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# Bio-sociodemographic and economic aspects and their connection to the oral health behavior of Brazilian and non-Brazilian academics

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**ABSTRACT.** The objective of this study is to characterize, relate and compare bio-sociodemographic and economic aspects, hygiene perception, habits and behaviors in the oral health of students recently admitted to an international university. This is a descriptive and quantitative study conducted with 101 Brazilian and non-Brazilian academics. For that purpose, a questionnaire was applied. The data were analyzed and submitted to Fisher's exact test and Chi-square test. Male and Brazilian students predominated, followed by Guineans. Regarding the perception about oral health, 50.5% of Brazilian academics and 63.3% of non-Brazilian students considered it regular. Of the total participants, more than half of Brazilian and non-Brazilian students brushed their teeth 3 times a day. About dental floss, 98% of Brazilians know it and 76% of non-Brazilian didn't use it. There was a significant association between the students with age lower than or equal to 18 years and the search for dental care, as well as income above one minimum wage and demand for this type of care. There were similarities and discrepancies between the behavior of Brazilian and non-Brazilian academics. Factors such as age lower than or equal to 18 years and income above one minimum wage positively influenced the search for dental care.

**Keywords:** oral hygiene; student health; health profile; social determinants of health.

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## Introduction

Throughout history, the concept of health progressed from a 'magical-religious' notion, through the definition of a 'vital balance and harmony' and 'absence of disease', to the 'biomedical model' and later 'product' of determining and conditioning factors, such as diet, housing, career, education, income, lifestyle, and access to services and property (Carvalho, 2013).

In this context, oral health started to be considered an integral part of general health and a result not only of the action of biological agents, the ecosystem and factors such as socioeconomic conditions, access to health services and knowledge of oral hygiene practices, but also of individual and collective life experience (Peltzer & Pengpid, 2014). Thus, inadequate oral health conditions started to be understood as factors that influence general health, directly contributing to the occurrence of systemic pathologies (Rodrigues et al., 2016).

In that respect, it is known that beliefs, values and self-care can interfere with the oral health status of individuals and of a population and, consequently, with their general health. In fact, attitudes related to the care of the oral cavity interfere directly with human oral health status (Sharma, Singh, Rajmani, & Degra, 2015). In that aspect, daily and correct practice of oral hygiene stands out as an essential attitude in the prevention of oral and systemic pathologies (Soares, Novais, & Freire, 2009). This oral hygiene habit is connected to bio-socioeconomic aspects, the self-perception of health, lifestyle, and psychological conditions (Geniole, Kodjaoglanian, Vieira, & Lacerada, 2011).

In the context of that connection, shortcomings in oral hygiene, inadequate diet, smoking and ingesting alcoholic drinks, associated to the difficulty in accessing health services and information, stand out as predisposing conditions in the development of oral pathologies, such as dental caries and periodontal disease, as well as cardiovascular, respiratory and metabolic disorders (Geniole et al., 2011).

Despite the importance of oral pathologies like dental caries and periodontal disease worldwide, especially since they constitute a growing challenge to global public health, oral health care in some developing countries is still precarious (Kassebaum et al., 2017). In fact, these countries may exhibit problems such as: scarcity of health professionals; inadequate structure; low educational levels; low purchasing power; lack of access to dental services; among others (Varenne, 2015).

Thus, studies with young people, especially those recently admitted to universities, become important due to their vulnerability to developing pathologies, as a result of their susceptibility to changes in habits and lifestyle characteristic to that phase and the challenges they face in university. These pathologies can actually interfere with students' academic performance, daily activities, relationship with colleagues and family members, and self-perception, besides creating unnecessary expenses to the public services (Lopes, Gusmão, Alves, & Cimões, 2011; Guerra, Greco, Leite, Ferreira, & Paula, 2014).

Therefore, the study aimed to characterize, relate and compare the bio-sociodemographic and economic aspects, perception of oral hygiene, habits and oral health behavior in students recently admitted to a public university of an international nature.

## Material and method

The project was submitted to and approved by the Committee of Ethics in Research of the *Universidade da Integração Internacional da Lusofonia Afro-Brasileira* (Unilab), under the protocol CAAE 59953716.5.0000.5576 and ruling number 1.937.092, on February 21st, 2017. It guarantees the autonomy of subjects and the non-maleficence and beneficence of the research, prescribed in the National Council of Health Resolution n. 466 (Brasil, 2012b), December 12th, 2012. The participants were informed about the study and signed an Informed Consent Form.

It is a descriptive, exploratory and quantitative research, carried out with Brazilian and non-Brazilian academics at Unilab, between February and April 2017.

We invited to participate in the study every Brazilian and non-Brazilian student in the first semester of undergraduate courses that require class attendance in Unilab, based on Liberdade Campus, Auroras Campus and Palmares Academic Unit, in the state of Ceará. Lack of access to the student was an exclusion criterion. Therefore, to obtain the sample, the convenience sampling technique was used.

When classes started, the project was presented to students, in their classrooms, according to the course, and then the Informed Consent Form was explained and signed. Subsequently, they filled a questionnaire with the following variables: nationality; sex; age; marital status; family income; undergraduate course; parents' professions; perception on oral hygiene; frequency, time and means used in oral hygiene; frequency of replacement of toothbrush; practice of cleaning the tongue; knowledge and use of dental floss; and seeking dental care. Data collection was carried out by a single researcher, without a pilot study.

The data obtained were organized in *Excel for Windows* and analyzed by the software *Epi Info* version 7.2.1.0. We carried out a descriptive analysis of variables, obtaining the absolute and relative frequency. To evaluate the association between variables, we applied the Chi-square test and Fisher's exact test, with a significance level of 5%.

## Results

131 academics of different nationalities took part in the study; 101 were Brazilian and 30 were non-Brazilian. Concerning education, the students were taking the following courses: Nursing (17.6%), Physics (16.8%), Mathematics (15.3%), Energy Engineering (14.5%), Chemistry (13%) and Biology (13%). Although in a smaller amount, there were also students of Agronomy (2.3%), Languages (1.5%), Humanities Studies (5.3%) and Public Administration (0.7%).

Results showed a predominance of male students (62.6%) and Brazilians (77.1%), followed by Guinean (16%), Cape Verdean (3%), Angolan (2.2%) and Sao Tomean (1.5%). Age varied from 17 to 64 years, with a greater amount of 19-year-old participants (31%) among Brazilians, and 23-year-old participants (23.3%) among non-Brazilians. Concerning marital status, a majority of students was single, with 70.4% of non-Brazilian and 61.7% of Brazilian academics having eventual partners. In terms of family income, 47.5% of Brazilian students and 30% of non-Brazilians had a family income of up to one minimum wage.

Concerning the father's profession, 20.9% of Brazilian and 24% of non-Brazilian participants' fathers were farmers. About their mothers' occupation, 34.4% of Brazilian mothers were housewives, 14.6% were farmers and 10.4% were teachers. Among non-Brazilians' mothers, the majority were housewives (65.3%).

About the participants' perception of their own oral hygiene (Table 1), 50.5% of Brazilian and 63.3% of non-Brazilian academics considered it regular. Apropos the frequency with which they brushed their teeth, over half the Brazilian (58.4%) and non-Brazilian students (56.7%) brushed their teeth 3 times a day. Only 2 non-Brazilian students declared they only brushed their teeth once a day.

**Table 1.** Perception, habits and behavior in oral health of Brazilian and non-Brazilian academics recently admitted to an international public university. Redenção and Acarape, State Ceará, Brazil, 2017.

| Variables | Academics | |
|---|---|---|
| | Brazilian – n (%) | Non-Brazilian – n (%) |
| Perception of own oral hygiene | | |
| Good | 46 (45.4) | 8 (26.7) |
| Regular | 51 (50.5) | 19 (63.3) |
| Bad | 4 (4.0) | 3 (10.0) |
| Frequency of brushing teeth | | |
| Once a day | - | 2 (6.7) |
| Twice a day | 16 (15.8) | 10 (33.3) |
| 3 times a day | 59 (58.4) | 17 (56.7) |
| 4 times a day | 18 (17.8) | 1 (3.3) |
| 5 times a day | 5 (4.9) | - |
| 6 times a day | 3 (3.0) | - |
| Time when they brush their teeth* | | |
| After waking up | 53 (52.4) | 26 (86.7) |
| After breakfast | 29 (28.7) | 4 (13.3) |
| After lunch | 59 (58.4) | 11 (36.7) |
| After dinner | 35 (34.6) | 8 (26.7) |
| Before sleeping | 43 (42.6) | 15 (50.0) |
| After a mid-morning snack | 3 (3.0) | - |
| After an afternoon snack | 4 (4.0) | - |
| After every meal (including snacks) | 14 (13.9) | 1 (3.3) |
| After waking up and after every meal (including snacks) | 22 (21.8) | 4 (13.3) |
| Means used in oral hygiene | | |
| Toothbrush and dentifrice | 48 (47.5) | 26 (86.7) |
| Toothbrush, dentifrice and dental floss | 33 (32.7) | 2 (6.7) |
| Toothbrush, dentifrice and mouth wash | 19 (18.8) | - |
| Other | 1 (1.0) | 1 (3.3) |
| Didn't answer | - | 1 (3.3) |
| Frequency of toothbrush replacement | | |
| Monthly | 8 (7.9) | 12 (40.0) |
| Bimonthly | 27 (26.7) | 6 (20.0) |
| Quarterly | 38 (37.6) | 6 (20.0) |
| Semestral | 19 (18.8) | 1 (3.3) |
| Annually | 2 (2.0) | - |
| When damaged | 7 (6.9) | 4 (13.3) |
| Didn't answer | - | 1 (3.3) |
| Practice of tongue cleaning | | |
| Yes | 94 (93.1) | 28 (93.3) |
| No | 6 (5.9) | 2 (6.7) |
| Didn't answer | 1 (1.0) | |
| Knowledge of dental floss | | |
| Yes | 99 (98.0) | 17 (56.7) |
| No | 2 (2.0) | 13 (43.3) |
| Use of dental floss | | |
| Yes | 62 (61.4) | 6 (20.0) |
| No | 38 (37.6) | 19 (63.3) |
| Didn't answer | 1 (1.0) | 5 (16.7) |
| Seeking dental care | | |
| Yes | 99 (98.0) | 12 (40.0) |
| No | 2 (2.0) | 18 (60.0) |

*Some participants chose more than one option.

Regarding the time when they brushed their teeth, 58.4% of Brazilian students declared brushing their teeth at least after lunch, followed by 52.4 and 42.6% who brushed their teeth at least after waking up and before going to sleep, respectively. Among non-Brazilian students, the majority (86.7%) declared brushing at least after waking up, followed by 50% that brushed at least before going to sleep and 36.7% who brushed after lunch.

About the means used in oral hygiene, there was a predominance of students that used toothbrush and toothpaste, especially non-Brazilians. When asked about the frequency with which they replaced their toothbrush, 37.6% of Brazilian academics asserted they do it every 3 months, and 40% of non-Brazilians mentioned replacing it monthly. A small percentage of students declared replacing the toothbrush when it was in inadequate condition. Concerning the practice of cleaning the tongue, most students, regardless of nationality, declared that it was a habit.

Concerning knowledge and use of dental floss, almost all of the Brazilian participants (98%) knew dental floss, whereas fewer non-Brazilian students did (56.7%). Over half of Brazilians used dental floss, while 76% of non-Brazilian academics did not use it. When it came to seeking dental care, most Brazilian students declared they seek this kind of service (98%), a greater amount than non-Brazilians (40%).

As for the association between age, perception of oral hygiene, habits and behavior in oral health (Table 2), there wasn't a significant connection between these variables among Brazilian or non-Brazilian participants. However, considering the total number of participants, we observed a significant connection between age lower than or equal to 18 years and seeking dental care ($p = 0.0006$).

Concerning the connection between family income, perception of oral hygiene, habits and behavior in oral health (Table 3), we did not observe an association between these variables among Brazilian or non-Brazilian students. However, considering the total number of participants, we observed significant connection between students with income higher than 1 minimum wage and seeking dental care ($p = 0.0005$).

## Discussion

This research characterized the bio-sociodemographic and economic aspects, perception of oral hygiene, habits and oral health behavior in Brazilian and non-Brazilian students recently admitted to a public university of an international nature, as well as investigated the associations between these variables.

Regarding the prevalence of male students among participants, we can suppose, based on data from the institution's management and academic records, that it is a result of the larger number of male students in the courses included in the research. Although Guineans stood out among non-Brazilian academics, phenomenon that can be explained by their greater number in the university when compared to other nationalities (Unilab, 2018), the smaller number of foreign students in the study can be justified by their initial apprehension to adopt any attitudes that may compromise their stay in the new country.

**Table 2.** Connection between age, perception of oral hygiene, habits and behavior in oral health of Brazilian and non-Brazilian academics recently admitted to an international public university. Redenção and Acarape, State Ceará, Brazil, 2017.

| Variables Age | Good perception of own oral hygiene[*,a] (%) | | Frequency of brushing teeth[*,b] (%) | | Means used in oral hygiene[1**,c] (%) | | | Seeking dental care[*] (%) | | Value of p |
|---|---|---|---|---|---|---|---|---|---|---|
| | Yes | No | 1-2 (times) | > 2 (times) | TD | TDD | TDM | Yes | No | |
| ⩽ 18 years | 50.0 | 50.0 | 14.7 | 85.3 | 47.1 | 23.5 | 29.4 | 100[#] | - | p > 0.05 |
| > 18 years | 38.5 | 61.5 | 24.0 | 76.0 | 61.3 | 29.0 | 9.7 | 79.2 | 20.8 | |

[1]TD – Toothbrush and dentifrice; TDD – Toothbrush, dentifrice and dental floss; TDM – Toothbrush, dentifrice and mouth wash. *Qui-square test. **Invalid test. #p = 0.0006. [a]p = 0.127; [b]p = 0.135; [c]p = 0.020.

**Table 3.** Connection between family income, perception of oral hygiene, habits and behavior in oral health of Brazilian and non-Brazilian academics recently admitted to an international public university. Redenção and Acarape, State Ceará, Brazil, 2017.

| Variables Income[2] | Good perception of own oral hygiene[*,a] (%) | | Frequency of brushing teeth[*,b] (%) | | Means of oral hygiene[1*,c] (%) | | | Seeking dental care[*] (%) | | Value of p |
|---|---|---|---|---|---|---|---|---|---|---|
| | Yes | No | 1-2 (times) | > 2 (times) | TD | TDD | TDM | Yes | No | |
| ⩽ 1MW | 40.3 | 59.7 | 16.1 | 83.9 | 57.4 | 29.5 | 13.1 | 83.9 | 16.1 | p > 0.05 |
| >1 MW | 46.1 | 53.9 | 19.2 | 80.8 | 49.0 | 29.4 | 21.6 | 98.1[#] | 1.9 | |

[1]TD – Toothbrush and dentifrice; TDD – Toothbrush, dentifrice and dental floss; TDM – Toothbrush, dentifrice and mouth wash. [2]MW – Minimum wage. *Qui-square test. **Fisher's exact test. #p = 0.0005. [a]p = 0.269; [b]p = 0.336; [c]p = 0.465.

About the predominance of lower age among Brazilian students when compared to non-Brazilians, besides corroborating data from the *Associação Nacional dos Dirigentes das Instituições Federais de Ensino Superior* (Andifes, 2011), this suggests a later admission of non-Brazilian academics in Higher Education. This result may be a consequence of greater difficulty in the access to university in their country of origin, besides the Brazilian government incentive, in the last years, to enroll in Brazilian universities (Quintas et al., 2014), especially for African people (Krawczyk, 2008).

Regarding the predominance of single academics with eventual partners, this profile may reflect the influence of the university environment on the expression of the young person's sexuality (Borges, Silveira, Santos, & Lippi, 2015), as well as result from sexual behavior inherent to their age and the institution of the adoption of several sexual partners by teenagers and young adults (Coley, Lombardi, Lynch, Mahalik, & Sims, 2013; Twenge, Sherman, & Wells, 2015). For non-Brazilian academics, besides these suppositions, we can consider that the high number of single students with eventual partners stems from higher emotional and psychological stability they display, faced with the distance from their country of origin, when compared to household leaders and committed singles.

About the low family income, finding that corroborates Carvalho and Jezine (2016) and Souza et al. (2013), this result can be justified by the institution of Law n. 12.711 (Brasil, 2012a), August 29th 2012, which allocates half of the spots in universities and federal institutions to students from public high schools, with family income equal to or lower than 1.5 minimum wage. Furthermore, federal government, according to Law n. 11.096, January 13th 2005, instituted the University for All Program (Prouni – Brasil, 2005), authorizing the provision of full and partial scholarships in undergraduate courses in private Higher Education institutions, destined to low income students. As for non-Brazilian students, although they need resources for their stay in Brazil, they can receive subsidies provided by the federal government and benefit from the lack of demand of an income statement to the federal police in order to renew their visa (Barros & Nogueira, 2015). Consequently, it has become easier for low income non-Brazilian academics to access Brazilian universities, which seems to be the case in this study.

Concerning the parents' professions, the prominence of farming confirms the high prevalence of this activity in the economically active population of the countries that constitute the Community of Portuguese Language Countries (CPLP), except for Brazil, Cape Verde and Portugal (Food and Agriculture Organization of the United Nations [FAO], 2012; Instituto Nacional de Estatística [INE], 2013). Although Brazil differs from the other countries, it is possible that the number of farmer parents observed among Brazilian students is a consequence of the location of the university where the research was carried out.

As for the students' perception of oral hygiene, the impression they expressed was average. Despite the subjectivity of the answer, it contrasted with the fact that the students showed adequate oral hygiene practices, brushing their teeth frequently and using toothbrush and toothpaste. This disagreement between impression and attitude of oral hygiene highlights the need to implement measures that guide the practice of oral hygiene, including the correct brushing technique and the use of dental floss (Souza et al., 2013). The importance of implementing these measures is evident in the study by Oliveira-Júnior et al. (2017), in which the authors asserted that, despite the university students' good oral health self-assessment, several students that stayed at school for more than a shift didn't practice any form of oral hygiene.

Therefore, although studies suggest a good frequency of tooth brushing and use of toothbrush and toothpaste among academics of different nationalities (Marulanda, Coral, Sabogal, & Serrano, 2014; Peltzer & Pengpid, 2014; Halawany, Abraham, Jacob, & Al-Maflehi, 2015; Waheed, Saeed, & Jameel, 2017), the discrepancy between the self-perception of oral health and hygiene and the daily practice of dental cleaning may result from a deficiency in knowledge and adequate habits of oral health.

When questioned about the moment in which they brushed their teeth, although the most mentioned times coincided, their order differed between non-Brazilian and Brazilian students. The first answered that these moments were 'after waking up', 'before sleeping' and 'after lunch', whereas Brazilians answered 'after lunch', 'after waking up' and 'before sleeping'. The most commonly mentioned moments reported by non-Brazilian academics corresponded to the morning period, corroborating studies by Fortes, Mendes, Albuquerque, and Bernardo (2016) and Mohiuddin, Nazista, Alam, Zaidi, and Akhtar (2015). Considering the two moments most mentioned by non-Brazilian students, they corroborate the literature, which states that tooth brushing must occur essentially in the morning and at night (Rahardjo et al., 2014). In fact, brushing the teeth at night removes the bacterial plaque from the dental surface, reducing the amount of dental

biofilm in the morning, produced by the reduced salivary flow during sleep. As for brushing in the morning, it eliminates the bacteria that adhered to the teeth during the night.

Regarding the frequency of toothbrush replacement, the higher frequency among non-Brazilian students, fact that contrasted with research involving African university students (Singh & Pottapinjara, 2017), was unexpected, since the type of toothbrush they often use seems harder, larger and more resistant than those sold in the Brazilian market, associated to the economic differences between African countries and Brazil. Furthermore, they also use other means to clean dental surfaces due to the influence of cultural aspects in each region and lower socioeconomic conditions (Okemwa, Gatongi, & Rotich, 2010; Carneiro, Kabulwa, Makyao, Mrosso, & Choum, 2011; Adib et al., 2015). Among Brazilian academics, the frequency of toothbrush replacement resembled the findings of Mohiuddin et al. (2015) and Cruz et al. (2015), besides being the frequency prescribed by literature. The latter asserts that toothbrush replacement shouldn't rely on the abrasion of the bristles, but should occur quarterly and in cases of oral infection and contamination by oral microbiota and the environment (Cruz et al., 2015; Costa, Carvalho, & Carvalho, 2017).

When questioned about tongue cleaning, 93.1 of Brazilian and 93.3% of non-Brazilian participants declared brushing their tongues, result that corroborates research by Andhare, Dhonge, Dhuldhwaj, Dede, and Sayyad (2017), in which 75 of Medicine students and 97% of Dentistry students had that habit. These findings are relevant when we consider the role that the tongue plays in the etiology of halitosis, by accumulating food remains, desquamated epithelial cells, bacterial products and dead leukocytes (Pham et al., 2011). Halitosis is a pathology charactherized by an unpleasant smell in the oral cavity that can affect individuals of any age and interferes with the self-esteem and interpersonal and social relationships (Suzuki, Yoneda, Naito, Iwamoto, & Hirofuji, 2008; Hammad, Darwazeh, Al-Waeli, Tarakji, & Alhadithy, 2014). The malodorous smell results from the degradation of compounds containing sulfur in food remains, saliva, blood and epithelial cells by Gram-negative bacteria (George, 2014).

Therefore, the tongue must be cleaned daily to avoid the development of halitosis. It can be cleaned with the toothbrush itself (back or bristles) (Gupta, Saxena, Sikka, & Bhatia, 2015) or with a tongue cleaner, reducing the bacterial formation in the posterior portion of the tongue (Cruz et al., 2015).

Concerning the knowledge and use of dental floss, although most participants knew it, especially Brazilians, not all of them used it. For the non-Brazilian students, the lack of use of dental floss by those who knew it may be justified by a lack of habit, the substitution of other dental cleaning tools (such as toothpicks or matches) (Carneiro et al., 2011), difficulty in access or low economic status. For the Brazilian academics, the lack of use of dental floss by those who knew it may result from a lack of habit or low economic status. In fact, research shows a greater use of dental floss by individuals with higher socioeconomic status, which may be a result of the high cost of dental floss in the Brazilian market (Bordin et al., 2017).

Corroborating the deficiency in instituting this habit, a research in Nigeria showed that 48.6% of university students had never used dental floss (Folayan et al., 2013), similar to what was observed in Colombia (Marulanda et al., 2014). Low flossing habits were also observed in Lisbon (Fortes et al., 2016) and Brazil (Ferreira-Borges, Parry, & Barbor, 2017).

About seeking dental care, the high percentage of non-Brazilian students who had never seen a dental surgeon was worrying. Despite the alarming situation, this result is not surprising, since a study conducted in Nigeria with Dentistry students, individuals who are aware of the importance of preventive and therapeutic dental care, showed that 6.8% of participants had never been to a dentist's office (Folayan et al., 2013). This reality may be a consequence of the scarcity of health professionals and services, the lack of knowledge and financial resources, the apprehension over dental treatments, among others (Sharma et al., 2015).

However, seeking dental care was significant among participants with age lower than or equal to 18 years and income higher than 1 minimum wage. Concerning these results on age, although literature shows a lower rate of teenagers seeking dental care, there is a similarity between our results and the data found in the study by Marín, Papadopol, Bottan, and Orcina (2016), in which a high number of teenagers underwent dental consults. This involved mostly routine dental care, orthodontic treatment, and the presence of dental caries and pain. Furthermore, the fact that academics with income higher than 1 minimum wage sought dental care more often can be explained by the high cost usually associated to this kind of service (Rodrigues, 2015).

Therefore, based on what has been discussed, it becomes clear that tooth brushing, flossing, using fluoridated dentifrice and mouth wash, as well as consulting dental care professionals and controlling the intake of cariogenic food, can contribute to the prevention of prevalent oral pathologies, such as dental caries and periodontal disease (Pauleto, Pereira, & Cyrino, 2004; Garcia, Campos, Rodrigues, Santos, & Dovigo, 2004). Thus, it is essential to stimulate adequate habits and behavior in oral health in students and the overall population.

It is worth noting that this research, due to using convenience sampling, invalidates generalizing the results obtained here with proper statistical rigor. Furthermore, the study didn't encompass a higher number of Brazilian and non-Brazilian academics, which might have produced more interesting results, since it was carried out during a strike in federal universities.

However, this study provided insight on habits and behavior in oral health of Brazilian and non-Brazilian academics recently admitted to university, offering guidance in decision-making for managers and health professionals regarding actions that can be undertaken to promote oral health and prevent pathologies in this community, respecting cultural differences.

## Conclusion

Based on the results obtained, we can conclude that, despite similarities in the bio-sociodemographic and economic aspects and in the perception of oral hygiene, some attitudes and behaviors in oral health differed between academics of different nationalities recently admitted to an international university. Some of those practices deviated from those established by the literature, both in Brazilian and non-Brazilian students. Finally, factors such as age lower than or equal to 18 years and family income higher than one minimum wage positively influenced seeking dental care.

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