Health Communication in Basic Education - the pedagogical playfulness of educational practices for school children

Comunicação em Saúde na Educação Básica- a ludicidade pedagógica das práticas educativas com escolares de 3 a 6 anos de idade

DOI:10.34117/bjdv6n4-029

Recebimento dos originais: 01/03/2020
Aceitação para publicação: 01/04/2020

Suzely Adas Saliba Moimaz
Professora Titular no Departamento de Odontologia Infantil e Social.
Universidade Estadual Paulista (UNESP), Faculdade de Odontologia, Araçatuba.
Rua José Bonifácio, 1193- Vila Mendonça, Araçatuba – SP, Brasil.
suzely.moimaz@unesp.br

Julia Arruda Batista
Mestranda no Programa de Pós-graduação em Odontologia Infantil e Social.
Universidade Estadual Paulista (UNESP), Faculdade de Odontologia, Araçatuba.
Rua José Bonifácio, 1193- Vila Mendonça, Araçatuba – SP, Brasil.
jarrudabaptista@gmail.com

Nemre Adas Saliba
Professora Titular no Departamento de Odontologia Infantil e Social.
Universidade Estadual Paulista (UNESP), Faculdade de Odontologia, Araçatuba.
Rua José Bonifácio, 1193- Vila Mendonça, Araçatuba – SP, Brasil.
nemre.saliba@unesp.br

Tânia Adas Saliba
Professora Associada no Departamento de Odontologia Infantil e Social.
Universidade Estadual Paulista (UNESP), Faculdade de Odontologia, Araçatuba.
Rua José Bonifácio, 1193- Vila Mendonça, Araçatuba – SP, Brasil.
tania.saliba@unesp.br

Cléa Adas Saliba Garbin
Professora Titular no Departamento de Odontologia Infantil e Social.
Universidade Estadual Paulista (UNESP), Faculdade de Odontologia, Araçatuba.
Rua José Bonifácio, 1193- Vila Mendonça, Araçatuba – SP, Brasil.
clea.saliba-garbin@unesp.br

ABSTRACT
The objective of this study was to verify health communication methodologies aimed at children aged 3-6 years and to describe the practical experience of a health education program developed by a higher education institution for primary school children. A literature review was carried out on the communication methodologies used in the above mentioned health education programs. For the experience report, a documentary analysis was carried out on annual reports of the "Program for the Promotion of Oral Health in Basic Education Schools," that aim at providing undergraduate and graduate students with experience on methodologies through learning in real-life scenarios about educational practices in health. As well as promoting the oral health of children through playful and pedagogical activities. BBO, Lilacs, Cochrane, Scielo, and PubMed accessed articles that presented...
reports of health education programs with school children. Such routinely employed methodologies in health education programs are fundamental for the development of preventive-educational activities and contribute to the teaching-learning process in the school locus.

**Keywords:** Health Education. Health Communication. Pre-School. Dental Education.

**RESUMO**

Na primeira infância, as atividades de promoção de saúde visam o desenvolvimento das habilidades psicomotoras, afetivas e cognitivas das crianças, e oportuniza a introdução de novos conceitos no que concerne ao desenvolvimento de hábitos saudáveis. O objetivo do presente estudo foi verificar as metodologias de comunicação em saúde com crianças de 3 a 6 anos de idade e descrever a experiência/atividades práticas desempenhadas em um programa de educação em saúde de uma instituição de ensino superior. Trata-se de uma revisão de literatura, referente as metodologias avaliativas empregadas em programas de educação em saúde com a finalidade de analisar as formas de comunicação em saúde com crianças de 3 a 6 anos de idade inseridas nos lócus escolares e análise documental de relatórios anuais do “Programa Promoção de Saúde Bucal nas escolas de Educação Básica”.

O projeto tem como objetivos: desenvolver métodos educativos e preventivos em saúde bucal, conhecer as condições de saúde bucal das crianças, estreitar a relação entre a universidade, comunidade e gestores públicos, proporcionar aos alunos da graduação e pós-graduação aprendizado em cenários reais sobre a prática de atividades educativas em saúde. A comunicação nos programas educativos ocorre por meio de orientação direta e demonstrações, com uso de recursos audiovisuais e atividades lúdico-pedagógica com auxílio de fantasias, teatros de fantoches e brinquedos. Considerando que a comunicação em saúde é um campo de estudo recente, ainda em desbravamento por pesquisadores e estudiosos, conclui-se que alguma das metodologias rotineiramente empregadas nos programas de educação em saúde são fundamentais para o desenvolvimento das atividades preventivo-educativas e contribuem para o processo ensino-aprendizagem no lócus escolar, assim como, as ações desempenhadas no projeto “Promoção de Saúde Bucal nas escolas de Educação Básica” que beneficia as crianças com atividades educativas e assistências em saúde.

**Palavras-Chave:** Educação em Saúde. Comunicação em Saúde. Pré-Escolares. Educação Dental.
the school locus supports the empowerment of individuals because it awakens a critical awareness and makes them responsible for maintaining their own health.\textsuperscript{7,1}

Given the importance of educational practices in schools, the World Health Organization (WHO) suggests the implementation of policies that ensure both individual and collective well-being through the integration of health professionals, education, parents, community, and school members.\textsuperscript{8,9}

In Brazil, according to the National Curricular Guidelines (NCG) for higher education health courses proposed by the Ministry of Education in Resolution No. 5 dated December 17, 2009, the pedagogical practices performed with preschoolers are fundamental for children's immersion in various sensory experiences, stimulating participation in individual and collective health activities.\textsuperscript{9}

The adoption of effective health communication strategies is paramount in the children's scenario because besides stimulating social interaction, it plays a facilitating role in the educational process.\textsuperscript{9} Health communication can be defined as the use of strategies to inform and influence individual and collective decisions, in the realm of health promotion, where it exhibits a more relevant character.\textsuperscript{10,11} The teaching-learning process should preferably be initiated in early childhood since the acquired attitudes and values will then be present during other phases of life.\textsuperscript{12} School children are therefore, considered the most favorable target audience since health education programs encourage the construction of skills and their development in the cognitive, affective, and motor spheres.\textsuperscript{3,1}

While literature has reports on educational activities aimed at children, there are few studies that evaluate the diversity of techniques employed in health education programs. Hence the objective of this study was to verify the methodologies of health communication in children aged 3 to 6 years and describe a higher education institution’s experience of a health education program.

2 METHODS

This was a documentary research with a literature review on the evaluation methodologies used in health education programs for the purpose of analyzing the forms of communication with children aged 3 to 6 years placed in the school locus.

In the literature review, the health area databases were consulted using the following descriptors: health education, health communication, child development, and pre-school. Publications presenting health education program reports were also included in the study.

An analysis of annual reports, extension rectory databases (PROEX), and published scientific articles on preventive-educational actions was carried out using the "Promotion of Oral Health in Basic Education Schools" program developed 20 years ago by the executing higher education
institution, Araçatuba-SP School of Dentistry, with the participation of teachers, undergraduate and graduate students.

The data obtained through literature reviews and documentary analysis were verified based on discussions on strategies, resources, and methodologies that enable health communication with school children aged 3 to 6 years in educational programs and in the extension program performed by the higher education institution.

3 RESULT - EXPERIENCE REPORT

The Program "Promotion of Oral Health in Municipal Elementary Schools"

Started in the 1970s, the program arose from an experience with educational-preventive activities in the third week of October, called “Good Teeth Week,” in commemoration of October 25, the "Day of the Dental Surgeon" in Brazil. Years later, due to the dissemination of satisfactory results, the educational activities gave rise to the "Municipal Program of Education in Oral Health," carried out for 6 to 10 year olds in all schools in the city of Araçatuba-SP, Brazil. Subsequently, the program expanded to other municipalities in the region, giving rise to the "Regional Oral Health Program." In 1998, a university extension program, aimed at children from 0 to 6 years of age, was implemented based on the experience accumulated in the Educational Programs carried out until then, with the active participation of the previous year's students, teachers, and postgraduates in the area of Social Dentistry. The program was carried out on a permanent basis in public schools with the objective of obtaining knowledge of children's oral health conditions; developing educational and preventive methods in oral health; strengthening the relationship between the community, university, and public administrators; and providing undergraduates and postgraduates with learning based on real-world health education practice scenarios.

The activities that are performed annually, begin with the training of the social actors involved and take place through discussion wheels and workshops in order to improve the development of skills, creativity, as well as directed studies and expository classes. Basic Education Schools are selected based on criteria of interest and social risk, defined in agreement with municipal leaders.

The teams then carry out an exploratory analysis of the infrastructure and human resources in the school locus, to recognize and identify the local reality. To check the oral health conditions of the children, the initial epidemiological survey is carried out by the entire team. Immediately after the situational diagnosis, the annual plan of activities and schedules were prepared through discussion wheels with the active participation of the entire team involved in the program, taking into account the variables analyzed and the school children’s epidemiological profile.
The activities that the graduates developed for the children took place in classrooms and in the school yard, and involved practices related to health and environment like supervised teeth brushing and educational-preventive activities addressing issues related to oral and body hygiene. Thus, communication occurred through direct guidance with the use of audiovisual resources and playful-pedagogical activities, making school children’s learning a reality. In addition to the routine weekly activities, dental care was provided on the school premises using a mobile unit, based on individuals’ risk factors to the main oral diseases and the philosophy of minimally invasive dentistry.1,13,16,17,18,19,29,32

As a monitoring and evaluation instrument, the field journal was used to record the positive and negative aspects of the actions performed. At the end of each year, the team presented its report on the activities performed, elaborating on the playful activities, the students’ epidemiological data, and evaluating the impact of the extension project on learning. The postgraduates’ reports were evaluated by teachers, principals, and coordinators of basic education schools to assess their perception resulting from their own as well as others’ experiences during the program.

4 DISCUSSION

The integration between the university and the community contributes to the generation and diffusion of new knowledge; and creates generalist, committed professionals capable of transforming social reality. Therefore, the adoption of methodological resources that stimulate health care in early childhood is considered essential due to the greater sensitivity of children placed in these environments, opportunizing the teaching-learning process.14,10

According to the NCG, educational programs aim at qualifying health professionals to acquire a broader vision of the local reality and in developing critical skills for a better understanding of the socioeconomic conditions in the health/disease process. Hence, active learning methodologies are beneficial not only for school children, but also for the social actors involved, making them health promoters.18,19,20,13

Preschoolers’ oral health condition is closely related to knowledge of their parents and caregivers, since health and diet related habits are formed in early childhood. According to studies, preventive-educational activities are considered as assistance measures in the promotion, protection, and recovery of oral health.19 For this reason, activities performed in health education programs with children aged 3 to 6 years, aim at reducing the incidence of dental caries, periodontal disease, and result in the decline of other childhood oral diseases, in addition to enabling the dissemination of knowledge.21,22,23
With the purpose of modifying risk behaviors and creating a healthy lifestyle, communication on health is an inseparable tool in educational practices.\textsuperscript{21,22} In the study by Coriolano et al. one of the preponderant factors that make the transmission of information impossible, was associated with language inconsistencies, receiver limitations (visual acuity, hearing, pain), and socio-cultural factors. Thus, the planning, execution, and adoption of appropriate languages for the target audience (receiver/interlocutor) should be adopted for making the message delivery more comprehensive.\textsuperscript{25}

The effectiveness of health education programs is closely related to the context of information, the recipients’ forms of perception, and the use of family references for the interposition of social barriers. Furthermore, the health professional (sender) has a fundamental role in choosing and disseminating information to enable the development of attitudes and skills.\textsuperscript{23,24} Children in the preschool phase, when stimulated and motivated, present a complex, continuous, progressive, and dynamic transformation. These changes have effects on the physical-motor, cognitive, and affective aspects of school children because they go through each stage sequentially.\textsuperscript{28} According to studies, child development focuses on dimensions that involve current experiences (environment, parents’ behavior, school, and society) and specific individual characteristics, while motor skills are acquired throughout life.\textsuperscript{17,21,14,27}

One of the main approaches in terms of program methodology comprise the preventive-educational activities developed with the help of playful-pedagogical instruments.\textsuperscript{15} Tools like macro models, serial albums, booklets, and audiovisual resources (dramatizations and educational videos) are often used in health education practices to deal with the main disorders specific to this age group as well as general and oral hygiene habits, for facilitating health communication with children aged 3 to 6 years.\textsuperscript{16}

The association between the environment and actual experiences exacerbates motor development, making the teaching-learning process possible.\textsuperscript{13,14} In early childhood, children exhibit a tendency to react more quickly and positively to the exposure of new information and have the desire to demonstrate to their parents and teachers learning related to their most recurrent oral conditions: curiosity about the etiology of dental caries, loss of deciduous teeth, deleterious oral habits, willingness to practice oral hygiene acts repeatedly, etc.\textsuperscript{9}

Since factors like the cognitive and communicative aspect are stimulated by the inter-relationship between the environment or actual experiences, this domain is influenced by the quality of the information received by the child.\textsuperscript{13,34} The cognitive, motor, and affective aspects of children in different age groups and the characteristics of the school locus should also be considered when choosing the methodology for the effective use of resources in the activities carried out by these programs.\textsuperscript{26,10} At 3 years of age, the physical-motor dimension increases and school children become...
more active, develop the capability of being attentive, take greater interest in themselves, and the cognitive dimension is covered by the increase of vocabulary and longer sentences.\textsuperscript{3} Thus, the strategies should contemplate abilities related to speech, language, and activities that facilitate motor refinement.\textsuperscript{3,15}

The improvement of fine control, the increase of curiosity, and the imaginative phase begins at the age of 4 to 5 years and fosters the increase of sociability.\textsuperscript{3} At 6 years, the development of logical reasoning, expressive increase in memory, and visual and auditory acuity occurs, in addition to an improvement in continuous motor capacity, that promote activities which explore the problem with positive reinforcement, increasing the ability of school children to understand their own health.\textsuperscript{3,15,30,31,28} In the study conducted by Fadel et al., it was emphasized that educational practices based on playfulness attract the attention of children, especially in early childhood because they arouse greater curiosity, assisted by motivation towards their own health. In addition, studies highlight the tenuous relationship between what the child is capable of learning and accomplishing, showing that playfulness fosters the retrieval of the topic addressed and transports it to daily living.\textsuperscript{27}

Considering that the process of health education is constantly constituted to modulate and create new habits, the adoption of new methodologies for health promotion are pertinent for individual empowerment and fundamental for the development of preventive-educational ac

5 CONCLUSION

It was concluded that the "Promotion of Oral Health in Basic Education Schools" program with the help of routinely employed methodologies (audiovisual resources, macro-models, role-plays) has achieved satisfactory results benefitting school children, improved technical-scientific training of undergraduates and postgraduates, as well as generated new knowledge through the development of preventive-educational activities in the school locus.

ACKNOWLEDGES

This study was financed in part by the Coordenação de Aperfeiçoamento de Pessoal de Nível Superior -Brasil (CAPES) - Finance Code 001*.

REFERENCES

Garbin CAS, Soares GB, Martin IM, Garbin AJI, Arcieri RM. Saúde bucal na escola: avaliação do conhecimento dos pais e da condição de saúde bucal das crianças. Revista da Faculdade de Odontologia-UPF 2016; 21(1).
Antunes LDS, Soraggi MBS, Antunes LA, Corvino MPF. Conhecimentos, práticas e atitudes de responsáveis frente à saúde bucal do pré-escolar. Odontol. clín.-cient. 2008; 7(3).

Carvalho JA, Torres MTP, de Souza LSA, de Araújo-Pedrote RDS, Alves F A. Educação em saúde bucal: uma abordagem reflexiva em prol da qualidade de vida. Revista Práxis 2017; 2(3).

Ministério da Saúde, Secretaria de Atenção à Saúde, Departamento de Atenção Básica (2008). Saúde bucal (Série A. Normas e Manuais Técnicos) (Cadernos de Atenção Básica; 17). Brasília, DF: Autor. Acedido novembro 22, 2018, em http://bvsms.saude.gov.br/bvs/publicacoes/saude_bucal.pdf

Lawal FB, Taiwo JO. Making a Case for Formal School-Based Oral Health Promotion: Oral Health Knowledge, Attitude and Practices of Pupils in Ibadan, Nigeria. Int Q Community Health Educ 2018; 38(2):99-105.

Thwin KM, Zaitsu T, Ueno M, Kawaguchi Y. Effects of oral health education in Myanmar preschool children and guardians. J Investig Clin Dent 2018; 9(3)

Aquilante AG, Almeida BSD, Martins de Castro RF, Xavier CRG, Sales Peres SHC, Bastos JRDM. A importância da educação em saúde bucal para pré-escolares. Rev Odontol UNESP 2003; 32(1), 39-45.

Gonçalves FD, Catrib AMF, Vieira NFC, Vieira LJEDS. A promoção da saúde na educação infantil. Interface-Comunicação, Saúde, Educação 2008; 12:181-192.

BRASIL. Ministério da Educação e do Desporto. Secretaria da Educação Fundamental. Referenciais Curriculares Nacionais para a Educação Infantil. Brasília, 1997a.

Fadel CB, Ferreira MD, de Souza Martins A, Secco A. Cartilha de passatempos como veículo de educação em saúde bucal. Revista Conexão UEPG 2017; 13(1):196-203.

Teixeira RR. Modelos comunicacionais e práticas de saúde. Interface-comunicação, saúde, educação 1998; 1:7-40.
Montoro T. Retratos da comunicação em saúde: desafios e perspectivas. Interface-Comunicação, Saúde, Educação 2008; 12: 445-448.

Saliba NA, Pereira AA, Moimaz SAS, Garbin CAS, Arcieri RM. Programa de educação em saúde bucal: A experiência da Faculdade de Odontologia de Araçatuba-UNESP 2003; 2(3):197-200.

Saccani R., Brizola E, Giordani AP, Bach S, Resende TDL, Almeida CS. Avaliação do desenvolvimento neuropsicomotor em crianças de um bairro da periferia de Porto Alegre Scientia Medica 2007; 17(3); 130-137.

Dallabona SR, Mendes SMS. O lúdico na educação infantil: jogar, brincar, uma forma de educar. Revista de divulgação técnico-científica do ICPG 2004; 1(4):107-112.

Araújo PC, Vettore MV, Garbin CAS, Garbin AIJ, Reatto D, Arcieri RM. Promoção de Saúde Bucal: 17 anos de experiência da FOA/UNESP. Revista Eletrônica Acervo Saúde 2017; 9(2):1045-1051.

Moimaz SAS, Gomes AMP, Bordin D, Garbin CAS, Saliba NA. Extensão universitária como ferramenta geradora de ensino-aprendizagem e produtora de pesquisa. Revista Conexão UEPG 2015;11(2): 140-149

Moimaz SAS, Saliba NA, Garbin CAS, Zina LG. Atividades extramuros na ótica de egressos do curso de graduação em odontologia. Rev ABENO 2008; 8(1):23-9.

Garbin C, Garbin A, Dos Santos K, Lima D. Oral health education in schools: promoting health agents. Int J Dent Hyg 2009; 7(3):212-6.

Locker D, Frosina C, Murray H, Wiebe D, Wiebe P. Identifying children with dental care needs: evaluation of a targeted schoolbased dental screening program. J Public Health Dent 2004; 64: 63–70.

Paula JS, Leite IC, Almeida AB, Ambrosano GM, Pereira AC, Mialhe FL. The influence of oral health conditions, socioeconomic status and home environment factors on school-children’s self-perception of quality of life. Health Qual Life Outcomes 2012; 10:6.
Martins MT, Sardenberg F, Abreu MH, Vale MP, Paiva SM, Pordeus IA. Factors associated with dental caries in Brazilian children: a multilevel approach. Community Dent Oral Epidemiol 2013; 42(4):289-99.

Coriolano MWL, Queiroga BAM, Ruiz LM, Lima LS. Communication in health practices: integrative literature review. Saúde Soc 2014;23(4):356-1369.

Bonacciato K, Pordeus IA, Moura-Leite FR, Ramos-Jorge ML, Vale MP, Paiva SM. Oral disease and social class in a random sample of five-year-old preschool children in a Brazilian city. Oral Health Prev Dent 2010; 8:125-32

Moreira MDF, Lima da Nóbrega MM, Tabosa da Silva MI. Comunicação escrita: contribuição para a elaboração de material educativo em saúde. Revista Brasileira de Enfermagem. 2003;56(2):184-188.

Feijão A, Gimeniz MT. Ações de educação em saúde na atenção primária: revelando métodos, técnicas e bases teóricas. Revista da Rede de Enfermagem do Nordeste 2007;8(2):41-49.

Coscrato G, PINA JC, Mello DF. Utilização de atividades lúdicas na educação em saúde: uma revisão integrativa da literatura. Acta Paulista de Enfermagem 2010; 23(2): 257-263.

Brasil. Ministério da Saúde. Secretaria de Políticas de Saúde- Departamento de Atenção Básica.Saúde da criança: acompanhamento do crescimento e desenvolvimento infantil. [Cadernos de Atenção Básica nº11]. Brasília, 2002.

Moimaz SAS, Gomes AMP, Bordin D, Garbin CAS, Saliba NA. Extensão universitária como ferramenta geradora de ensino-aprendizagem e produtora de pesquisa. Revista Conexão UEPG 2015;11(2):140-149.

Murta AMG, do Carmo Lessa A, Santos AS, Murta NMG, Cambraia RP. Cognição, motricidade, autocuidados, linguagem e socialização no desenvolvimento de crianças em creche. Journal of Human Growth and Development 2011; 21(2): 220-229.
Schwantes de Souza R, Baumgarten A, Ceriotti RFT. Dental health education: a literature review. Revista Odonto Ciencia 2014; 29(1).

Santos KT, Pacheco AC, Garbin CAS. Educação em saúde bucal na visão de acadêmicos de Odontologia. Arquivos em Odontologia 2012; 48(2): 96-101.

COSTA DVS. Extensão universitária na promoção da saúde infantil: analisando estratégias educativas. Revista Ciência em Extensão 2015;11(1):25-31.

Khalifah AM., Celenza A. Teaching and Assessment of Dentist-Patient Communication Skills: A Systematic Review to Identify Best-Evidence Methods. Journal of dental education 2019; 83(1): 16-31.

Table 1. Methodologies for the development of health practices

| Author                          | Year | Country          | Target Audience                          | Resources Employees                                                                 |
|---------------------------------|------|-----------------|------------------------------------------|--------------------------------------------------------------------------------------|
| Knevel, Neupane, Shressta et al.| 2008 | Nepal           | Schoolchildren aged 5 to 12 Preschoolers aged 3 to 6 years | Oral hygiene instructions, demonstration of brushing techniques using macro models performed by dentists |
| Livny, Vered, Slouk et al.      | 2008 | Israel          | Oral hygiene techniques performed by dentists                                          |
| Antonio, Kelly, Valle et al.    | 2007 | Brasil          | Oral hygiene guidelines with the use of audiovisual resources performed by dentists    |
| Katsman                         | 2007 | República Dominicana | Oral hygiene techniques with the use of macro models and a serial album by dentists |
| Chapman, Copestartke, Duncan    | 2006 | Reino           | Oral hygiene techniques with the use of macro models and a serial album by dentists     |
| Kasila, Poskiparta, Kettunen     | 2006 | Finalândia      | Motivational techniques of oral hygiene in groups performed by dentists                 |
| Silveira Filho, Medeiros, Justo | 2005 | Brasil          | Playful-pedagogical activities, discussion groups and problematization of the theme carried out by dentists |
| Petersen, Peng Tai, Vanobberg,  | 2004 | China           | Use of audiovisual resources, theaters, dynamics and brushing technique with macro models performed by dentists |
| Declerk, Mwalili                 | 2004 | Bélgica         | Oral hygiene techniques using audio resources and brushing demonstration with macro models performed by dentists |
| Authors          | Year | Country | Age Group            | Methodology                                                                 |
|------------------|------|---------|----------------------|----------------------------------------------------------------------------|
| Rong, Bian, Wang | 2003 | China   | Preschoolers aged 3 to 6 years | Use of audiovisual resources, theaters, dynamics and brushing technique with macro models performed by dentists |
| Aquilante, Almeida, Martins | 2003 | Brasil  | Preschoolers aged 3 to 6 years | Brushing techniques using macro models, playful-pedagogical activities performed by dentists |
| Saliba, Pereira, Moimaz | 2003 | Brasil  | Preschoolers aged 3 to 6 years | Situational assessment of the school and target audience, hygiene instruction with the use of audiovisual resources, theaters, dynamics performed by undergraduate students / dentist |
| Toassi, Petry Frencken, Borsun, Makoni | 2001 | Zimbabwe | Schoolchildren aged 5 to 12 years | Activities using audiovisual resources, theaters and serial albums followed by brushing guidance with macro models carried out by a dentist |
| Tai, Du, Peng et al. | 2001 | China   | Schoolchildren aged 5 to 12 years | Motivational oral hygiene techniques using leaflets, posters and reading educational material by a dentist |
| Tomita, Pernambuco, Lauris, Makuch, Rescheke | 2001 | Brasil  | Schoolchildren aged 5 to 12 years | Brushing techniques using macro models, playful-pedagogical activities performed by dentists |
| Hawkins, Zanetti, Main | 2000 | Canáda | Schoolchildren aged 5 to 12 years | Oral hygiene techniques with the use of puppets and dynamics performed by dentists |
|                 |      |         | Preschoolers aged 3 to 6 years | Individual hygiene guidance, discussion groups and dynamics on oral hygiene performed by dentists |