

# Use of participative methodology in oral health education for adolescents

*Utilização de metodologia participativa na educação em saúde bucal para adolescentes*

Tatiana Ribeiro de Campos MELLO<sup>1</sup>

Patrícia NOGUEIRA<sup>2</sup>

Cláudia CORÁ<sup>3</sup>

Ana Carolina JUNQUEIRA<sup>3</sup>

Daniel KORYTNICKI<sup>3</sup>

## ABSTRACT

---

### Objective

*This paper describes a model of participative methodology used in the oral health education for teenagers.*

### Methods

*16 teenagers aged between 10 and 14 years old participated. Focus groups were used to evaluate the topics of interest. The methodology evaluation was performed by the analysis of the material developed by the teenagers and an objective questionnaire, applied after the project completion.*

### Results

*By means of the focus group it was identified the following issues: problems due to bad breath in their relationships and the relationship between lack of access to employment and precarious oral health. Ten meetings were held to discuss these issues and evaluate their relationship with oral health basics. The participation of adolescents was encouraged via movies and music available on the Internet. At the end of the meetings the group produced some educational materials and a comic book, which was analyzed and considered as a category 3: very rich design in content, objective concepts and clear goals. The questionnaire revealed that the right answers concentrated on the subjects which they have developed educational materials, such as self-care. 88% of the teenagers evaluated the project as very important, and an influencing factor in their improvement of oral health care.*

### Conclusion

*The use of a participative methodology for oral health education can, in fact, positively impact on changing teenagers behaviors. Third sector institutions that perform a well-planned and committed work can contribute to the promotion of oral health in Brazil.*

*Indexing terms: Adolescent. Health education, dental. Oral health.*

## RESUMO

---

### Objetivo

Descrever um modelo de metodologia participativa utilizado na educação em saúde bucal de adolescentes.

### Métodos

Participaram 16 adolescentes com idades entre 10 e 14 anos. Para o conhecimento de temas de interesse foi utilizado o grupo focal. A avaliação da metodologia empregada foi realizada através da análise do material desenvolvido pelos adolescentes e de um questionário objetivo, aplicado após o término do projeto.

### Resultados

Através do grupo focal foi possível identificar os seguintes temas: problemas trazidos pelo mau-hálito em uma relação afetiva e a relação entre dificuldade de acesso ao emprego e precariedade da saúde bucal. Foram realizados 10 encontros para a discussão e relacionamento desses temas com conceitos básicos de saúde bucal. A participação dos adolescentes foi incentivada através de filmes disponíveis na Internet e músicas. Ao final dos encontros o grupo produziu alguns materiais educativos e um gibi, que foi analisado e considerado como categoria 3: desenho muito rico em conteúdo; conceitos objetivos e claros. O questionário demonstrou que as respostas certas se concentraram nos temas para os quais eles desenvolveram material didático, como o auto-cuidado. O projeto foi avaliado por 88% dos adolescentes como muito importante e como um fator que os influenciou na melhora do cuidado com a saúde bucal.

### Conclusão

A utilização de uma metodologia participativa de educação em saúde bucal pode, de fato, impactar positivamente na mudança de atitude dos adolescentes. Instituições do terceiro setor que realizem um trabalho comprometido e bem planejado podem contribuir para a promoção de saúde bucal no Brasil.

**Termos de indexação:** Adolescente. Educação em saúde bucal. Saúde bucal.

---

<sup>1</sup> Universidade de Mogi das Cruzes, Centro de Ciências Biomédicas. Av. Dr. Cândido Xavier de Almeida e Souza, 200, Centro cívico, 08790-000, Mogi das Cruzes, SP, Brasil. Correspondência para / Correspondence to: TRC MELLO. E-mail: <tatmello@usp.br>.

<sup>2</sup> Universidade Estadual Paulista Júlio de Mesquita Filho, Faculdade de Relações Internacionais. São Paulo, SP, Brasil.

<sup>3</sup> Universidade de São Paulo, Faculdade de São Paulo. São Paulo, SP, Brasil.

## INTRODUCTION

Historically, oral health programs carried in Brazil by the public sector were almost exclusively destined to school children. Adults and adolescents were neglected by a system which offered only emergency care assistance. Data from the epidemiologic survey on domestic oral health (SB Brasil)<sup>1</sup> show that out of the 16,126 adolescents aged between 15 and 19 evaluated, 5,948 (35.6%) reported pain in their teeth or gum in a period of six months before the survey. The prevailing of toothache was higher among those individuals presenting cavity or teeth lost<sup>2</sup>.

The paradox of the observation of a severe oral health scenario among teenagers lies on the fact that both cavity and gingival inflammation can be avoided by adopting simple measures of prevention and control. In this manner, actions aimed at educating the individual as for oral health have a significant influence on the inversion of this situation, especially collaborating with promoting health by means of increasing autonomy for self-care<sup>3</sup>.

However, the access to information, including oral health education, does not equally reach all sectors of society; areas with the lowest socioeconomic indicators present the lowest oral health indicators<sup>4</sup>.

Despite the number of works about oral health education described in literature, it is verified that several of them do not have appropriate planning. They are usually characterized as prompt actions, apart from the local reality, and do not make use of a methodology towards the building and acquisition of knowledge by the student. According to Pauleto et al.<sup>5</sup>, "although the studies themselves establish the education practice as an important and necessary component to reduce oral health-related problems, the concept of health education on Dentistry has lacked in discussion opportunities. There are few programs which show rupture strategies with more traditional and behavioral proposes, supported by communication and one-way practices which not enable the dialogue or the effective participation of the students, all necessary to build emancipative knowledge which fosters autonomy concerning oral health care.

In what concerns health education for teenagers, these pedagogical techniques is even more essential. It is paramount to plan them accurately in order to arouse the interest and change of attitude, especially<sup>6</sup>. This aspect is supported by the observation that the adolescence

comprehends a phase when the individual no longer wants to be treated as a child, neither have experience enough to have an adult behavior, and it is also punctuated by a complex bio-psycho-social growth process<sup>7</sup>.

Given the challenges of the above mentioned context, different organizations have strived for promoting educational activities in the so-called third sector, defined by literature with expressions such as "non-profit organizations", "volunteer organizations", "independent sector" "non-government organizations", "charity", "philanthropy", among other. According to Franco<sup>8</sup>, it is attributable to these organization five characteristics in common: (i) they are not part of the formal structure of the State; (ii) they are not profitable; (iii) they are constituted by groups of citizens of the civil society as individuals; (iv) there are compulsory membership, and (v) they produce assets and services of collective use (interest)<sup>8</sup>.

The Brazilian association for child dentistry (in Portuguese, AOC - Associação Odonto-Criança) is one of these organizations. Aided by volunteers and partnerships, AOC develops projects of oral health education for children and teenagers economically vulnerable in São Paulo. It is aimed at positively influencing on the life quality of both child and teenager, as well as their family core and the community they live. In order to do so, the organization tries to improve education methodologies to develop change of habits and knowledge acquisition<sup>9</sup>.

In this manner, the present study is intended for describing a model of participative methodology used by the AOC for oral health care of adolescents.

## METHODS

This study was carried out with 16 teenagers aged between 10 and 14, male and female, who also participated in Projeto Casulo, an institution aimed at improving the life quality of those who live at Real Parque, south area of São Paulo city, by means of focusing on young individuals as strategic agent of social transformations.

For purposes of acquisition of interest themes and educational activities planning used the technique of focal group. It was formed a single group composed by the 16 adolescents participating in the research, a coordinator, and a note taker to write the speeches down. By asking an open question, the coordinator approached the importance

of the oral health for the group. This was a 60-minute discussion phase, carried only in the first meeting of AOC volunteers and teenagers.

Education activities were performed throughout ten meetings planned in a way to stimulate discussion and the relationship among themes pointed in the focal group, with basic concept approaches on oral health. It was used the following resources: videos, songs, paper, pencil, pen, and overhead projector. By the end of each meeting, the teenagers were asked to produce their own material, and in the last meeting

By the end of each meeting, the teenagers were asked to produce their own material. In the last meeting a textbook was produced with no interference of the AOC team.

In order to evaluate the educational methodology, it was used the material autonomously developed by the adolescents and the analysis of the result of an objective survey applied one month after the completion of the project. This evaluation made use of the methodology described by Tomita et al.<sup>6</sup>, and keywords are used to graduate the level of understanding of the adolescent about the theme. They were group in four categories which received scores from 0 to 3 according to the following criteria: 0 - no content drawing; 1 - poor content drawing; 2 - some content drawing; 3 - very rich content drawing, clear and objective concepts.

The questionnaire was formulated in order to contemplate the three major themes discussed during the educational activities: oral health, cavity, and self-care. The analysis was carried out according to the percentage of question hits. It was also considered the object answer of the adolescents themselves to one question about the assessment of the educational activity.

The research was approved by the Ethical Research Commission of Mogi das Cruzes University, process n. 123/2010.

## RESULTS

The initial question of the focal group was "How important is oral health for you?", and there were answers such as "Very important, because if I had bad breath, nobody would kiss me" and "people with no teeth don't

get any jobs". In this manner, it was possible to identify themes which draw the attention of teenagers such as problems bad breath generates in a love relationship, and the ratio between problems to get a job and poor oral health, then linking them to basic concepts approach on plaque, cavity, gum and periodontal diseases, diet, oral hygiene, and flour.

Given the initial diagnosis, ten meetings were held by the AOC team and the teenagers of the Projeto Casulo. Every meeting, different resources were used in order to stimulate the interest of the teenagers such as clips available on-line and songs with the above theme, and AOC team never presented information in only one expositive format, such as a speech. Teenagers were constantly stimulated to take part on the discussion, and by the end of each meeting, they produced their own educational material, for example, coloring pages and games, all created under the orientation of AOC and containing the theme discussed in the correspondent meeting. Pictures of the meetings and the material produced were published in the web blog of the association.

In the last meeting, with no interference of the AOC team, they decided to collectively produce a comic book, using language and situations suitable for adolescents, in order to deal with the theme. Each individual illustrated and reported part of a story, and in the end of it, it was described a technique of teeth brushing and flossing accordingly to what they learned so far (Figure 1).

This comic book was analyzed by using the methodology described by Tomita et al.<sup>6</sup> and considered as very rich in drawings, content, concepts, and straight objectives.

The analysis of the questionnaire to evaluate knowledge, applied a month after the end of the project, it was demonstrated that some answers focused on themes towards which they developed educational material, especially in what concerns self-care. Some myths were still kept (that is the case of the necessity to stop brushing if the gum starts bleeding), however, for a lower percentage of adolescents (Table 1).

The project was evaluated by 88% of the teenagers as very important and as a factor which influenced them to better take care of their mouth health. The other 12% also classified the project as very important, but admitted that they did not change their habits to improve their oral hygiene.

**Table 1.** Distribution of the answers of the survey on the evaluation of the acquired knowledge São Paulo (SP), 2010.

Themes	Questions		n	%
Cavity	What is fluoride good for?	prevent cavity	14	87.5
		avoid tartar	2	12.5
		avoid mouththrishes	0	0.0
	Do children in constant use of antibiotics have weaker teeth?	Yes	12	75.0
		No	1	6.3
		No opinion	3	18.8
	Cavity is not always painful	Disagree	1	6.3
		Agree	14	87.5
		No opinion	1	6.3
	Self-care	Baby teeth do not require so much care as as adult teeth, since they change	Disagree	7
Agree			8	50.0
No opinion			1	6.3
When the gum bleed, on should decrease the times of brushing Since such practice hurts the gum even more		No	7	43.8
		Yes	3	18.8
		No opinion	6	37.5
Suck thumb or pacifiers is not harmful to teeth		No	3	18.8
		Yes	11	68.8
		No opinion	2	12.5
Does oral health affect self-esteem and frustrate your relationship?		No	0	0.0
		Yes	16	100.0
		No opinion	0	0.0
Most part of time, can bad breath be relieved with a good mouth hygiene?		No	0	0.0
		Yes	0	0.0
		No opinion	16	100.0
A good quality toothbrush must have large head and hard bristles		No	2	12.5
		Yes	10	62.5
		No opinion	4	25.0
Does what you eat interfere in your oral health?		No	0	0.0
		Yes	13	81.3
	No opinion	3	18.8	
Can plaque be eliminated only by using mouth antiseptics?	No	7	43.8	
	Yes	3	18.8	
	No opinion	6	37.5	
Oral health	Are Baby teeth important to protect the space for adult teeth?	No	2	12.5
		Yes	14	87.5
		No opinion	0	0.0
	Is oral health able to affect the individual's general health?	No	0	0.0
		Yes	16	100.0
		No opinion	0	0.0
	Is the lack of teeth able to affect speech sounds?	No	0	0
		Yes	16	100.0
		No opinion	0	0.0
	Evaluation	Are you consider the information about oral health you received during the course offered by dentists of the AOC	very important, and they made me improve my self oral care	14
very important, but I admitted I did not change my habits to improve oral hygiene			2	12.5
I learned nothing different from what I knew before			0	0.0
very poor			0	0.0
			0	0.0

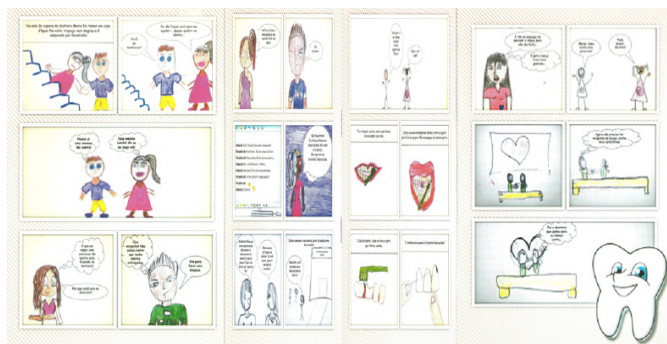


Figure 1. Comic book produced by adolescents who participated in the study. São Paulo (SP), 2010.

## DISCUSSION

The adolescents participating in the study attend an institution located in Real Parque, São Paulo area. The study is a convenience sample, thus the methodology used to assess oral health education may not be appropriate to other groups. According to data from the institution, there are 110 families in Real Parque. They occupy a non-urban area, and great part of them (63.24%) has a month family income from one to three minimum wages, and 16% are illiterate people. The option of working with adolescents is due to the possibility of turning them into multipliers of knowledge and into opinion formers into their community.

Focal groups enable the participants to expose their previous knowledge about the subject and present themes of interest. The activity is initiated by means of an open question, whose answers enabled some discussion<sup>10</sup>. The methodology applied by the AOC team was intended for planning activities of health education, and allowed the approximation of themes involving the reality these adolescents live.

The themes presented by the adolescents, that is, bad breath-related problems which affect a love relationship, and the comparison of difficulty to get a job and poor oral health, show the value they attributed to oral health in interpersonal relationships. This perception comes from their reality and from adolescent phase-issues, and once it is proved, the importance of avoiding bad breath and practicing hygiene to foster the socialization was academically described by several authors<sup>11-13</sup>. According to Wolf<sup>14</sup>, mouth, teeth, smile and bite are personal references and criteria of social acceptance. The look is highly valued in our social-cultural organization and can interfere in work relationships.

When analyzing tooth loss and the importance of the teeth in the life quality of adults in Belo Horizonte,

Vargas & Paixão<sup>15</sup> observed that the problems of the daily life related to tooth loss were functional, such as difficulty to eat, bite or speak, and social, such as change of behavior, no satisfaction with their look, lack of social acceptance, and difficulty to enter the professional market. This issue exposed by the participants also demonstrates the inefficiency of the system to promote oral health equally and integrally, once teeth extraction is usually the only alternative available for adults in most part of the cities<sup>15</sup>.

In this manner, it is observed that stimulating health habits by means of education enables not only a decrease in the whole curative requirement of the health system, but also improving the life quality of the population. Considering a city as large as São Paulo, where the government fails in offering proper service to the intense requirement repressed by basic procedures of oral health, it is also evident that is important for the social organizations to contribute to the development of health promotion actions.

Nevertheless, it is highlighted that independently from the players responsible for these actions, the educational programs for adolescents must be effective in their purposes and based on participative methodologies in order to draw attention and influence habit changes towards oral hygiene<sup>6</sup>.

In an attempt to compare different motivational strategies, Costa<sup>16</sup> divided the adolescents of the research into four groups. All of them received the same content of information by means of different strategies. The A Group received direct orientation about mouth hygiene, cavity evolution, and periodontal disease with demonstrative models and individual technical orientation. The B Group received data whose contents were given with the use of slides. As for the C Group, the orientation was given in association with a movie, while the D group received direct orientation in association with a theater play and songs. The author concluded that, although strategies constituted a rich motivational resource, the teenagers showed more interest during the presentation of the movie, followed by the play and the song, both in association with direct technique. In this same sense, thus proving the expected presupposes, resources such as appropriate language, multimedia tools, movies, and songs made the communication much easier and brought the attention of the teenagers. Posts of results and pictures of the meetings on the web blog also significantly motivated the participants to perform their activities.

Initially, the publication of pictures on the Internet was not considered a motivational strategy, but only a release of the results. In the course of the project, however, it was observed the importance the teenagers gave to these attitude. According to Mello and Wiggers<sup>17</sup>, the Internet fascinates them, especially when exchanging pictures and text messages, and can be used as a tool in education process. In this manner, it is suggested that studies are carried out in order to demonstrate the effects of using these resources in activities regarding oral health education.

In a literature review on oral health educational programs for students, Pauleto et al.<sup>5</sup> observed that different methodologies were used, thus complicating the comparison among them, however, it is evident that programs with unidirectional, authoritarian, non-dialogical educational practices have to be replaced for programs which stimulate some discussion and autonomy to change behaviors.

The evaluation of the pedagogical methodology applied in the present study was performed by analyzing the material autonomously produced, as well as the survey applied one month after the conclusion of the project. The development of standard assessment instruments would enable the comparison of different educational methodologies.

The material produced by the teenagers in the meetings fulfilled the objectives established, since it reflected both their commitment throughout the program and the effective understanding of the knowledge and content linked to the local reality. The autonomous production of the comic book allowed the teenagers to apply their previous life knowledge, to incorporate the new information absorbed and not only to understand the content, but also to put this knowledge into practice. Campos et al.<sup>18</sup> states that health educational problems must originate from the reality lived: "The isolated factor which influences the learning the most is what the learn already know". Knowledge exchange occurs in the teaching-learning process.

The comic book was printed and distributed by the own teenagers during an open community event. This action represented the empowerment of the content they worked with, which validated them as multipliers agents and helped them develop autonomy towards basic oral health. In the same manner, the rates of successful hits in

the survey applied one month after the conclusion of the project showed the effectiveness of educational actions developed on an ongoing basis.

Although the project was evaluated by 88% of the participants as very important and as a factor of influence to take better care of their oral health, the results have to be analyzed cautiously, since they could have been biased by the good relationship established between the AOC team and the teenagers.

Lastly, it is worth mentioning that the assessment of the actions towards educational health must not be restricted to the analysis of data and numbers obtained, but encompass a significant myriad of qualitative and non-measurable factors. From the object presented, it is noticed that AOC develops and makes use of different assessment instruments aiming at improving the understanding of the efficiency and effectiveness of the method, as well as contributing to enhance methods of health promotion to children and adolescents in different institutions.

## **CONCLUSION**

---

The results certify the hypothesis that the use of a participative oral health education methodology is indeed able to have a positive impact on the teenagers change of attitude. The description of the experience carried by AOC in the Projeto Casulo attempts to collaborate to the development of further participative pedagogical strategies. In addition, it demonstrates that, in this process, the participation of institutions which carry committed, well planned actions may significantly contribute to health promotions and decrease the inequality of oral health conditions.

## **Collaborators**

---

TRC MELLO, P NOGUEIRA, and D KORYTNICKI were involved in the conception and data gathering on every phase, besides writing this paper. C. CORÁ participated in the conception, data gathering, and writing. AC. JUNQUEIRA interpreted the results and also elaborated the writing.

## REFERENCES

1. Brasil. Ministério da Saúde. Departamento de Atenção Básica. Secretaria de Atenção à Saúde. Projeto SB Brasil 2003. Condições de saúde bucal da população brasileira, 2002-2003: resultados principais. Brasília: Ministério da Saúde; 2004 [citado 2011 Out 13]. Disponível em: < [http://dtr2001.saude.gov.br/editora/produtos/livros/pdf/05\\_0053\\_M.pdf](http://dtr2001.saude.gov.br/editora/produtos/livros/pdf/05_0053_M.pdf)>.
2. Borges CM, Cascaes AM, Fischer TK, Boing AF, Peres AM, Peres KG. Dor nos dentes e gengivas e fatores associados em adolescentes brasileiros: análise do inquérito nacional de saúde bucal SB-Brasil 2002-2003 *Cad Saúde Pública*. 2008;24(8):1825-34. doi: 10.1590/S0102-311X2008000800011.
3. Flores EMT, Drehmer TM. Conhecimentos, percepções, comportamentos e representações de saúde e doença bucal dos adolescentes de escolas públicas de dois bairros de Porto Alegre. *Ciênc Saúde Coletiva*. 2003;8(3):743-52. doi: 10.1590/S1413-81232003000300008.
4. Antunes JLF, Narvai PC, Nugent ZJ. Measuring inequalities in the distribution of dental caries. *Community Dent Oral Epidemiol* 2004;32(1):41-8. doi: 10.1111/j.1600-0528.2004.00125.x.
5. Pauleto ARC, Pereira MLT, Cyrino EG. Saúde bucal: uma revisão crítica sobre programações educativas para escolares. *Ciênc Saúde Coletiva*. 2004;9(1):121-30. doi: 10.1590/S1413-81232004000100012.
6. Tomita NE, Pernambuco RA, Lauris JRP, Lopes ES. Educação em saúde bucal para adolescentes: uso de métodos participativos. *Rev FOB*. 2001;9(1/2):63-9.
7. Phipps MG, Sowers M. Defining early adolescent childbearing. *Am J Public Health*. 2003;92(1):125-8.
8. Franco A. Terceiro setor: a nova sociedade civil e seu papel estratégico para o desenvolvimento. Brasília: AED; 2003.
9. Associação Odonto-Criança. Missão da Associação Odonto-Criança [texto na Internet]. São Paulo: Associação Odonto-Criança [citado 2010 Dez 10]. Disponível em: <<http://www.odontocrianca.org.br>>.
10. Stewart DW, Shamdasani PN. Focus groups: theory and practice applied social research methods series. Sage: Newbury; 1990.
11. Silva TA, Paixão HH, Pordeus IA. Fatores do comportamento relacionado à higiene bucal em adolescentes. *Arq Odontol*. 1997;33(1):5-14.
12. McGregor Y, Balding J, Regis D. Motivación para la higiene oral en adolescentes. *Bol Asoc Argent Odontol Niños* 1998;27(1):25.
13. Wolf RMS. O Significado psicológico da perda dos dentes em sujeitos adultos. *Rev Assoc Paul Cir Dent*. 1998;52(4):307-16.
14. Vargas AMD, Paixão HH. The loss of teeth and its meaning in the quality of life of adults who use the municipal oral health services of the Boa Vista Health Center in Belo Horizonte. *Ciênc Saúde Coletiva* 2005;10(4):1015-24. doi: 10.1590/S1413-81232005000400024.
15. Costa EL. Como motivar adolescentes em saúde bucal: avaliação de estratégias didático-pedagógicas aplicadas em escolas públicas de São Luis - MA [tese]. Natal: Universidade Federal do Rio Grande do Norte; 2000.
16. Mello HD, Wiggers ID. Representações e usos da internet: um estudo de recepção com adolescentes. *Rev Iberoamericana Educac*. 2008;45(2):1-14.
17. Campos JADB, Zuanon ACC, Guimarães MS. Educação em saúde na adolescência. *Ciênc Odontol Bras*. 2003;6(4):48-53.

Received on: 15/3/2011

Final version resubmitted on: 18/10/2011

Approved on: 9/3/2012