

ORAL HEALTH OF INTERNATIONAL UNDERGRADUATES: FROM IMPORTANCE TO KNOWLEDGE AND CONDUCTS TOWARD ORAL PATHOLOGIES

Saúde bucal de universitários internacionais: da importância ao conhecimento e condutas frente às patologias orais

Salud bucal de universitarios internacionales: de la importancia al conocimiento y conductas frente a las patologías orales

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ABSTRACT

Objective: The study's goal has been to scrutinize the importance of oral health and also the frequency and the means used to perform oral cavity cleaning, as well as, assessing the knowledge and behavior of undergraduates towards oral diseases. **Methods:** It is a descriptive study with a qualitative approach, which counted with undergraduates from different nationalities. Data collection took place by the application of a questionnaire. **Results:** For the participants, the importance of oral health was related to disease prevention, aesthetics, self-esteem and overall health. With regards to the frequency and the means used in brushing, they all cleaned the oral cavity daily and most of them used both toothbrush and toothpaste. Furthermore, they have associated oral diseases with pain, bleeding, dental problems and lack of brushing. Besides dentistry professionals, they also sought physicians and nurses to solve dental problems. **Conclusion:** Although they recognize the importance of oral health, the knowledge of undergraduates about oral pathologies was considered insufficient.

Descriptors: Oral health, students, university.

RESUMO

Objetivo: Investigar a importância da saúde bucal e a frequência e os meios utilizados na higienização da cavidade oral, assim como o conhecimento e as condutas de universitários frente às doenças bucais. **Método:** Estudo descritivo e qualitativo desenvolvido com

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universitários de diferentes nacionalidades. Os dados foram coletados pela aplicação de questionário. **Resultados:** Para os participantes, a importância da saúde bucal estava vinculada à prevenção de doenças, à estética, à autoestima e à saúde geral. Quanto à frequência e aos meios utilizados na escovação, todos higienizavam a cavidade oral diariamente e a maioria utilizava escova e creme dental. Eles associavam as doenças orais à dor, ao sangramento, aos problemas dentários e à falta de escovação. Além do dentista, buscavam o médico e o enfermeiro para resolução de problemas odontológicos. **Conclusão:** Apesar de reconhecerem a importância da saúde oral, o conhecimento dos universitários sobre as patologias bucais foi escasso e muito limitado.

Descritores: Saúde bucal, Estudantes, Universidade.

RESUMÉN

Objetivo: Investigar la importancia de la salud bucal y la frecuencia y los medios utilizados en la higienización de la cavidade oral, así como el conocimiento y las conductas de universitarios frente a las enfermedades bucales. **Método:** Estudio descriptivo y cualitativo desarrollado con universitarios de diferentes nacionalidades. Los datos fueron recolectados por la aplicación de cuestionario. **Resultados:** Para los participantes, la importancia de la salud bucal estaba vinculada a la prevención de enfermedades, a la estética, a la autoestima y a la salud general. Em cuanto a la frecuencia y los medios utilizados en el cepillado, todos higienizaban la cavidad oral diariamente y la mayoría utilizaba cepillo y crema dental. Ellos asociaban las enfermedades orales al dolor, al sangrado, a los problemas dentales y a la falta de cepillado. Además del dentista, buscaban al médico y al enfermero para la resolución de problemas odontológicos. **Conclusión:** A pesar de reconocer la importancia de la salud oral, el conocimiento de los universitarios sobre las patologías bucales fue escaso y muy limitado.

Descriptorios: Salud bucale, Estudiantes, Universidad.

INTRODUCTION

The actions carried out in Primary Health Care in Brazil are intrinsically related to health promotion and disease prevention, one of the main focuses of this service being the development of strategies for the promotion of oral health.¹

The importance of these strategies lies in the fact that oral diseases are characterized as pathologies of high prevalence in the general population. Undeniably, caries represents a major public health problem worldwide, affecting about 60-90% of schoolchildren and most adults, as well as being largely responsible for a dental loss in older individuals.²

Although the prevalence of the caries process has declined in countries that have instituted health programs, using fluoride as a preventive measure, and have promoted improved living conditions and self-care practices in Latin American, African and Asian countries, as well as their incidence and severity, children and adults do not generally undergo adequate treatment of their decayed teeth and are subject to exodontia for pain relief.³ In those countries, preventive programs are limited due to the reduced number of professionals in the dental area and performance of health systems only in the resolution of symptoms and emergency cases.³

In addition to caries, the literature has pointed to other problems that directly or indirectly are associated with the oral cavity, such as: periodontal disease, halitosis, oral candidiasis, cancer, temporomandibular disorders, eating disorders, alcoholism and smoking.⁴

Bearing in mind this context, it becomes evident that many of these disorders can be prevented by establishing proper self-care with the oral cavity. Generally, self-care depends on the level of knowledge of the individual, the level of education, the lifestyle, socioeconomic, environmental and cultural factors to which the subject is subjected, as well as the presence of comorbidities.⁵

In the context of self-care, good oral hygiene practices, such as brushing and flossing, play an important role in the prevention of oral diseases and disorders that interfere with the individual's overall health and quality of life. In fact, the deficiency or absence of these preventive practices can have repercussions on the biological, psychological, social and economic aspects of the human being.⁶

Nonetheless, the hygiene practices of the oral cavity are distinguished among the different peoples, clearly emphasizing the cultural influence. Indeed, there is a diversification of habits vis-à-vis oral hygiene care, the means used to promote oral cavity hygiene and related beliefs.⁷

Hence, based on the importance of oral diseases on the world scene, on the influence of oral hygiene knowledge and practices on the development of oral pathologies and on the repercussion of cultural aspects on oral health, as well as the possibility of bringing together individuals from different nationalities in the same space, with similarities in the educational level and in the age group. The present study aimed to investigate the importance of oral health and also the frequency and the means used to perform oral cavity cleaning, as well as, assessing the knowledge and behavior of undergraduates towards oral diseases.

METHODS

It is a descriptive study with a qualitative approach, which was performed with international students of an international public university. The study was carried out in August 2015, at one of its campuses, located in the municipality of *Redenção*, *Ceará* State. The participants were students of Graduation Courses from the higher education institution aforementioned.

Concerning the inclusion criteria adopted, were considered here all the international students who attended to the oral health extension actions, which were carried out at the entrance of the campus, on the day and at the scheduled time. Regarding the exclusion of the study, no criterion was established.

A questionnaire was applied in order to collect the data. It has addressed subjective questions related to the following topics: - the importance of oral health; - means and frequency of oral cavity hygiene; - knowledge about oral pathologies; - behaviors adopted regarding oral diseases.

In order to maintain the confidentiality of the identification, each participant was assigned the letter "S", referring to the term "student", followed by the number that the academic assumed in front of the other members of the research.

For data interpretation, the technique of content analysis proposed by Bardin was adopted.⁸ According to Bardin,⁸ the content analysis should be done following the

respective stages: - pre-analysis; - material exploitation; - results handling.

In the process of encoding the responses, the technique of registration and context units was used, the first being the “document” type, which allows us to take the answers to discursive questions as a unit, and the second is the mechanism of understanding the first.⁸

In the identification of the categories, the words that contributed to the creation of the categories were considered as registration units. Context units were the paragraphs or segments of the message used as units of understanding for the identification of words, defined as record units.

The research was approved by the Research Ethics Committee from the *Universidade da Integração Internacional da Lusofonia Afro-Brasileira*, according to the *Certificado de Apresentação para Apreciação Ética (CAAE)* [Certificate of Presentation for Ethical Appreciation] No. 42412815.0.0000.5576 and the Legal Opinion No. 1.183.883. The autonomy of the subjects and the non-maleficence and beneficence of the research were assured, as recommended in the Resolution No. 510/16 from the National Health Council.

RESULT AND DISCUSSION

With regards to the total number of participants, there were included 40 students from Guinea-Bissau, Mozambique, São Tomé and Príncipe, Angola and Cape Verde, being of both genders. The survey included undergraduates from all Graduation Courses and attending the initial quarters of their respective courses.

Considering the data analysis and its interpretation, the following four categories were formulated: the importance of oral health according to the international student's viewpoint; the means used and brushing frequency of international students; the knowledge regarding oral diseases; and, the conducts of international students towards oral diseases.

The importance of oral health according to the international student's viewpoint

A research addressing the value that international students put vis-à-vis oral health becomes relevant if it is considered that this group experiences, in addition to a process of life transition and an increased sense of responsibility,⁹ the distance from both their family and home country.

Faced with such a circumstance, it is possible that the new reality experienced by the university provides changes of physical, psychological, cultural, social, also economic and lifestyle habits. Changes in the latter can trigger from oral pathologies, with systemic repercussion, and also changes in the psychological state and interference in the interaction of the individual with his environment. As a consequence, the student's quality of life and self-esteem can be negatively impacted.¹⁰⁻¹

For the participants of this study, the importance of oral health involved in the prevention of diseases, aesthetics, and self-esteem, according to the following statements:

In addition to preventing, in other words, avoiding bad breath, tooth decay, and other diseases that might come from carelessness to oral health, it is important to watch over the latter because it provides a beautiful smile. (S23)

It is important because it can be said that it is our postcard. Just imagine a toothless smile? It's terrible. (S11)

Besides these findings, the reports pointed out an importance related to the functionality of the oral cavity and its contribution to the communication process. See the following lines:

Oral health is important because it is where we perform most of the digestive activities and in turn, contains in it the important organs of speech, as well as allows communication. (S37)

The importance of good oral health is to allow good communication and to smile in the public environment, because a person who does not brush their teeth, their mouth smells very bad. (S14)

Given this perspective, it is interesting to note that oral health is defined as a set of objective (biological) and subjective (psychological) conditions that enable the exercise of chewing, swallowing and phonation. Nevertheless, oral health is not restricted to physiological actions, but extends to the interaction of the individual with his social environment, involving aesthetic issues.¹²

Based on the above-mentioned, it can be assumed that the association established by the participants between oral cavity functions, oral health, interference in social contact and the importance of oral health stems from factors such as: prior knowledge of the actions performed by oral components, contact with social media, search for dental care and experience of self-embarrassing situations or of others in the interaction with other individuals.

Another relevance attributed to oral health was its connection to disease prevention and general health, mentioned by many of the undergraduate students, as follows:

As we already know that health begins with the mouth, then we must prevent against cavities, bad breath and so we must brush our teeth every day after every meal or at least 3 times a day. (S16)

Oral health is very important because with it we can protect our teeth from mouth infectious diseases (dental caries). (S21)

Maintain proper hygiene, prevent diseases that may affect our organism, whether systemic or local. (S34)

The reference of the students to the importance of the prevention of oral diseases for the establishment of oral health reinforces the argument that actions of health promotion and prevention of oral diseases are essential for the reduction of caries and other pathologies that can affect the oral cavity.¹³ Nonetheless, it was surprising to allude to the link between oral health and systemic repercussion.

It was also undeniable the linking of oral health to food consumption and good physical health, noticeable in the following sections:

Oral health is very important because it is through the mouth that we ingest the food. (S20)

It is very important because it allows us to make our mouths healthy to speak, to eat without difficulty [...]. (S24)

To achieve good physical health, it is necessary to have a healthy mouth, because it is the first part of our digestive system. (S21)

This association becomes clear when it is observed that tooth loss, gingival pain, and bleeding can impair the chewing and swallowing processes, reflecting on the digestion and absorption of food.

Through the analysis of the students' reports, it was noticed that they recognize the importance of oral health, especially regarding the prevention of oral pathologies that have repercussions in other areas of the organism, its relation with food and its social function, both aesthetic and in terms of communication. These results are surprising considering that oral health in Africa has not yet reached its relevance, presenting problems ranging from the lack of qualified personnel to the scarcity of investments in preventive and curative practice.¹⁴

The means used and brushing frequency of international students

When questioned about the means used in brushing, most students mentioned the use of toothbrush and toothpaste. As for its regularity, there was no homogeneity between the answers, according to the speeches below:

Brush and toothpaste. In the morning, after lunch, after dinner, and before bed. (S6)

I use toothbrush and toothpaste to brush my teeth. I brush my teeth twice a day. (S16)

Toothbrush, toothpaste. Two to three times a day. Usually when you wake up in the morning, after lunch and before bed (S31).

Yet, only two participants stated that they used, in addition to the toothbrush and toothpaste, dental floss:

To brush my teeth I use toothpaste, toothbrush, and dental floss when needed, I brush my teeth twice a day, before breakfast and after dinner. (S14)

To brush my teeth I use the toothbrush. I brush 4 times a day, when it's time to wake up, after lunch, and after have dinner, and I also use dental floss. (S8)

The reference to the toothbrush by the respondents was not surprising, since, in a previous study, with the population are Tomense, the authors indicated the brush as the most used instrument in the hygiene of the oral cavity.⁷ However, different from the one observed in the mentioned study,⁷ no students participating in this research mentioned miswak (a type of stick that cleans the teeth) and fruit leaf as other means used for oral hygiene.

Bearing in mind this context, it was unexpected that no student mentioned the use of devices, known already used by the African populations, in the practice of oral cavity hygiene. Actually, no instruments were mentioned, such as: miswak, mulala (a native root of Africa), charcoal, salt, toothpick, matches, fingernails, leaves, and others.¹⁵⁻⁶

Concerning the significance of the means used to perform oral cavity cleaning, the literature indicates that the use of dental floss, associated to correct brushing, represents the initial step for the control of bacterial plaque (Kubo; Mialhe, 2011; Rodrigues et al., 2011).¹⁷⁻⁸ Nonetheless, in spite of the importance of this practice, the statements presented here, as in other studies, showed a good frequency of daily brushing at the expense of a reduced use of dental floss.¹⁹⁻²⁰

Considering the aforementioned, it can be assumed that the participants' low adherence to dental use may be related to a lack of knowledge, cultural differences or difficulty in access.²¹ It is also possible that the lack of economic conditions and the rhythm accelerated life contribute to this phenomenon.¹⁷

Observing the frequency of toothbrushing, although the participants in this study presented different opinions, they all cleaned the oral cavity daily. This result corroborates the findings of a study with an undergraduate student from Portugal,²² which showed the practice of daily brushing by all participants.

Complementing these observations, in a survey of academics from sub-Saharan African countries, the authors showed that more than half of the participants brushed their teeth at least twice a day, with the exception of Nigerians, where most of them cleaned their teeth only once a day.²³

The knowledge regarding oral diseases

The undergraduates' understanding in regards to oral diseases was found insufficient, as it can be seen in the testimonials below:

I do not know about mouth diseases. (S15)

I do not know diseases that affect the mouth. (S18)

The wounds are the diseases that most affect the mouth. (S8)

One of the diseases I know is toothache. (S10)

Diseases that affect the mouth are: caries, gingivitis, and toothache. (S22)

The participants' knowledge limitation regarding oral pathologies differed from the data obtained in Telangana, India.²⁴ According to the authors, students of the last year of Nursing had adequate knowledge about diseases affecting the oral cavity, except for the identification of decayed teeth. The discrepancy between these findings may be due to the fact that in the research carried out the participants studied different areas and belonged to different nationalities.

It is also possible that the deficiency in knowledge about oral diseases presented by university students results especially from the lack of access to visual and written media, as well as to the dental surgeon. Actually, these means are considered as the main sources of oral health information.²⁵

It is believed that the knowledge deficit presented by the participants can significantly influence their care with oral health, since the lack of information about oral pathologies and, consequently, their forms of treatment and prevention will impose obstacles to the implementation of adequate oral health practices.

For this reason, the topic of oral health should be discussed during the academic training process, regardless of the Graduation Course, as part of health education. Therefore, we will collaborate in the prevention of oral cavity sickness and the motivation of self-care in oral health.

In addition to the aforementioned pathologies, cancer of the oral cavity was a disease noted by only two of the students, as reported below:

The diseases I know that affect the mouth are: mouth cancer, gingivitis, and dental caries. (S32)

Mouth cancer, herpes, thrush, gingivitis, and so on. (S39)

The restricted reference to oral cancer by the students was not unexpected, since, in a previous study, it was showed the lack of preparation of health undergraduates in the identification of the main characteristics of this type of cancer.²⁶ In addition to these events, the literature also points out a deficit this knowledge by health professionals.²⁶

However, the severity of this reality is only noticeable when it is understood that oral cancer occupies the eighth position among the most prevalent malignancies, and because it is capable of promoting great impact in the individual, social and economic sphere.²⁷ Thus, necessary for the qualification of health professionals for the recognition of oral cancer and the identification of their risk factors.²⁶

Considering caries and gingivitis, alluding to university students may be justified by the fact that they are oral

pathologies of high incidence in the world population and because they are associated with pain and tooth loss.^{13,28}

In regards to herpes and oral candidiasis (popularly known as thrush), its association with oral diseases can be related to the way these pathologies are manifested in the oral cavity, especially in immunosuppressed and malnourished individuals.²⁹⁻³⁰

The conducts of international students towards oral diseases

According to the international students' perceptions, oral diseases are related to pain, bleeding, dental problems and lack of tooth brushing. Having in mind this context, although some participants reported having no pathologies in the oral cavity, it was clear in the reports how they would proceed if they did have it. The following reports confirm the aforesaid:

I never have these pains. If it happens to me, I'll go find a dentist to treat my teeth. (S10)

I have never had one of these diseases, but if I had I would have sought medical attention. (S32)

I've never had a mouth disease before, except now my mouth is bleeding a lot, whenever it happens I go brush my teeth. (S27)

When I'm feeling any sickness in my mouth I brush three times a day. (S16)

The absence of oral problems alleged by students may stem from their lifestyles, including the type of food routinely consumed and oral health practices, as well as the lack of knowledge related to oral health. Indeed, the decayed, missing, and filled teeth (DMFT) index in some countries of the African continent is considered low, with an expectation of increase due to the increase in sugar consumption.⁷ Furthermore, some of the oral cavity hygiene practices adopted by the African population the use of antibacterial substances.

It is also possible that the absence of oral problems mentioned by the participants represents the lack of diagnosis by a professional, as a consequence of the lack of access and demand for dental care, as well as the shortage of services and health professionals.^{7,31}

With regards to the places and health professionals to solve dental problems, academics have mentioned places such as pharmacy and hospital, and health professionals, such as nurses, physicians, and dentists, as stated below:

When I get any disease I always look for a hospital. (S2)

When I have some illness in my mouth I look for a pharmacy. (S8)

When I have a disease in my mouth I look for a dentist who is the best option. (S14)

If I get any illness in my mouth I go to see a doctor. (S15)

When I have a disease in my mouth I look for a nurse. (S22)

The search for nursing professionals suggest the important role nurses play in health care, especially in the rural areas of sub-Saharan African countries, and also the high emigration of physicians.³²

Considering the dentist professional, it is worth mentioning that in countries such as South Africa there are no autonomous dental health plans, with most health plans including dental benefits. Thus, this circumstance hinders the access of users to this health professional.³³

It was possible to verify that many international students would only seek either some professional or health place when a disease was already in place. This attitude reinforces what occurs in low-income countries, where public dental services are driven by the dental extraction practice, with detriment to health promotion actions.³³

CONCLUSION

International students have attributed the importance of oral health to factors such as: disease prevention, aesthetics, self-esteem, oral cavity functionality, related to systemic health, food consumption and good physical health. For them, the oral cavity hygiene should be done by using brush, toothpaste, and dental floss daily. The understanding about oral pathologies was insufficient, although relevant oral diseases were mentioned. Although some participants reported having no pathologies in the oral cavity, when the students were facing oral problems they looked for a pharmacy, a hospital, and health professionals, such as nurses, doctors, and dentists. Moreover, the students only looked for solving their oral problems when some disease was already in place.

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