to move the population to be studied, an email was sent to everyone and with the help of the coordinators distributed in the coordination's *WhatsApp groups*, in addition to promoting interactions with students in moments of recreation on the university campus and class breaks and stages; This procedure adopted by the researchers will be carried out using the snowball technique.

Therefore, the survey of the sample took place in a specific period of 60 (sixty) days, where the researchers sent the invitations with the link available for access to respond to the survey. Having as inclusion criteria being university students, over 18 years old of both sexes, enrolled in any period of higher education courses at the IES. And as exclusion criteria those university students who perhaps failed to complete the questionnaire responses.

This research complied with ethical principles according to CNS Resolutions Nº. 466/2012 and no. 510/2016 for research with human beings. Therefore, the research was submitted, through the necessary documentation, for ethical analysis and follow-up by the Research Ethics Committee of Faculdade Patos de Minas. It was only carried out after CEP/FPM approval through CAEE 58859622.0.0000.8078 under opinion number 5,434,877.

The collection took place through the mobilization of researchers who are members of the Research Group on Culture, Subjectivity and Psychosocial Promotion of CEPPACE (Center for Studies and Research in Applied Psychology and Clinical School) of the Psychology course of the Department of Undergraduate and Postgraduate Psychology (DPGPSI) of Faculdade Patos de Minas (FPM) which, together with the participating researcher, will seek to interact with course coordinators and students to encourage participation in the research.

As this is a research using the *survey method*, the research instrument is a questionnaire based on the study by França (2019), Albuquerque et al. (2019), Vitti et al. (2011) and Alvarenga et al. (2011), thus the form was made available to participants through the *Google Forms* Platform through the link to access the survey and respond. The questionnaire is entitled Research on Hygiene Habits with Oral Health and Knowledge of University Students regarding Oral Pathologies, consisting of 25 questions, divided into 6 (six) sections that correspond to the research structure: TCLE validation; participant profile; Self-perception; behavioral habits; orality issues; and finally, thanks.

First, the researchers visited the course coordinators to present the study proposal and strengthen contact through e-mail; later, the researchers forwarded the email to the university students inviting them to participate in the research and sent the invitation to the coordinators so that they could be replicated in the coordinators' *WhatsApp groups*. One week after sending the e-mails, the invitation was made personally in all the classrooms on the university campus, raising awareness and reinforcing them to participate in the research, as well as, during the break period and approaching the students, inviting them individually and requesting support in disclosure.

For data analysis, electronic spreadsheets from the Microsoft Excel for Windows program were used, extracted from the Google Forms platform. Descriptive statistical analyzes were performed using the SPSS version 27 statistical software, with data in the form of mean, standard deviation and percentage; considering the significant value of $p \leq 0.05$. Qualitative analyzes were presented considering the theoretical framework on health promotion.

For the analysis on the theme “Quality of Life”, the instrument validated by Alvarenga et al. (2011) as “Oral Health Impact Profile-14 (OHIP-14)” in the translated version culturally adapted to the Portuguese language by Oliveira and Nadanovsky (2005). The IHIP-14 was related to problems with chewing, speaking, pain, discomfort, shame and oral discomfort. It consists of 14 questions, which assess seven composite dimensions: 1. Functional limitation; 2. Pain; 3. Psychological discomfort; 4. Physical disability; 5. Psychological disability; 6. Social disability and 7. Disability. To calculate the ISBQV of each individual, the multiplicative method was used; where each of the 14 questions had 5 (five) answer alternatives, which will be assigned a score from 0 to 4 based on the *Likert model*. Finally, the OHIP-14 scores ranged from 0 to 28 points, where the highest scores correspond to the greatest impact of oral health on the individual's quality of life.

3. Results and Discussion

A total of 135 responses were obtained, 14 of which were discarded because they did not meet the established inclusion criteria; therefore, the eligible number of participants for this study was 121 university students, portrayed mostly because they were studying dentistry 35.5% (n=43), followed by 17.4% (n=21) from the law course and 17.4% (n=21) of the psychology course, in which 30.6% (n=37) are enrolled in the 5th period, followed by 20.7% (n=25) in the 1st period, 17.4% (n=21) in the 3rd period and 14% (n=17) in the 7th period of the course.

With regard to the age of the participants, 44.6% (n=54) of university students said they were between 17 and 21 years old, followed by 26.4% (n=32) between 22 and 26 years old; 79.3% (n=96) identified themselves biologically as female; 78.5% (n=95) live with their family and 57.9% (n=70) have a paid job; Table 1 presents the stratified profile data of the university students participating in the study.

Considering other studies, people of the sex represented the majority of the answers, in addition, it is worth mentioning that the Brazilian population is composed mostly of women, 51.8% and 48.2% of men (Brazilian Institute of Geography and Statistics, 2022); given this, a greater participation of women is expected. Regarding age, the average age of participants was 21.5 years and the predominance of the health area, according to other studies with the same theme (Silva et al., 2018). It should be noted that the profile of the universities is composed of young people aged 19 to 24 years, women, white people, working students, living with their parents and having an income of up to two minimum wages and a greater predominance of the health area (Semesp , 2022).

Table 1 - Description of the profile of university students participating in the study.

Variables	Frequency (n=121)
Age:	
17 to 21 years old	44.6% (54)
22 to 26 years old	26.4% (32)
27 to 31 years old	9.1% (11)
32 to 36 years old	4.1% (5)
37 to 46 years old	9.9% (12)
47 to 56 years old	4.1% (5)
57 to 66 years old	1.7% (2)
Over 66 years old	-
Biological sex:	
Feminine	79.3% (96)
Male	20.7% (35)
Course you are enrolled in:	
Agronomy	-
Management	2.5% (3)
Accounting	5.8% (7)
biomedicine	8.3% (10)
Right	17.4% (21)
Nursing	7.4% (9)
Aesthetics	0.8% (1)
Pharmacy	-
Physiotherapy	-
Gastronomy	0.8% (1)
Dentistry	35.5% (43)
Psychology	17.4% (21)
veterinary Medicine	4.1% (5)
What period are you enrolled:	
1st period	20.7% (25)
2nd period	1.7% (2)
3rd period	17.4% (21)
4th period	-
5th period	30.6% (37)
6th period	1.7% (2)
7th period	14% (17)
8th period	1.7% (2)
9th period	8.3% (10)
10th period	4.1% (10)
If they perform paid activity:	
Yea	57.9% (70)
No	36.4% (44)
didn't want to answer	5.8% (7)
Currently residing:	
Family	78.5% (95)
Friends	7.4% (9)
Alone	8.3% (10)
Other than listed	5.8 (7)

Source: Research authors (2022).

Considering the self-perception of university students, with regard to their state of satisfaction with their mouth and teeth, the study showed that 50.4% (n=61) said they were satisfied, followed by 23.1% (n=28) who consider themselves neither

satisfied nor dissatisfied, 29.8% (n=24) say they are very satisfied, and 6.6% (n=8) say they are dissatisfied; Table 2 presents the stratified data of the self-perception of university students in relation to different aspects of the mouth and teeth.

The level of dental satisfaction is considerably high, with little expressiveness of the number of dissatisfied people, data that are identified with the study by Silva et al. (2018) in which university participants say they are satisfied with their teeth.

However, when observing the first item in Table 2 about the need for dental treatment, there is a contradiction in the response of the participants comparing the satisfaction found in self-perception, with 56.2% thinking that they currently need some dental treatment.

Currently, dental aesthetics is an aspect present in people's daily lives, with regard to the search for the perfect and/or symmetrical smile. Therefore, other factors such as tone, shape and gingival contour may be one of the components that justify the affirmative of the university students participating in the study. In a way, the aesthetic perspective in search of the symmetrical body goes beyond a beauty point of view, but a psychological perspective linked to adequacy to the culture of the ideal body, which in many cases dissatisfaction with the image revealed in the mirror that can cause depressive states, low self-esteem and unhappiness, especially when it involves the mouth and dental arch (Moreira Junior et al., 2018; Carmo-Guedes et al., 2021; Brandão & Antoniassi Junior, 2015).

Table 2 - Description of self-perception regarding the state of the mouth and teeth of university students participating in the study.

Variables	Frequency % (n=121)		
	Yea	No	Do not know
- Do you think you currently need dental treatment?	56.2% (68)	38.8% (47)	5% (6)
- Have you had toothache in the last six months?	16.5% (20)	83.5% (101)	-
- Did you have difficulty eating because of your teeth or did you feel pain in your teeth when drinking cold or hot liquids?	33.1% (40)	67% (81)	-
- Did teeth bother you when brushing?	9.9% (12)	88.4% (107)	1.6% (2)
- Teeth make you nervous or irritable at some point?	21.5% (26)	78.5% (95)	-
- Have you stopped having fun, going to parties, outings because of your teeth?	6.6% (8)	93.4 (113)	-
- Did you stop playing sports because of your teeth?	3.3% (4)	96.7% (117)	-
- Did you have trouble speaking because of your teeth?	5% (6)	95% (115)	-
- Were you embarrassed to smile or speak because of your teeth?	20.7% (25)	78.5% (95)	0.8% (1)
- Teeth got in the way of studying or working?	4.1% (5)	95% (115)	0.8% (1)
- Have you stopped sleeping or slept badly because of your teeth?	14% (17)	86% (104)	-
- Did you miss any classes in college due to mouth problems such as toothache, swelling or others?	4.1% (116)	4.1% (5)	-

Source: Research authors (2022).

It is possible to identify in Table 2 that, in general, there is not a significant number for dental pain, however, there is a significant number about discomfort in the intake of cold and/or hot foods, possibly due to tooth sensitivity.

Dental sensitivity comes not only from the ingestion of hot and cold foods, but also poor oral hygiene with lack of brushing or even poor hygiene. Other factors that cause sensitivity include the ingestion of acidic foods and drinks, bruxism, dental malocclusion, among others. Pain is caused by exposure of dentin, a porous layer that connects to the central nerve due to enamel wear (Almeida, et al., 2021).

Considering the behavioral habits of university students participating in the study, 62.8% (n=76) brush their teeth 3 times a day, 19.8% (n=24), 2 times a day and 17.4% (n=21), they rarely brush their teeth. It was observed that the habit of brushing the teeth by the participants was mostly 43% (n=52) after lunch, 28.9% (n=35) after dinner, 21.5% (n=26) after breakfast and 6.6% (n=8) after a snack.

For 72.7% (n=88) of university students have the habit of brushing their teeth before going to bed, 25.6% (n=31) sometimes brush and 1.7% (n=2) do not have this habit. Of these, 25.6% (n=31) sometimes have gingival bleeding when brushing their teeth, 2.5% (n=3) always have bleeding and most 71.9% (n=87) claim not to have bleeding.

The results evidenced on the oral hygiene care of university students, in relation to brushing, are similar to the study by Silva et al. (2018), in which 90% of Brazilian university students brushed their teeth at least 3 times a day, and 55% of foreigners brushed their teeth twice a day. These indicators can be appreciated in the study with French university students, which reveals the practice of periodic brushing among study participants and is being considered a protective factor for oral health care (Ceinos et al., (2017).

The ideal frequency of toothbrushing is three times a day, if there is a lot of time between one brushing and another, bacterial plaque can form, which would increase the risk of gum inflammation, in addition to other pathologies. Therefore, people with poor brushing are more likely to have gingival bleeding (Machado et al., 2018).

Regarding dental floss, a little more than half, 56.2% (n=68) claim to use it sometimes, 40.5% (n=49) claim to use it daily and 3.3% (n=4) does not use; only 32.2% (n=39) carry dental floss in their purse or backpack, followed by 59.5% (n=72) carrying a toothbrush, 6.6% (n=8) mouthwash and only 1.7% (n=2) claimed to carry the tongue cleaner.

In this way, the use of dental floss, together with toothbrushing, in addition to hindering the formation of dental caries and the formation of bacterial plaque, also prevents gingival inflammation and bad breath; therefore, they directly influence good oral health (Ceinos et al., 2017; Silva et al., 2018; Machado et al., 2018).

Regarding the frequency of consumption of foods and beverages containing sugar, 58.7% (n=71) of university students said they consume between 1 and 2 times, 38.8% (n=47) consume 3 times or more and 2.5% (n=3) wished not to answer; I already use soft drinks and/or artificial juices, a little more than half 52.9% (n=64) said they consume between 1 and 2 times a week, 33.9% (n=41) between 3 and 6 times in the week, 7.4% (n=9) said they did not use it and a small part of the sample of university students consume it every day of the week 5.8% (n=7).

Regarding the consumption of soft drinks, 53.7% (n=65) consume, 19.8% (n=24) consume common and diet, light and zero, and 15.7% (n=19) consume only soft drinks diet, light and zero, but 10.74% (n=13) did not respond.

Regarding the exaggerated intake of soft drinks, it is believed that it may be a predictor of damage to oral health, such as dental erosion and the loss of hard dental tissue, dental caries, due to acids and adjacent sugars present in the soft drinks, consequently, the demineralization of the teeth (Perondi et al., 2018).

Regarding tobacco use, most university students 87.6% (n=106) said they did not use it and a small part said they use it daily 5% (n=6) and 7.4% (n=9) do use occasionally. Of the university students who declared themselves smokers (n=15), Table 3 compares the number of cigarettes smoked per day with the frequency of cigarette use.

Table 3 - Comparative description of the number of cigarettes that university students self-reported smokers use compared to the frequency of use of study participants.

Frequency of cigarette use	Number of cigarettes they smoke ⁽ⁿ⁼¹⁵⁾		
	2 to 4 cigarettes	5 to 15 cigarettes	I don't know how to measure
Daily use (n=6)	5	1	
I use it occasionally (n=9)	4	1	4

Source: Research authors (2022).

Regarding the low rate of university students who self-declared to be adept at tobacco use, this result differs from the results of the study carried out by Antoniassi Junior, et al., (2016), with 1125 university students enrolled in courses in the health area of an HEI, when which identified a total of 33 university students who self-declared smokers, mostly men.

However, it is important to note that people who use cigarettes may be twice as likely to develop periodontal problems, given that tobacco directly affects the immune system and impairs the fight against bacteria and gingival healing. Furthermore, other problems are recurrent in smokers: oral cancer, bad breath and dental pigmentation (Antoniassi Junior, et al., 2016; Silva et al., 2018; Camargo & Antoniassi Junior, 2021)).

Regarding the dentistry consultation, most of the participating university students 79.3% (n=96) stated that the last time was less than a year ago, followed by 11.6% (n=14) who said it was between one and two years, 5.8% (n=7) said that the last time was three years or more and 3.3% (n=4) could not say.

When crossing the information of university students by course with the last visit to the dentist, it is evident that among university students of dentistry (n=43) the majority 36 have visited their dentist less than a year, 4 between one and two years, 1 claims to have between three years or more and 2 did not know how to answer.

In a way, the visit to the dentist occurred less than a year ago, this result is similar to the study by Silva et al. (2018) which states that the last visit to the dentist was carried out at least 6 months ago, which is what 55% of the sample of Brazilian students indicates.

However, when observing that university students of dentistry are those who stand out for visiting the dentist the most, a factor that can be considered is the fact that these students are routinely inserted in an environment that transmits information and trains professionals responsible for the practice of care for the oral health.

Regarding the use of the IES dental school clinic, only 8.3% (n=10) university students said they had sought the service and used it, 7.4% (n=9) said they sought the public service and 84.3% (n=102) seek private service. Evidencing that the main reason for seeking the service is for revision, prevention or check-up 47.1% (n=57), followed by 27.3% (n=33) specific treatment, 13.2% (n= 16) for others than not specified, 6.6% (n=8) when feeling pain and 5.8% (n=7) for extraction.

The study on the use of public and private dental services by adults residing in the state of São Paulo, reveals that among the 59.92% visited the private service and 40.08% the public. Given this, the demand for dental care in private offices is due to greater agility in carrying out the service, the paid consultation in the vast majority of cases is shorter, whereas the public consultation time can be longer. However, not all people are able to pay for private dental services, especially the lower social classes (Fonseca, 2017).

Checking the quality of life, regarding the impacts on oral health, it was observed through the OHIP-14 that most university students, 86.8% (n=105), have no impact, 7.4% (n=9) has a low impact, 3.3% (n=4) has a moderate impact and 2.5% (n=3) has a high impact of the oral health condition on quality of life, however, table 4 allows identifying the frequency of answers of the OHIP-14 items.

Quality of life encompasses several factors that affect the ways in which the subject perceives life in all its contexts. More specifically, in oral health, quality of life refers to the impact of the oral health condition in relation to its existence, which is directly related to people's quality of life. Pathologies such as caries, periodontitis, candidiasis, can properly influence the feeling of well-being, resulting from pain, bleeding, among other aspects, as the aesthetic issues already mentioned directly affect the quality of life (Bendo et al., 2015).

Table 4 - Description of the frequency of the university students' response items in relation to the impact of oral health on the quality of life according to the OHIP[®]-14 of the study participants.

In the past six months, because of problems with your teeth:	Frequency of answers % (n=121)				
	Not once	1 time a year	Between 2 to 3 times a month	Between 2 to 3 times a week	Every day
Did you have trouble speaking a word?	90.9% (110)	6.6% (8)	1.7% (2)	-	0.8% (1)
Have you felt that the taste of food has deteriorated?	93.4% (113)	5% (6)	1.7% (2)	-	-
Did you feel severe pain in your mouth?	77.7% (94)	17.4% (21)	2.5% (3)	1.7% (2)	0.8% (1)
Have you been feeling uncomfortable eating any food?	76.9% (93)	12.4% (15)	8.3% (10)	0.8% (1)	1.7% (2)
Have you been uncomfortable?	82.6% (100)	12.4% (15)	3.3% (4)	1.7% (2)	-
Feeling stressed?	79.3% (96)	14% (17)	2.5% (3)	3.3% (4)	0.8% (1)
Has your diet been harmed?	90.9% (110)	5% (6)	1.7% (2)	2.5% (3)	-
Had to stop your meals?	94.2% (114)	4.1% (5)	1.7% (2)	-	-
Have you been finding it difficult?	90.1% (109)	5% (6)	4.1% (5)	0.8% (1)	-
Have you ever felt a little embarrassed?	73.6% (89)	14% (17)	9.9% (12)	1.7% (2)	0.8% (1)
Have you been irritable with other people?	94.2% (114)	3.3% (4)	1.7% (2)	0.8% (1)	-
Did you have difficulty carrying out your daily activities?	93.4% (113)	5% (6)	0.8% (1)	0.8% (1)	-
Have you ever felt that life in general has gotten worse?	92.6% (112)	5% (6)	1.7% (2)	0.8% (1)	-
Have you been unable to do your daily activities?	96.7% (117)	2.5% (3)	0.8% (1)	-	-

Source: Research authors (2022).

It is possible to observe in the table that severe pain in the mouth, discomfort when eating some food, stress and feeling of shame were items to which there was a response at all intervals, highlighting that at least once a year, on average, 17.5 university students manifested such problems, attention is drawn to the discomfort when eating and the feeling of shame. When the responses are observed in relation to feeling, at least 2 or 3 times a month and/or year and even every day.

The “pain” symptomatology, in most cases, is due to pathologies such as caries, periodontitis, gingivitis. Lack of hygiene is an essential factor for the development of these same diseases. Stress and shame reveal the pre-established standards of beauty in today's society. Some people feel uncomfortable with their teeth aesthetically, as they are outside these standards, directly affecting their social life and mental health (Bendo et al., 2015).

With regard to knowledge of oral pathologies, table 5 describes the frequency in relation to the knowledge of university students according to classification; revealing the lack of knowledge about oral pathologies in the general sample of participants, which is common in the general population.

Table 5 - Description of frequency in relation to knowledge of oral pathologies of university students and classification of study participants.

Classification	Variables	frequency of answers % (n=121)	
		Yea	No
It is a pathology	Halitosis	39.7% (48)	60.3% (73)
	oral thrush	33.1% (40)	66.9% (81)
	Periodontitis	38% (46)	62% (75)
	Caries	57.9% (70)	42.1% (51)
	Gingivitis	58.7% (71)	41.3% (50)
non-pathological changes	Bacterial plaque	44.6% (54)	55.4% (67)
	Tartarus	52.9% (64)	47.1% (57)
	enamel problems	43% (52)	57% (69)
	lingual coating	28.9% (35)	71.1% (86)
	Xerostomia (dry mouth)	41.3% (50)	58.7% (71)

Source: Research authors.

Studies on the knowledge and behavior of university students regarding oral diseases are scarce and limited (Benedito et al., 2020), which is in line with the data revealed in the present study, and reinforces the need to disseminate clearer information about the pathologies oral hygiene and basic oral hygiene care.

With regard, specifically, to ontology university students (n=43 out of n=121), Table 6 presents the data in relation to the stratified evidence in the sample of that course. Attention is drawn to indifference regarding a certain oral pathology and/or a non-pathological alteration.

Especially for students enrolled in the 5th period 27.9% (n=12), followed by 23.3% (n=10) in the 9th period and 20.9% (n=9) in the 1st period; it is possible to note that on average 25.5 students (59%) showed that they were not clear that halitosis, oral candidiasis, periodontitis, caries and gingivitis are oral pathologies.

In this sense, when observing that the curricular structure of dentistry courses, the discipline of pathology is offered between the 3rd and 5th period of the course; it is important to consider that the discipline of oral pathology is the dental specialty that studies changes in the oral cavity and adjacent structures, requiring constant improvement of the teaching-learning process (Souza et al., 2011). However, when looking at the study indicators, it is noteworthy that in this HEI the content was taught during the COVID-19 pandemic (Ditterich , et al., 2001; Antoniassi Junior, et al., 2022).

Ditterich, et al., (2007), reveal in their study about the social concern of the curricula of the course of dentistry of the Brazilian universities must be revised, in this way the HEIs will be able to train professionals with an integral vision of the health to promote the importance of the knowledge in all contexts of dental practices, thus reinforcing extramural practice that favors the teaching and learning relationship of students.

However, the study by Leite (2018) evaluates the knowledge of students from various periods of the Dentistry course at a public institution, revealing that, regarding the etiology of pathologies, the greater frequency of correct answers is portrayed in the higher periods, that is, the final periods, which differs from the present study.

Table 6 - Description of the stratified sample of dentistry students in relation to the knowledge about oral pathology of university students participating in the study.

Period	Variable	It is a pathology % (n)					non-pathological changes % (n)				
		Halitosis	Oral Candidiasis	Periodontitis	Caries	Gingivitis	Bacterial plaque	Tartarus	Enamel Problems	lingual coating	Xerostomia (dry mouth)
1st p. (n=9)	<i>Yea</i>	44.4% (4)	55.6% (5)	55.6% (5)	66.7% (6)	55.6% (5)	33.3% (3)	44.4% (4)	66.7% (6)	44.4% (4)	66.7% (6)
	<i>No</i>	55.6% (5)	44.4% (4)	44.4% (4)	33.3% (3)	44.4% (4)	66.7% (6)	55.6% (5)	33.3% (3)	55.6% (5)	33.3% (3)
2nd p. (n=2)	<i>Yea</i>	-	50% (1)	50% (1)	50% (1)	50% (1)	50% (1)	100% (2)	50% (1)	50% (1)	50% (1)
	<i>No</i>	100% (2)	50% (1)	50% (1)	50% (1)	50% (1)	50% (1)	-	50% (1)	50% (1)	50% (1)
3rd p. (n=3)	<i>Yea</i>	-	33.3% (1)	33.3% (1)	100% (3)	33.3% (1)	66.7% (2)	66.7% (2)	-	-	-
	<i>No</i>	100% (3)	66.7% (2)	66.7% (2)	-	66.7% (2)	33.3% (1)	33.3% (1)	100% (3)	100% (3)	100% (3)
5th p. (n=12)	<i>Yea</i>	16.7% (2)	25% (3)	25% (3)	33.3% (4)	33.3% (4)	16.7% (2)	33.3% (4)	33.3% (4)	16.7% (2)	25% (3)
	<i>No</i>	83.3% (10)	75% (9)	75% (9)	66.7% (8)	66.7% (8)	83.3% (10)	66.7% (8)	66.7% (8)	83.3% (10)	75% (9)
7th p. (n=3)	<i>Yea</i>	66.7% (2)	66.7% (2)	66.7% (2)	66.7% (2)	66.7% (2)	100% (3)	66.7% (2)	66.7% (2)	66.7% (2)	66.7% (2)
	<i>No</i>	33.3% (1)	33.3% (1)	33.3% (1)	33.3% (1)	33.3% (1)	-	33.3% (1)	33.3% (1)	33.3% (1)	33.3% (1)
8th p. (n=2)	<i>Yea</i>	50% (1)	50% (1)	50% (1)	50% (1)	50% (1)	50% (1)	50% (1)	50% (1)	50% (1)	50% (1)
	<i>No</i>	50% (1)	50% (1)	50% (1)	50% (1)	50% (1)	50% (1)	50% (1)	50% (1)	50% (1)	50% (1)
9th p. (n=10)	<i>Yea</i>	40% (4)	50% (5)	50% (5)	60% (6)	50% (5)	30% (3)	30% (3)	40% (4)	30% (3)	40% (4)
	<i>No</i>	60% (6)	50% (5)	50% (5)	40% (4)	50% (5)	70% (7)	70% (7)	60% (6)	70% (7)	60% (6)
10th p. (n=2)	<i>Yea</i>	-	-	-	-	50% (1)	-	-	-	-	-
	<i>No</i>	100% (2)	100% (2)	100% (2)	100% (2)	50% (1)	100% (2)	100% (2)	100% (2)	100% (2)	100% (2)

Source: Research authors.

4. Conclusion

Through the study on screen, it was possible to obtain greater knowledge about the relationship of the students of this HEI and the care with oral hygiene, in addition, it can be seen that the level of knowledge of the participants about the pathologies and pathological changes require attention in the dissemination of information among academics.

With regard to the hypothesis of the study, the results showed that the findings are similar to the assumption raised initially, as it was possible to note that the dissemination of information is an extremely important factor.

In the data obtained, a significant number of misinformation about pathologies was observed. This brings a reflection that perhaps there is a lack of knowledge on the subject.

Regarding the main results regarding hygiene habits, visits to the dentist, self-image (satisfaction) and knowledge of pathologies, some actions can be carried out in the academic environment to promote knowledge to strengthen care, in order to raise awareness among university students.

It is believed that group activities, posters, in addition to practical integrative actions that address care can be effective

In view of the results of this research, it is suggested that future studies may deepen the investigation into the knowledge of oral pathologies and pathological changes, within the process of training dentists, since the study showed the fragility of academics in the course of dentistry, especially those who had the discipline of oral pathology during the period of the covid-19 pandemic.

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