ORAL HEALTH CONDITION AND INTERPERSONAL RELATIONSHIP OF SCHOLARS OF A PUBLIC INSTITUTION

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Palavras-chave: Percepção. Saúde Bucal. Criança.

RESUMO

Objetivo: O objetivo desse trabalho foi avaliar a condição de saúde bucal e analisar a autopercepção do impacto da saúde bucal no relacionamento interpessoal de escolares de uma instituição da rede pública municipal do Rio de Janeiro, Brasil. **Método:** A amostra foi do tipo não probabilística, sendo composta por 260 crianças e adolescentes, de 8 a 15 anos. A condição bucal foi verificada através de exame clínico de acordo com os critérios da Organização Mundial da Saúde. A percepção dos escolares em relação a própria condição bucal foi avaliada através de entrevista, cujo instrumento foi desenvolvido a partir da Pesquisa Nacional de Saúde do Escolar, 2012 e do *Child Perception Questionnaire (*CPQ).[11-14] Os testes qui-quadrado e Exato de Fisher foram utilizados com nível de significância de 5% (p<0,05). **Resultados:** 51,5% da amostra apresentou CPOD zero. A análise do questionário mostrou que a maioria está feliz com o próprio sorriso (88,1%). Porém, 35,8% relatou já ter evitado sorrir e 18,5% já deixou de realizar alguma atividade por causa dos dentes. **Conclusão:** Embora a metade dos escolares se apresente livre de cárie e a maioria goste do próprio sorriso, uma parcela considerável demonstra sentimentos como chateação e vergonha, podendo interferir no relacionamento com seus pares.

Keywords: Perception. Oral Health. Child.

ABSTRACT

Objective: The aim of this study was to evaluate the oral health status and to analyze the self-perception of the impact of oral health statuson the interpersonal relationship of students from a local school in Rio de Janeiro, Brazil.

Methods: A non-probabilistic sample was used, consisting of 260 children and adolescents aged 8 to 15 years. Oral health status was evaluated by clinical examination according to the World Health Organization criteria. The perception of the students of their oral health status was assessed by interview using a questionnaire developed from PeNSE (Brazilian National School Health survey) and CPQ[11-14] (Child Perception Questionnaire). Chi-square and Fisher's exact test were used, with level of significance of 5% (p< 0.05). **Results:** A DMFT index equal to 0 was observed in 51.5% of the participants. The questionnaire revealed that most students were happy about their own smile (88.1%). However, 35.8% had already avoided smiling and 18.5% had refrained from some daily activities because of the appearance of their teeth. **Conclusion:** Although half of the students were free of dental caries and most were satisfied with their smile, a sizable number felt upset and embarrassed about their teeth, which may interfere in the relationship with their peers.

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INTRODUCTION

Oral health is an integral and essential part of general health and it is influenced by social and behavioral factors, playing a key role in quality of life.[1]

Oral esthetics is closely related to emotional aspects and to some oral problems such as early loss of deciduous teeth, which may have a negative impact on the development of children and adolescents, causing changes in their behavior, such as irritability and low self-esteem.[2] In adolescence, development of social relations is initially associated with

physical attraction, and facial esthetics becomes of further relevance.[3]

Thus, dental problems, like malocclusion, anterior traumatic tooth, tooth loss and untreated decay, can have a direct impact on the development of relationships, on self-esteem, and on quality of life.[3,4,5]

Given the importance of this topic, the aim of this study was to evaluate the oral health status and analyze the self-perception on the impact of oral health on the interpersonal relationship of students from a local public school in Rio de Janeiro.

MATERIALS AND METHODS

Ethical aspects

This study was approved by the Research Ethics Committee of Clementino Fraga Filho Teaching Hospital – UFRJ (process 46637315.4.0000.5257, report no. 1 165.807).

Study design and sample characteristics

This is a cross-sectional, descriptive, observational, and quantitative study conducted for 8 months at an Integrated Public Education Center in the Caju neighborhood, in Rio de Janeiro, Brazil. Convenience sampling was used for the selection of study participants.

A total of 760 free informed consent forms were handed out to children and adolescents aged 8 to 15 years enrolled in the school, and 260 were returned. The inclusion criteria were the signed consent form, absence of neurological impairment, and free participation by the child or adolescent.

Pilot study

A pilot study was carried out to assess the questionnaire proposed for the interview. The study included children and adolescents in the same age bracket selected by convenience sampling at the Pediatric Outpatient Clinics affiliated with the Dental School of UFRJ. Four children (three girls and one boy) were assessed and the mean age was 10 years.

The questionnaire was based on the Brazilian National Student Health survey,[6] and Child Perception Questionnaire (CPQ).[11-14,7] The questions and answers were elaborated to verify the students' perception of their oral health, based on the block "hygiene and oral health" of the questionnaire of the National School Health Survey[6] and some questions from the Child Perception Questionnaire.[11-14 7] Regarding the answers, it was possible to mark more than one option on some questions and open answers, that were categorized for analysis. The adaptations were made with the aim of grouping and simplifying the answers.

Data collection

Interview

The interviews were performed in the place and time designated by the school and the students were scheduled by class. The questions were asked directly to the children or adolescents aiming to understand the perception of their smile. Both the interview and the report were made by the same researcher (MCCB).

Clinical oral examination

The oral health examination was performed after the interview, in the same room, under ambient lighting using personal protective equipment (gloves, mask, cap, and goggles), mouth mirror, and millimeter-graduated probe for epidemiological examination in order to assess the oral status of the children and adolescents and check for the presence of dental caries. Presence of trauma was assessed by evidence or not of anterior tooth fracture.

The examination and notetaking were performed by the same researcher (SKPCT), previously trained and calibrated (Kappa 0.716), and classified according to the World Health Organization.[8] Those patients in need of treatment were referred to the health unit in charge of school health. The referral was previously planned with dentists from the referral unit.

Statistical analysis

Percentage values were used for the descriptive analysis and the chi-square test was used for comparison of categorical variables. If necessary, Fisher's exact test was utilized. The results are shown in the tables and the level of significance was set at 5% ($p < 0.05$). The data were described and analyzed by SPSS version 20.0 (Chicago, IL, USA).

RESULTS

Among the 260 participants, 137 (52.7%) were male and 123 (47.3%) were female, with a mean age of 10.5 years (Table 1). Most students self-identified as dark-skinned (52.3%) and whites (29.6%).

A DMFT index equal to zero was observed in 134 (51.5%) students, and when the DMFT index was compared between sexes, the difference was not statistically significant. Forty students (15.5%) had dental caries with a DMFT index greater than 3. Anterior tooth trauma was observed in 10 students, accounting for 3.8% of the total sample. Most students (173 or 66.5%) said they had not seen a dentist in the past year, being significant the difference in relation to those (Table 2).

Table 1: *Sample distribution according to age and sex (n=260)*

Age	Sex		
	Female	Male	Total
8 years	16	9	25
9 years	26	23	49
10 years	25	30	55
11 years	29	33	62
12 years	16	24	40
13 years	7	6	13
14 years	4	9	13
15 years	0	3	3
Total	123	137	260

Table 2: *Students' oral health status (n=260) according to the past visit to a dentist.*

Variable	Female		Male		Total		*p* value
Did you see a dentist in the past year?	n	%	n	%	n	%	
No	81	31.2	92	35.4	173	66.5	
Yes	42	16.2	45	17.3	87	33.5	$p = 0.04$*
DMFT index							
0	56	21.5	78	30	134	51.5	
1	21	8.1	16	6.2	37	14.2	
2	13	5	19	7.3	32	12.3	
3	10	3.8	7	2.7	17	6.5	
>3	23	8.5	17	6.6	40	15.5	$p = 0.37$
dmft index							
0	75	28.8	88	33.8	163	62.7	
1	17	6.5	14	5.4	31	11.9	
2	10	3.8	13	5	23	8.8	
3	8	3.1	7	2.7	15	5.8	
>3	13	5.1	15	5.8	28	10.7	$p = 0.4$
Trauma							
No	120	46.2	130	50	250	96.2	
Yes	03	1.1	7	2.7	10	3.8	$p = 0.21$
Total	123	47.3	137	52.7	260	100.00	

***Table 3**: Self-perception of the impact of oral health status on daily life (n=260)*

Variable	Female		Male		Total		*p* value
	n	%	n	%	n	%	
Do you like your own smile?							
Yes	102	39.2	127	48.8	229	88.1	
No	21	8.1	10	3.8	31	11.9	*p* = 0.19
Is there anything you don't like about your own smile?							
Nothing	50	19.4	87	33.2	137	52.6	
Position	21	8.1	18	6.9	39	15	
Color	18	6.9	06	2.3	24	9.2	
Size	17	6.5	12	4.6	29	11.2	
Other	17	6.4	14	5.6	31	12	*p* = 0.23
Have you ever felt upset about your teeth?							
Never	81	31.2	101	38.8	182	70	
Few times	29	11.2	32	12.3	61	23.5	
Many times	13	5	04	1.5	17	6.5	*p* = 0.39
Have you ever felt embarrassed about your teeth?							
Never	76	29.2	96	36.9	172	66.2	
Few times	25	9.6	31	11.9	56	21.5	
Many times	22	8.5	9	3.5	31	11.9	
Did not answer	0	0	1	0.4	1	0.4	*p* = 0.21
Have you ever avoided smiling because of your teeth?							
Never	77	29.6	90	34.6	167	64.2	
Many times	24	9.2	21	8.1	45	17.3	
Few times	22	8.5	26	10	48	18.5	*p* = 0.684
Have you ever been given a nickname because of your teeth?							
No	92	35.4	114	43.8	206	79.2	
Yes	31	11.9	23	8.8	54	20.8	*p* = 0.65
What have you avoided doing because of dental problems?							
Nothing	96	36.9	116	44.6	212	81.5	
Playing	7	2.7	15	5.8	22	8.5	
Going to school	7	2.7	4	1.5	11	4.2	
Going out with friends	5	1.9	1	0.4	6	2.3	
Other	8	3.1	1	0.4	9	3.5	*p* = 0.07
What's a beautiful smile for you?							
Clean teeth	33	12.7	41	15.8	74	28.5	
White teeth	25	9.6	33	12.7	58	22.3	
Feeling of happiness (happy smile)	16	6.2	14	5.4	30	11.5	
Well-positioned teeth	16	6.2	9	3.5	25	9.6	
Don't know	5	1.9	16	6.2	21	8.1	
Clean + white teeth	4	1.5	6	2.3	10	3.8	
White teeth + position	4	1.5	6	2.3	10	3.8	
Clean teeth + correct position	5	1.9	2	1.5	7	2.7	
White teeth + feeling of happiness	1	0.4	1	0.4	2	0.8	
Other	14	5.4	9	3.5	23	8.8	*p* = 0.19
TOTAL	123	47.3	137	52.7	260	100.00	

The level of satisfaction with one's smile was high, as 229 (88.1%) students said they liked their smile; and when they were asked "What's a beautiful smile for you?," 74 (28.5%) and 58 (22.3%) students mentioned clean and white teeth, respectively, as the main characteristics of a beautiful smile. When asked whether they had already felt upset or embarrassed about their teeth, 182 (70%) said they had never felt upset and 172 (66.2%) answered they had never felt embarrassed. However, 93 (35.7%) mentioned they had already avoided smiling because of the appearance of their teeth and 54 (20.8%) said they had already been given nicknames for that reason. When these questions were compared between sexes, embarrassment was more predominant among girls, but without any statistical significance (Table 3).

DISCUSSION

Sex distribution in the sample was balanced relative to the total number of students, and the most frequent age was 11 years. At any age, regardless of sex, oral health and esthetics are considered to be important for self-image and normal social interaction.[9]

The negative answer of students to the question about whether they had seen a dentist in the past year indicates better results than those obtained from PeNSE 2012,[6] in which 40% of the interviewees in Rio de Janeiro gave a negative answer. This should be further investigated to verify whether there is a shortage of dental care services in the region or whether the behavior is specific to that community. Notably, the region where the school is located has one of the lowest human development index (HDI) and social development index (SDI) at the local level.[10,11]

Limitations of the study were the difficult access and compliance of a considerable share of the population, since only 34.2% of consent forms were returned. This is one of the major problems with research that involves students, so it is important to conduct investigations into methods for obtaining informed consent.[12] This low rate underscores the importance of communication between the school and the parents/legal guardians for the development of strategies that include students.

By comparing the dental caries rate obtained in our study with the data published by SB Brasil[13] in 2010, there was some similarity in the results found for 12-year-olds, with 52.5% of students with a DMFT index equal to zero, in line with those data gathered by SB Brasil for Rio de Janeiro. Nevertheless, from the total sample (48.5%) with a DMFT index greater than zero, 15.5% had a DMFT index greater than 3, which indicates a high prevalence of dental caries, i.e., predominance of the disease in a given group. Similar results have been reported in the literature,[14,15] showing that, even though the strategies for control of the disease and public policies for oral health promotion have been favorable, control strategies and oral health promotion actions should always be encouraged, because the coverage of dental care is not similar across different population groups.

Regarding the frequency of dental trauma, according to data published by SB Brasil,[13] the prevalence of dental trauma was observed in one fifth of the population, and upper incisors were the most commonly affected teeth. Comparing this with the data obtained by the study, the prevalence is a lot lower, which, to some extent, was unexpected, as children and adolescents at such an age are more exposed to situations that lead to dental trauma.[16]

The analysis of satisfaction of students with their teeth and smile showed that most of them liked their teeth and smile, but such an answer was more frequent among male students than among female ones. In this sense, although a significant difference was not disclosed in the analysis of the results, it suggested a higher trend of satisfaction among male students. It is possible to say that girls, from a very young age, demand more from themselves and have a higher level of dissatisfaction with their esthetics.[17,18] Those who said they liked their teeth were asked whether there was anything that they disliked about them, and in their answers they mentioned position, size, and color. Among the factors that make up someone's beauty, smile is regarded as one of the most important ones.

When asked what they considered to be a beautiful smile and what they thought was important for a relationship with their peers, the biggest concern turned out to be "having clean teeth." If we group the answers related to the question about dental esthetics, almost 50% of the sample showed this concern. In the study by Perin et al.,[19] this answer about esthetics was also frequent.

While most students did not indicate a direct impact of oral status on the development of daily relationships, one fifth of the sample had been given nicknames because of their smile. Some studies demonstrate that nicknames may characterize bullying at school, which could interfere with the students' self-esteem and with the relationship with their peers.[20]

Based on the results obtained, we suggest studies that evaluate the relationship between oral health status and possible bullying or situations that could interfere with the students' psychosocial development.

Most students like their own smile and are satisfied with their teeth, and that half of them are free of dental caries and that a sizable number feel upset and embarrassed about their teeth, which may affect the self-esteem and, consequently, the quality of life of these students.

CONCLUSION

It may be concluded that although half of the students were free of dental caries and most were satisfied with their smile, a sizable number felt upset and embarrassed about their teeth, which may interfere in the relationship with their peers.

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