CHILDREN'S CONCEPTION OF BUCCAL HEALTH: A STUDY ON SCHOOL CHILDREN IN THE MUNICIPALITY OF BAURU-SP

Adriana Regina Colombo Pauleto¹ Maria Lucia Toralles Pereira² Eliana Goldfarb Cyrino³

¹Graduation Program in Collective Health – School of Medicine of Botucatu – UNESP. PAULETO, Adriana Regina Colombo; PEREIRA, Maria Lucia Toralles; CYRINO, Eliana Goldfarb. Children's conception of buccal health: a study on school children in the municipality of Bauru-SP. *Salusvita*, Bauru, v. 23, n. 2, p. 251-262, 2004.

²Dept. of Education. Institute of Biosciences of Botucatu – UNESP. Graduation Program in Collective Health – School of Medicine of Botucatu – UNESP.

³Dept. of Public Health. Graduation Program in Collective Health – School of Medicine of Botucatu – UNESP.

ABSTRACT

Although tooth decay is an buccal health problem very frequent during childhood but there are means to prevent it and educate. Several oral health programmes have been carried out, but most of them are restricted to thematic lectures without problematizing the theme. The necessity to systematize indicators able to subsidize oral health educational projects motivated this study, the main purpose being to know the buccal health conceptions and hygiene habits of the students. The research involved children from first to fourth grades of primary municipal schools of Bauru by means of structured interviews and questionnaires with closed questions. A sample of 80 students was chosen randomly and studied. The results showed that 63.75% of the children have already had tooth ache and the cares mentioned by them were bushing the teeth, going to the dentist, not eating sugar candy and taking good care of the teeth. It

Received on: January 19, 2004 Accepted on: August 10, 2004 demonstrates that the students have information about buccal health cares answering the questions trying to achieve the researcher's expectations, however their answers point out to a deficient hygiene practice. In conclusion, these facts are significant examples to carry out a pedagogical work based on problematizing the theme.

KEY WORDS: health education; buccal health; educational programs; students; primary school students

INTRODUCTION

The Brazilian Ministry of Health declared there has been a reduction of 54% on dental caries in the last 30 years (BRASIL, 1999). This reduction has been more marked in those areas in which technologies were implemented such as water fluoridization and collective preventive and educational action in schools and community places. An example is the municipality of Cambé at Paraná State that, in 1981, showed a DMFT (Decayed, missing, filled) of 8 to 12 years of age and, in 1996, the same index was 2.4 in the same age group (GARBELINI; SOUZA, 2003). This marked reduction, according to Frazão (1998) can be associated with both above mentioned technologies.

It is known that buccal health is closely linked to the nutritional, living, working, income, environmental, transportation, leisure and freedom factors as well as to the quality of access to health services and information. However, education and access to information about buccal health has been pointed at by many authors as the main factors to attain reduction in this process (PORTO, 2002).

The lack of knowledge on the importance of adequate practices of oral hygiene should be considered in the context of the problematic of the buccal health in populations since the information does not reach all social strata in a even way. More over, and dentistry care is still restrict to a small part of the population due exactly to socio-economic and cultural reasons (MARCELO, 2001).

Therefore, health education is an important strategy in health promotion once it is an instrument of social change. For that, according to Pinto (2000), it requires specific characteristics in what regards the practices and the knowledge to be worked out. To this author the concept of education in bu c c a l health should be reviewed aiming to include among its tasks the awareness of different

socials groups. In close relation to the concepts of Freire (1980) the author uses the term *awareness* as an strategy to attain a critical and significant nearness to the studied reality, prizing the knowledge as a possibility of a greater autonomy for each individual in what regards their own health care.

However, not many educational actions in bu c c a l health bears strategies to discontinue the traditional and comportamentalistic practices anchored in the unidirectional communication processes that do not allow neither dialogue nor effective participation of the population in the construction of the knowledge on the preventive practices. Education, most of the time, is not linked to the reality of a given population and, therefore, becomes meaningless to them.

Thus health education is still a challenge in the field of dental public health mainly when one analyzes the world prevalence of dental diseases and the high cost of a restorative treatment taking into consideration that symptomatic treatment is not enough to guarantee buccal health (YATSUDA; RAMOS, 1998).

Moysés and Watt (2000) stress that the school can be an adequate enviroment to develop buccal health actions, including education. For the authors prevention and education assumes greater relevance and the health education in the school gets stressed by many other authors. The posed challenge is in the pedagogical field, trying to surpass the traditional models focusing the problematization of buccal health care aiming to provide information and knowledge while emancipatory practice in the search of bound to the autonomy of each individual regarding the care of its own health.

To deal with this challenge one of the first actions is to make a precise situational diagnosis of the workable object, knowing the experiences and concepts of the population on buccal health and disease. Indeed, this is a requirement to the problematizing practices that have characteristically articulate the knowledge to be worked out and the references and/or past experiences of this population (PAULETO et al., 2004).

In this connection, to value the preventive action in the school and to understand the concepts on buccal health, taking as reference the explanations elaborated by school boys and girls on the problems of buccal health and disease, is basic to the communication of the dentist both in its private practice and in the problematizing educational work.

Perosa and Gabarra (2004), have studied the conceptions of children admitted in a public hospital in the countryside of São

Paulo, and have showed that the concern of researchers to understand how children explain disease has permitted the elaboration of communication strategies and teaching materials that allowed a more meaning full to adequate work with the information and the knowledge on the process of illness, treatment and prevention.

The aim of this study is to get to know the concepts and experiences on buccal health of schoolboys and girls from the 1st to the 4th grades of the elementary school on the public network of a town in São Paulo State, aiming to identify the conceptual frame and the experiences capable of supporting the development of an education pr ogram in buccal health based in the problematization of health issues, in the meaningful learning and in the emancipatory education (FREIRE, 1997).

PAULETO, Adriana R egina Colombo; PEREIRA, Maria Lucia Toralles; CYRINO, Eliana Goldfarb. Children's conception of buccal health: a study on school children in the municipality of Bauru-SP. Salusvita, Bauru, v. 23, n. 2, p. 251-262, 2004.

MATERIAL AND METHODS

This is an exploratory and descriptive study based on a quantitative and qualitative approach using as main instrument with a structured interview for data collection .

The interview included seven previously formulated question on the main knowledge on "bu c c a l health" considered as relevant in the literature (DINELLI et al, 1998; PINTO, 2000) in order to attain a satisfactory preventive and educative work.

- 1. What do you use the mouth for?
- 2. What parts do you have in your mouth?
- 3. Have you ever experienced toothache?a) If yes: what did you do to solve the problem?b) If no: what is the reason for not having it?
- 4. Why does a tooth hurt?
- 5. Why does the mouth sometimes has a bad smell?
- 6. Do you take care of your teeth?
- 7. What do you do to take care of your teeth?

Besides the interview a closed questionnaire was used with objective multiple choice answers, adapted from Dinelli et al (1998), tackling knowledge on bacterian plaque, oral hygiene,

fluoride, caries, diet, gingivitis and the importance of dentists, aiming to disclose the knowledge of children on the aspects considered as significant to the area of buccal health and that is included in the curricula of the 1st to 4th grades of most elementary schools.

The interviews, recorded and then transcribed, were done in November 2002, taking around 20 to 30 minutes per children. The questionnaire was applied during class time after the interview.

The data was grouped after successive readings and interpretations based on the studies by Minayo (2002), trying to identify categories of significative analysis in the context of education in buccal health and associating, in this analytic process, the researcher sight and the students' ideas, mediated by the theoretical reflections on the themes that support the present study.

The analysis of the categories was based on the ideas by boys and girls taking into consideration the theoretical reference. The obtained categories were then compared to the more ample concepts that defined the questions previously proposed, looking for a relation or an association that allowed the understanding of the conceptual frames and the more significant explanations based on the cognitive development of the students aiming to establish indicators to anchor an health educational work based on problematization (FREIRE, 2000) and in the meaningful learning (COLL, 1996).

The study included 80 students (40 males and 40 females) from the 1st to the 4th grades in a public elementary school at Bauru, São Paulo State with age from 7 to 12 years, selected at random. The school had been recently opened (2002) in the east side of the city and there was no educational program on buccal heath being developed. The students, 20 from each grade from the morning and afternoon periods, were sons of civil servants, clerks and liberal professional, among others, pertaining to the low medium level social strata according to data furnished by the school.

The present study and the informed consent were approved by the Committee on Ethics in Research at the University of the Sacred Heart under protocol number 107/2002.

RESULTS

TABLE 1 shows the results obtained in the questionnaire.

TABLE 1 – Number of students, by school grade, according to the scores obtained in the evaluation about knowledge about buccal hygiene.

concept	A		В		C		D		E		
School grade	(81 to 100%			%	(41 to 60%)		(21 to 40%)		(0 to 20%)	%	TOTAL
1 st	0	0	4	5.00	10	12.50	6	7.50	0	0	20
2 nd	0	0	2	2.50	10	12.50	8	10.00	0	0	20
3 rd	0	0	2	2.50	10	12.50	8	10.00	0	0	20
4 th	4	5.00	10	12.50	5	6.25	1	1.25	0	0	20
Total	4	5.00	18	22.50	35	43.70	23	28.70	0	0	80

PAULETO, Adriana R egina Colombo; PEREIRA, Maria Lucia Toralles; CYRINO, Eliana Goldfarb. Children's conception of buccal health: a study on school children in the municipality of Bauru-SP. *Salusvita*, Bauru, v. 23, n. 2, p. 251-262, 2004.

In what regards the *importance of the mouth* it is possible to point five groups of ideas and explanation involved: to eat (37.5%); speak and eat (18.75%); brush teeth (17.5%); brush teeth and eat (13.75%); and speak (12.5%). These explanations were grouped in more specific ideas resulting in three main categories: eating, brushing and speaking.

Answers to the question What parts do you have in your mouth? were: teeth (50.0%); teeth and tongue (26.25%); caries (10.0%); tongue (5.0%); don't know (8.75%). Palate, gingiva and lips where not mentioned although the theme "the mouth and its parts" is an item addressed in the curricular content.

To the question *Have you ever experienced toothache?* many gave positive answers: 51 (63.75%) declared that have already experienced toothache. To these children an additional question was made: *what did you do to solve?* and 45.11% out of 51 children replied that they saw a dentist, 19.60%; *took some medicine;* 11.77% gave *fantasious and senseless explanation* and 23.52% just did *not know* what to explain.

Some of the children informed that their mother gave them some medicine, which suggests a tendency to medicialization of the dental problem on the part of mothers. This finding makes clear the importance of health education not only to school children but also to parents and the family as a whole.

Those 29 children (36.25%) that reported never having experienced a toothache were asked the reason they never had toothache. The answers were grouped in four categories: brushing (mentioned by 34.48% with typical answer being *because I brush my teeth quite well*; *imagination*: (found in 27.60% with explanations such as *because a brush my teeth every hour, all day long or at least 8 times a day* although a bacterian plaque was clearly visible in most of these children); brushing and dental flossing reported by 20.68% with answers such as: *because I brush in the morning, in the afternoon , in the evening and then I use dental floss*; no candies (reported by 17.24%).

When stimulated to explain Why teeth hurt? answers could be grouped in four groups: lacking of brushing (41.17%); food (25.49%); caries (23.54%); fantasy (9.80%). Most of the children associated the problem to lack of brushing, maybe to correspond to the expectation of the interviewers; others associated to the intake of certain foods (hard meat, chocolate, pop-corn, etc.) without any connection with the presence of caries. Another group of children tried to explain the caries problem by mentioning experiences of other persons such as a member of the family or by fantasious explanations which reports were included under fantasy the bug has bitten the tooth of my aunt because she didn't brush it correctly.

Concerning the question Why sometimes the mouth has a bad smell the answers were grouped in five main categories: incorrect brushing (66.0%); not brushing after waking-up in the morning (25.0%); to eat deteriorated food (8.0%); not brushing at all (1.0%).

The explanation to the question on personal teeth care could be grouped in three categories: *brush* (53.75%); *brush and dental floss* (31.25%); *do not eat candies* (15.0%).

One third of children reported using of dental floss, but as the interview went on it was observed that such reporting was most of the time to please the interviewer. A typical situation leading to this conclusion was subsequent comments such as: *Ah! I used dental floss in May last year*, or indicating some sort of economic problem: *I use dental floss when my brother buys it*. It can be said that 20.0% out of the 31.25% of children reporting use of dental floss could be included in the category *fantasy*, that is, showing no concern to the cause-effect relationship and indicating ways of thinking dependent only in the magic thinking.

The 55 children that reported not using dental floss were asked the reason for this and new categories arouse: *economic* (41.83%); *lack of knowledge* (27.27%); *hurt* (21.81%); *do not know* (9.90%).

In the broad sense children seek explanations that meet the expectation of the interviewer by frequently going into the filed of fantasy and creating explanations that become progressively senseless as the interviewer went on: *I always use dental floss; When did you use last time?; When I visited my grand-mother.*

DISCUSSION

Values on TABLE 1 show that only four children in the 4th grade got an A (correct answers from 81% to 100%); score B was granted to 18% being most of them from the more advanced grades; 35 children attained score C with an even percentage distribution among the grades; 23 children obtained score D with great percentage distributed in the mean grades. No E score was granted.

It was observed the best scores were obtained in the 4th grade, what was expected taking in consideration the age, the experience, and the knowledge acquired in the school. The results of the questionnaire for the present study are different from those obtained by Dinelli et al. (1998), which applied the questionnaire in private schools. In the present study (public school) most students fell in the scores C and D whereas in the mentioned study children obtained mostly grades A (65.50%) and B (15.6%) and no children got Ds and Es. It should be stressed, however, the complexity of some of the themes tackled by the questionnaire and the differences between the elementary teaching in public and private schools.

The use of interviews allowed the identification of the knowledge among school children in a situation of interactive and dialogic communication. The questionnaires, are somehow difficult for children of elementary school and some adaptation is necessary. However, both instruments contributed to the elaboration of a diagnosis and understanding of the challenges that buccal health posed to dentists in this context. It was possible to perceive that, although children do not master the formal knowledge on the issue, which stresses the importance of further health education in the public school, they elaborated explanations and knowledge that are previous and valuable references to professionals that intend to work with educative actions in this area.

As it was seen, 63.75% of the studied group reported having had toothache. Although this figure included some answers biased by the desire to please the interviewer, toothache seems to arise as the

starting point to a educative work. On the other hand, even those that did not reported toothache and reported to systematically brushing their teeth and to using dental floss, it was observed misunderstanding on the correct forms for brushing and using dental floss. This indicated the importance of an educative work aiming to guarantee the technical efficiency of some care already incorporated by children.

Toothache as reported by more than half the children was associated to various causes, among them the lack of brushing, eating certain foods and caries. These references are important to be considered in preparing any educative work on this issue.

Concerning self care some important information were given by children and should be regarded as meaningful previous knowledge (COLL, 1996) to focus a problematizing practice to groups such as brush teeth, visit the dentist, no candy.

Although it has been seen that many children eat candies during the class breaks the reference on *not eating* was quite present in the discourse of children and points to the possibility of a work focusing the issue of diet and buccal health emphasized in the literature. Freire (2000) reports that food rich in sugar is the main dietary determinant for caries and is also a risk factor for other chronic diseases, so that food/nutrition is one of the most important issues to be addressed in the preventive practice in dentistry.

Even tough many of the answers or explanations were intended to meet the expectations of the interviewers or based on immediate explanations without cause-effect relation, dominated by images or by magic thoughts, characteristic of the pre-operative thinking in the classification of Piaget (1971), their ideas arise as focal points to the educative work and are able to support a problematizing practice based in the significative learning by children. On the other hand, to understand the explanation of children in terms of thought elaboration allowed to verify that in the studied group there were children in the concrete operative stage (PIAGET, 1971) with explanations based on the concrete reflexive thinking, but there were also found some children in the pre-operative stage (with explanations based on immediate images, created or simply constructed to please the interviewer without self reflection) what can point towards the need for challenges in the filed of communication practices, pedagogical strategies and teaching materials that address this diversity.

CONCLUSION

Social, economical and cultural issues can represent constraining factors to the preventive work in buccal health. In spite of that, the problematizing practice in education can be a way to make available information on the importance of health care.

The presence imaginative explanations in children during the interviews can point to the importance of the ludic dimension as one of the teaching strategies favoring the communicative interaction, the mobilization and the problematization of the buccal health theme among younger school children. One should not forget the importance of practical activities that allow the concrete manipulation of objects related to the learning content, which can be a facilitating strategy to those that are in the concrete-operation phase to make them to absorb knowledge.

Thus, the importance to understand and to know the conceptions and the knowledge that children build on the theme to be worked.

In buccal health the educative strategies still deal with the surface of the problem, based mainly on the transmission of information without creating a space to the discussion of the health theme or valuing the active participation of children in the process of knowledge construction. To know the universe of children, their talks, fantasies and perceptions is a way to open roads to the construction of a problematizing educational program as mentioned by Freire (apud FREIRE; SHOR, 1987), the problematizing practice and emancipation presents to the educator the challenge to learn with the *other* (the target public) observing their knowledge and ways they construct relations to work with this *other* in a significant and dialogic way.

The present study allowed to identify the ideas of the group both in the answers constructed from the reflection out of concrete experiences and those constructed form the imagination of the group assisting in the definition of indicators to a educative work able to problematize the theme of buccal health to the group.

BIBLIOGRAPHIC REFERENCES

1. BRASIL. Ministério da Saúde. Secretaria Nacional de Programas Especiais de Saúde. Divisão Nacional de Saúde Bucal. Fundação de Serviços de Saúde Pública. *Levantamento Epidemiológico em Saúde Bucal. (Brasil). Zona Urbana: 1998.* Brasília DF, Centro de Documentação do Ministério da Saúde, 1999.

- COLL, C. Um marco de referência psicológico para a educação escolar: a concepção construt ivista da aprendizagem e do ensino. In: COLL, C.; PALÁCIOS J.; MARCHESI A. (orgs.). Desenvolvimento psicológico e educação. Porto Alegre: Artes Médicas, 1996. p. 389-404.
- 3. DINELLI, W. et al. Campanhas de prevenção e motivação em odontologia. *Novos caminhos. Odonto 2000*, v. 2, n. 1, parte 2. p. 8-13, jan./jun. 1998.
- 4. FRAZÃO, P. Tecnologias em Saúde Bucal Coletiva. In: BOTAZZO, C.; FREITAS, S. F. T. (Org.). Bauru: EDUSC,1998. p. 166-167.
- 5. FREIRE, M. C. M. Dieta em saúde bucal e geral. In: BUISH, I.P. (Org.). *Promoção de saúde bucal na clínica odontológica*. São Paulo: Artes Médicas, 2000. p. 249-78.
- 6. FREIRE, P. *Pedagogia da autonomia*: saberes necessários à prática educativa. 5. ed. São Paulo: Paz e Terra, 1997.
- 7. FREIRE, P. *Conscientização*: teoria e prática da libertação, uma introdução ao pensamento de Paulo Freire. São Paulo: Moraes, 1980.
- 8. FREIRE P.; SHOR, I. *Medo e ousadia*: o cotidiano do professor. Rio de Janeiro: Paz e Terra, 1987.
- 9. GARBELINI, M. L.; SOUZA, R. A. A. R. *Retrospectiva epide miológica dos serviços odontológicos da prefeitura municipal de Cambe em 16 anos de programa*. Disponível em: http://www.aonp.org.br/fso/bibli04.htm>. Acesso em: 15 dez. 2003.
- 10. MARCELO, V. C. *Adolescentes e profissionais de Saúde*: olhares sobre a saúde bucal. Tese (Doutorado) Faculdade de Saúde Pública, Universidade de São Paulo, São Paulo, 2001.
- 11. MINAYO, M. C. S. *Pesquisa Social*: Teoria, método e criatividade. 21. ed. Petrópolis: Editora Vozes, 2002.
- 12. MINAYO, M. C. S. *O desafio do conhecimento*: pesquisa qualitativa em saúde. Rio de Janeiro: Hucitec/ABRASCO, 1999.
- 13. MOYSÉS, S. T.; WATT, R. Promoção de saúde bucal: definições. In: BUISCH, Y.P. (Org.). *Promoção de saúde bucal na clí-nica odontológica*. São Paulo. Artes Médicas, 2000, p. 1-22.
- 14. PAULETO A. R. C.; PEREIRA M. L. T.; CYRINO E. G. *Bus cando caminhos para a educação em saúde bucal*: relato de uma experiência entre escolares, 2004.
- 15. PEROSA, G. B.; GABARRA, L. M. Explicações de crianças internadas sobre a causa das doenças: implicações para a comunicação profissional de saúde-paciente. *Interface: Comunic, Saúde, Educ*, v. 8, n. 14, p. 135-147, 2004.

- 16. PIAGET, J. *Seis estudos de Psicologia*. 5. ed. Rio de Janeiro: Editora Forense, 1971.
- 17. PINTO, V. G. *Educação em Saúde Bucal*, 4. ed. São Paulo: Santos, 2000.
- 18. PORTO, V. M. C. *Saúde bucal e condições de vida*: uma contribuição do estudo epidemiológico para a inserção de atenção à saúde bucal no SUS. Dissertação (Mestrado). Universidade Estadual Paulista Júlio de Mesquita Filho, Faculdade de Medicina de Botucatu, Botucatu, 2002.
- 19. SINGH, K. A.; MORAES, A. B. A.; AMBROSANO, G. M. B. Medo, ansiedade e controle relacionados ao tratamento odontológico. *Pesq. Odontol. Bras*, v. 14, n. 2, p. 131-136, 2000.
- 20. YATSUDA, R. A.; RAMOS, D. L. P. O papel do educador em saúde bucal na pré-escola. *O mundo da saúde.* v .22, n. 1, p. 15-22, 1998.