

Efficacy of Audiovisual Aid in Assessing Parental Attitude toward their Child's Oral Health

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ABSTRACT

Objective: To evaluate the effectiveness of audiovisual (AV) aid in assessing the parental attitude for their child's oral health.

Materials and methods: A study (cross-sectional) was conducted in 50 parents of the children between age group of 0 and 14 years. A PowerPoint presentation was given to parents in two batches, and its effectiveness was assessed by comparing results of questionnaire before and after presentation. Data were collected through a questionnaire.

Statistical analysis: All data were compiled using MS Office Excel Sheet, and analysis was performed using the Statistical Package for Social Sciences software for descriptive analysis, and the level of statistical significance used in this study was chosen at p value < 0.005 .

Results: The results proved that selected sample had lack of knowledge regarding primary teeth and its importance, oral health care of the child from birth, ideal time of first dental visit, and preventive treatments before awareness program. But there was significant difference in attitude of parents regarding their child's oral health care after presentation.

Conclusion: Within the limitation of the study, the high prevalence dental caries in children showed that change of parental behavior and attitude is much more important rather than focusing on increasing knowledge only. Hence, AV aids can be effective tools for increasing awareness.

Keywords: Audiovisual aid, Child oral health care, Parental attitude.

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INTRODUCTION

As stated by the World Health Organization in their oral health report of 2003,¹ dental caries is a widespread disease affecting all population irrespective of gender, age, or socioeconomic status. Prevalence of dental caries in 5- and 12-year-old schoolchildren in India reported in 1940 were 55.5% which jumped to 68% in year 1960 and 89% in next years.²⁻⁴

In developing country like India, situation is more disturbing due to lack of oral health awareness among the parents who are first teachers of the child. Audiovisual (AV) aids may be effective tools for developing interaction between parent and dentist. These aids not only help to save time but also help in developing and arousing curiosity, creativity, and motivation.⁵

Thus present study was conducted for assessing the effectiveness of AV aids regarding a child's oral health among parents.

MATERIALS AND METHODS

This survey was conducted on parents of patients between age-group of 0 and 14 years. Fifty patients who were included in the study were selected using random sampling technique.

The questionnaire of 16 questions was formulated to evaluate parental knowledge, attitude and practical behavior for the oral health of their children. A pilot study was designed in the pediatric and preventive dentistry department on parents of child patients who attended clinics to test the validity and operational feasibility of the study. The questionnaire items were analyzed for difficulty in understanding, interpreting, and answering correctly. A few modifications were done, and the questionnaire was given to the same set of parents 2 weeks after the initial administration of the questionnaire, and internal consistency was found to be good, and the proforma was finalized.

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The questionnaire was given to 70 parents of children between the age group of 0 and 14 years who were willing to participate in the survey. Participants were asked to respond to each item of the questionnaire in the format provided. One of the investigators was always available during the completion of the questionnaire, and the participants were encouraged to approach the investigator for clarification if any. Questionnaire with incomplete responses were excluded, and final 50 survey sheets with complete responses were included.

Same questionnaire was given to parents after delivery of information through PowerPoint presentation, and responses were compared with previous questionnaire of each parent to assess effectiveness of awareness program.

All data were compiled using MS Office Excel Sheet, and analysis was performed using the Statistical Package for Social Sciences software for descriptive analysis, and the level of statistical significance used in this study was chosen at p value < 0.005 .

RESULTS

In this study, 52% were male, 48% were females; 40% were non-working females, 2% working females, 58% working males; 44% were below 12th standard, 26% were graduates, 30% were postgraduates; and 18% were with income <50,000 per annum, 14% were 50,000 to 100,000 p/a, 22% were 100,000 to 300,000 p/a, and 46% were with >300,000 p/a.

Regarding the awareness about pediatric dentistry, only 6% were aware about branch of pediatric dentistry that transformed to 50% after presentation as depicted in Figure 1.

Regarding first visit to pediatric dentist, only 2% believe that the child should visit dentist immediately after eruption of first primary teeth, but results after presentation transformed to 98% as depicted in Figure 2.

Regarding care of oral cavity before eruption of primary teeth, only 10% believe that they should clean gums of child after every

feed which transformed to 84% after PowerPoint presentation as depicted in Figure 3.

Regarding natal teeth, 32% parents believe that they should visit dentist as soon as possible which changed to 100% after presentation as depicted in Figure 4.

Regarding oral care after eruption of milk teeth, only 2% marked the correct answer © which changed to 100% after presentation as depicted in Figure 5.

Regarding cavities in primary teeth, only 20% of the parents believe that primary teeth are important and need to be treated which transformed to 100% after presentation as depicted in Figure 6.

Regarding mobile primary teeth during accident, only 8% parents believe that they need to go to dentist as primary teeth are equally important which changed to 98% after presentation as depicted in Figure 7.

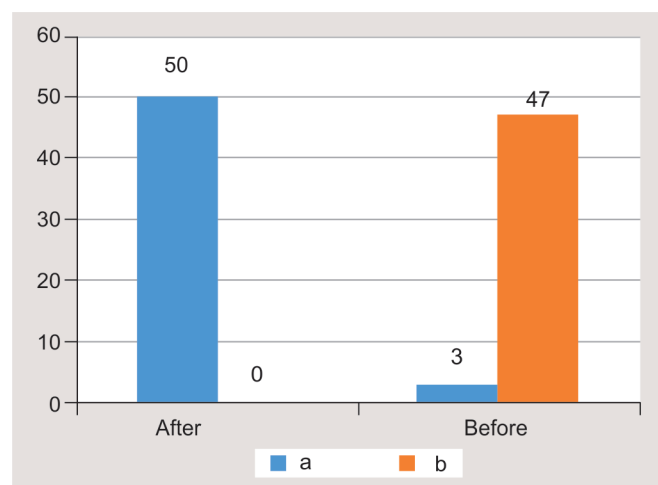


Fig. 1: Comparison of frequencies of responses before vs after regarding the awareness about pediatric dentistry. Have you ever heard of Pediatric Dentistry? (a) Yes (b) No

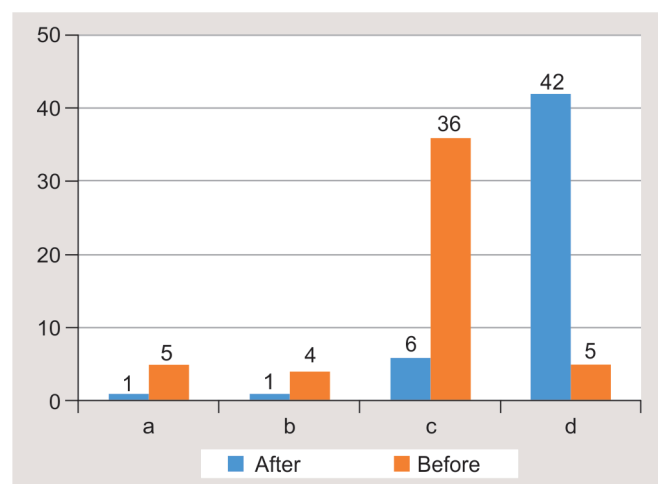


Fig. 3: Comparison of frequencies of responses before vs after regarding care of oral cavity before eruption of primary teeth. How will you take care of your baby's oral cavity before eruption of tooth? (a) No special care is required until the eruption of milk teeth (b) Clean the gums of child with soft toothbrush once a day (c) Wipe the gums of child with clean cloth once a day (d) Wipe the gums of child with clean cloth after each feed

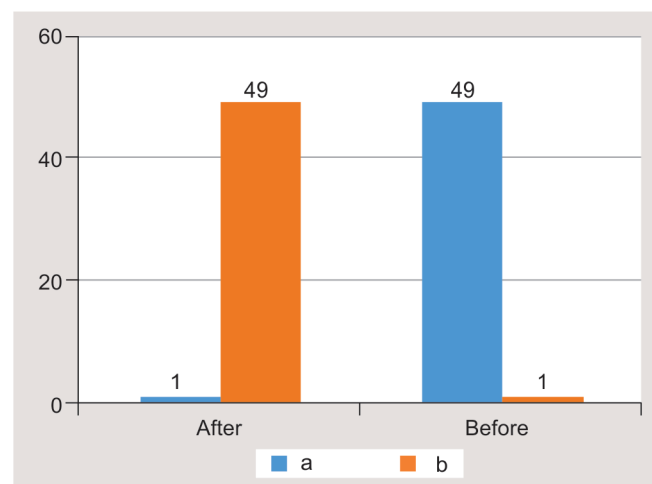


Fig. 2: Comparison of frequencies of responses before vs after When will you take your child to the pediatric dentist? (a) Only if you suspect cavity; (b) As soon as the milk tooth comes out

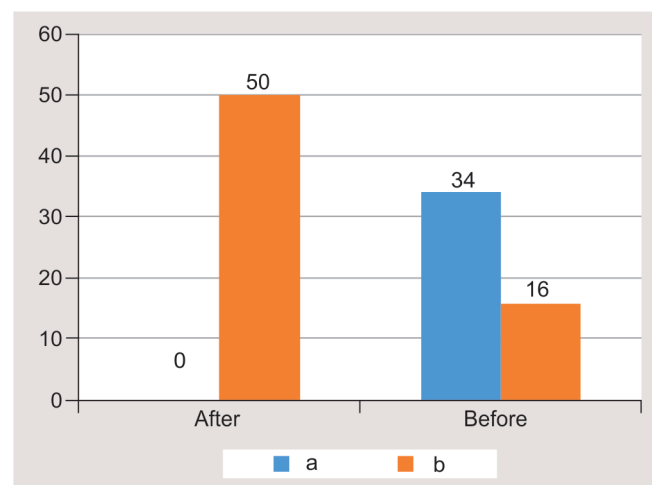


Fig. 4: Comparison of frequencies of responses before vs after regarding natal teeth. The newborn has teeth in his mouth since birth and he hurts the mother while feeding, is this normal because after some time the mother and the newborn will get used to it? (a) True (b) False

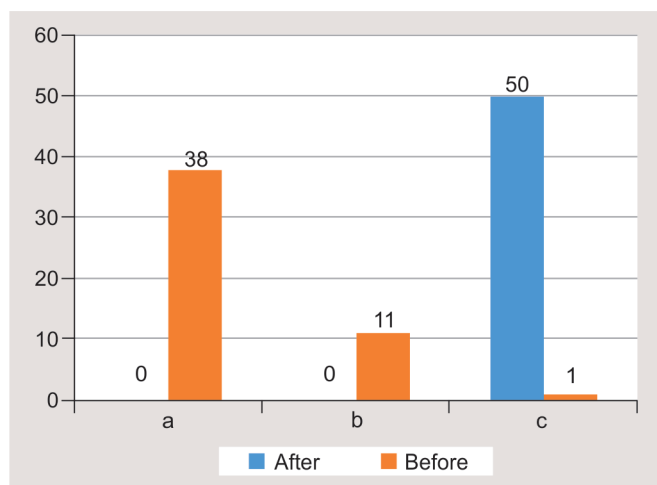


Fig. 5: Comparison of frequencies of responses before vs after regarding oral care after eruption of milk teeth. How will you take care of the oral cavity of the baby after the eruption of milk teeth? (a) As soon as the first tooth comes out, start brushing with water and a soft brush (b) Till 2 years of life, brush teeth twice a day with soft brush and pea size kids toothpaste (c) a and b both

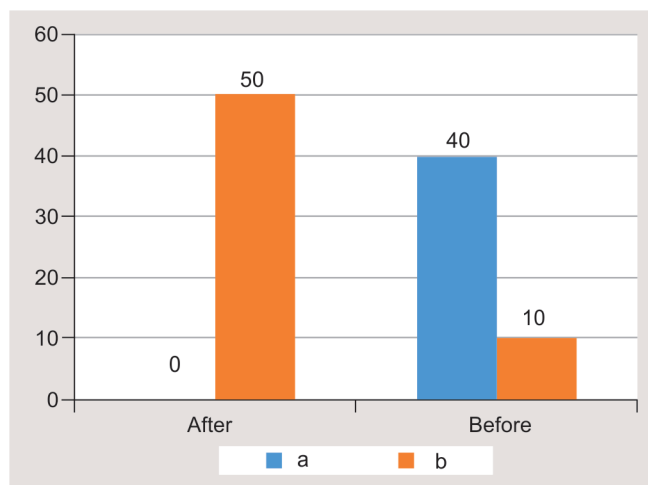


Fig. 6: Comparison of frequencies of responses before vs after regarding cavities in primary teeth. If the baby has cavities in his mouth, they do not need to be corrected because milk teeth are going to fall anyway? (a) True (b) False

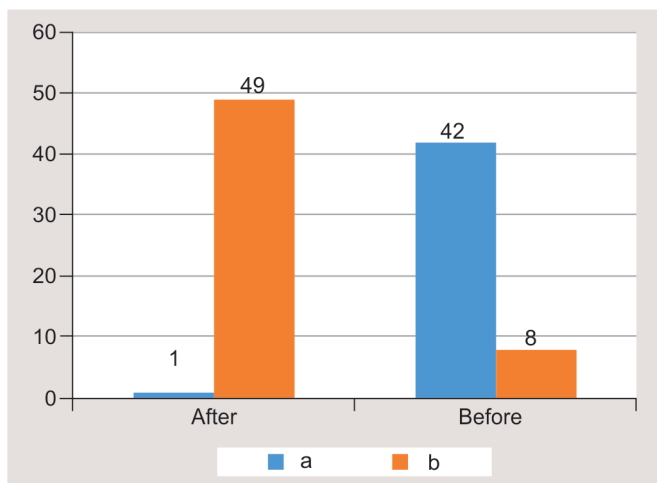


Fig. 7: Comparison of frequencies of responses before vs after regarding mobile primary teeth during accident. In the event of an accident, if the baby's milk teeth begin to fall or become mobile, they do not need to be corrected because the milk teeth are going to fall anyway? (a) True (b) False

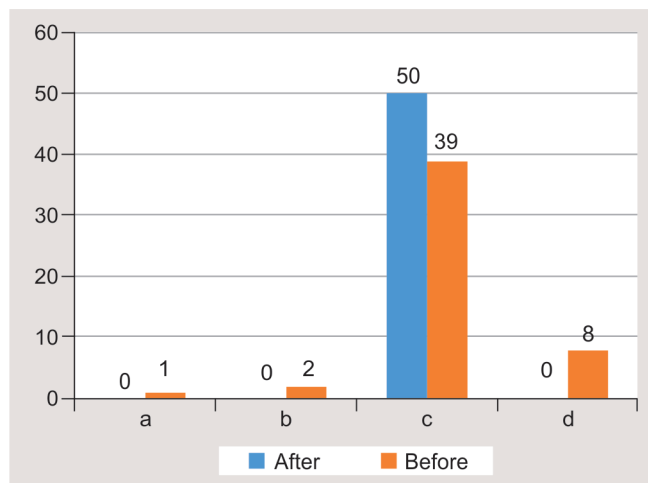


Fig. 8: Comparison of frequencies of responses before vs after regarding care of oral cavity after night bottle feeding. If the baby is put to sleep at night using a bottle of milk, what special precautions would you take? (a) Wipe the gums/teeth before placing the bottle in the mouth (b) Remove the bottle next morning and clean gums or teeth in morning (c) Remove the bottle immediately after kids sleep and clean the teeth or gums (d) No special attention needed

Regarding care of oral cavity after night bottle feeding, 78% know the fact that they need to clean gums after withdrawal of bottle from the mouth at night which changed to 100% after presentation as depicted in Figure 8.

Regarding prolonged thumb-sucking habit, 32% of the parents were aware of bad consequences of thumb sucking which changed to 94% after presentation as depicted in Figure 9.

Regarding habit of mouth breathing in children, 30% parents were aware which changed to 84% after presentation as depicted in Figure 10.

Regarding treatment of malaligned teeth at the age of preventive treatment, only 16% parents were aware that malaligned teeth can be treated with preventive /interceptive treatment which changed to 64% after presentation as depicted in Figure 11.

Regarding dental treatment of special children, only 28% believe that they should be treated as early as possible without focusing only on medicines which changed to 64% after presentation as depicted in Figure 12.

DISCUSSION

Parental education and training regarding the value of child's first dental visit and oral health care is much needed aspect of awareness. There is no good time for child's oral health care than to start it as early as possible to ensure primary teeth healthy and free of decay and other diseases.⁶ Education for the mothers are important to make them realize that they being role models for

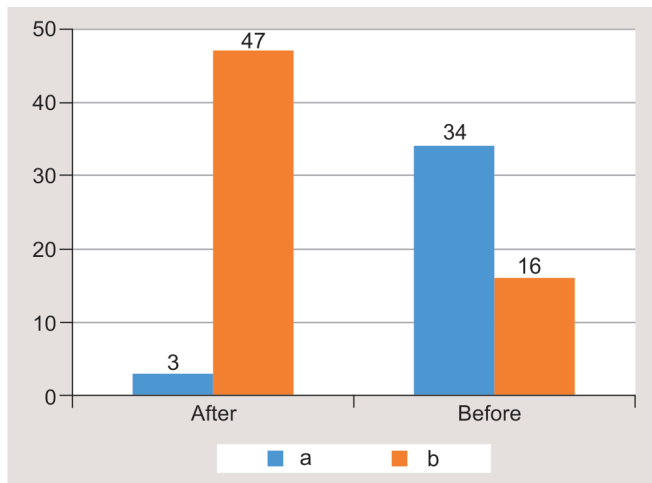


Fig. 9: Comparison of frequencies of responses before vs after regarding prolonged thumb-sucking habit. There is no need to stop the habit of thumb sucking for a long time because it does not affect the teeth and oral cavity? (a) True (b) False

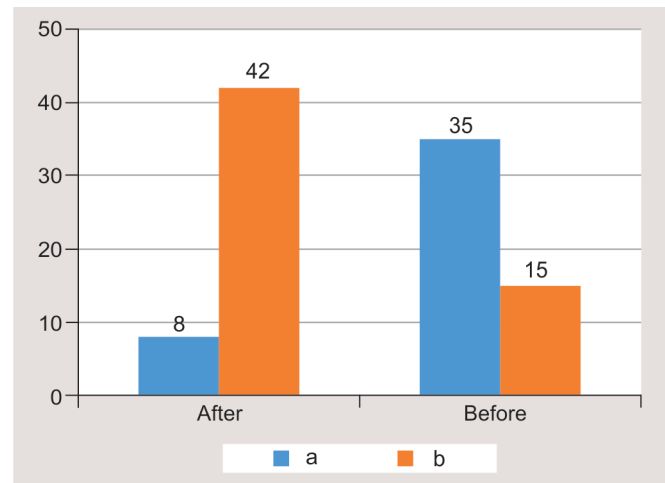


Fig. 10: Comparison of frequencies of responses before vs after regarding habit of mouth breathing in children. Special attention is not required for mouth breathing babies as it is a natural process and will certainly correct with the child's age. (a) True (b) False

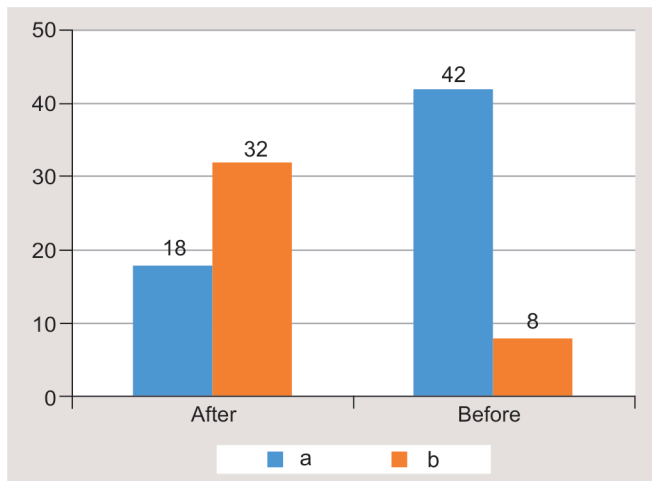


Fig. 11: Comparison of frequencies of responses before vs after regarding treatment of malaligned teeth. Malaligned teeth of children cannot be cured at a young age because later they will definitely need treatment? (a) True (b) False

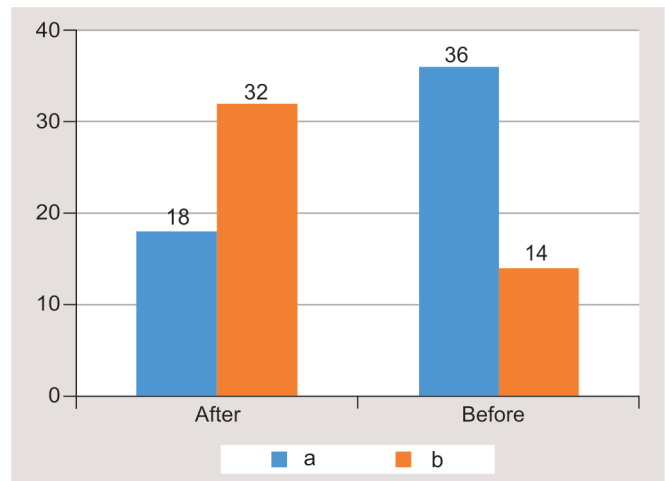


Fig. 12: Comparison of frequencies of responses before vs after regarding dental treatment of special children. There is no need for special children's dental treatment as they are uncooperative and medicines can help them better. (a) Correct (b) Wrong

their children can improve child's dental health habit.⁷ The good knowledge with attitude must convert into good oral hygiene practices to have beneficial dental health effects.⁸ Infant oral health knowledge among parents was reported to be lacking in many of the studies.^{9,10}

Hence, the present study was conducted with the aim to assess efficacy of AV aids regarding child's oral health among parents. In this study, a self-administered questionnaire in Hindi was distributed among the parents to study their perception on the AV aids used in dental education.

Questionnaire feedback revealed the statistically high significant difference for the frequencies between the questionnaire before and after power point presentation (p value $< 0.01, 0.05$) regarding awareness about importance of primary teeth, first dental visit, oral health care, importance of management of natal

teeth, oral habits, preventive procedures, and importance of dental treatment of special children.

Only 2% believe that child should visit dentist immediately after eruption of first primary teeth without having any carious lesion but results after presentation transformed to 98%. A study in the United Kingdom by Hood et al.⁸ showed similar results, where parents were well counseled about the etiology of dental caries but were less aware of preventive methods.

In all, 10% believe that they should clean gums of child after every feed which transformed to 84% after PowerPoint presentation. Regarding care of oral cavity after night bottle feeding, 78% know the fact that they need to clean gums after withdrawal of bottle from the mouth at night which changed to 100% after presentation. Suresh et al., reported that despite having good knowledge, many of the mothers were using nursing bottles

during bed times, similar to the findings of the study carried by Gussy et al., in rural mothers of Australia.^{9,11}

In all, 32% parents believe that they should visit dentist as soon as possible if child has natal teeth at birth which changed to 100% after presentation.

In all, 20% of the parents believe that primary teeth are important and need to be treated for eruption of permanent teeth at right place in arch which transformed to 100% after presentation. This is in agreement with the study where parents assume that primary teeth only for a short duration in the mouth and will be replaced soon by permanent teeth.¹²

Regarding prolonged thumbsucking habit, 32% of the parents were aware of bad consequences of thumb sucking which changed to 94% after presentation. Regarding habit of mouth breathing in children, 30% parents were aware which changed to 84% after presentation. After eruption of permanent teeth, sucking may lead to various problems like proper alignment of teeth and growth of the oral cavity.¹³

Regarding malaligned teeth treatment at the age of interception, only 16% parents were aware that mal aligned teeth can be treated with interceptive treatment which changed to 64% after presentation. This is in agreement with study in which group of preadolescents showed moderate level of awareness regarding orthodontic procedures.¹⁴

Regarding dental treatment of special children, only 28% believe that they should be treated as early as possible without focusing only on medicines which changed to 64% after presentation. This is in agreement with results of the study in which most of the parents were unaware of oral health importance and problems faced by disabled children.¹⁵

It was proved that parents were still not educated for some important aspects of their children's oral health which improved significantly with AV awareness program.

Although certain limitations of the present study were reported as the study was conducted with short sample size among parents with varied literacy level and socioeconomic status. Thus, further studies with parents of larger sample are encouraged with less variable literacy level and socioeconomic status. This can lead to the preventive programs formulation with the help of AV aids as per their literacy level and socioeconomic status that increase awareness regarding oral health among the parents.

CONCLUSION

The knowledge, attitude and behavior regarding oral health improved using AV aid. Various comprehensive oral health care programs with AV aids can be developed in the country for changing attitude and for providing important skills to the parents.

REFERENCES

- Petersen PE. The world oral health report 2003: continuous improvement of oral health in the 21st century – the approach of the WHO global oral health programme. *Community Dent Oral Epidemiol* 2003;31(Suppl 1):3–23. DOI: 10.1046/j.2003.com122.x.
- Joshi N, Rajesh R, Sunitha M. Prevalence of dental caries among school children in Kulasekharam village: a correlated prevalence survey. *J Indian Soc Pedod Prev Dent* 2005;23(3):138–140. DOI: 10.4103/0970-4388.16887.
- Damle SG, Patel AR. Caries prevalence and treatment needs amongst children at Dharavi, Mumbai. *Community Dent Oral Epidemiol* 1994;22(1):62–63. DOI: 10.1111/j.1600-0528.1994.tb01572.x.
- Dash JK, Sahoo PK, Bhuyan SK, et al. Prevalence of dental caries and treatment needs among children of Cuttack. *J Indian Soc Pedod Prev Dent* 2002;20(4):139–143.
- Mohammed RB, Rasool I, Meenakshi K, Yasmeen SA, Anusha K, et al. Assessment of student's perceptions for audio-visual aids in dentistry. *Ann Med Health Sci Res* 2017;7:256–262.
- Sultan S, Ain TS, Gowhar O. Awareness of mothers regarding oral health of their children in Kashmir, India. *Int J Contemp Med Res* 2016;3(7):ICV:50.43.
- Reang T, Bhattacharjya H. Mother's knowledge and practice regarding oral hygiene and challenges in the prevention of dental caries of under-five children in an urban resettlement colony. *Int J Med Sci Pub Health* 2014;3(1):76. DOI: 10.5455/ijmsph.2013.061020131.
- Hood CA, Hunter ML, Kingdon A. Demographic characteristics, oral health knowledge and practices of mothers of children aged 5 years and under referred for extraction of teeth under general anesthesia. *Int J Paediatr Dent* 1998;8(2):131–136. DOI: 10.1046/j.1365-263x.1998.00068.x.
- Gussy MG, Waters EB, Riggs EM, et al. Parental knowledge, beliefs and behaviours for oral health of toddlers residing in rural Victoria. *Aust Dent J* 2008;53(1):52–60. DOI: 10.1111/j.1834-7819.2007.00010.x.
- Blinkhorn AS, Wainwright-Stringer YM, Holloway PJ. Dental health knowledge and attitudes of regularly attending mothers of high-risk, pre-school children. *Int Dent J* 2001;51(6):435–438. DOI: 10.1002/j.1875-595x.2001.tb00856.x.
- Suresh BS, Ravishankar TL, Chaitra TR, et al. Mother's knowledge about pre-school child's oral health. *J Indian Soc Pedod Prev Dent* 2010;28(4):282–287. DOI: 10.4103/0970-4388.76159.
- Chhabra N, Chhabra A. Parental knowledge, attitudes and cultural beliefs regarding oral health and dental care of preschool children in an Indian population: a quantitative study. *Eur Arch Paediatr Dent* 2012;13(2):76–82. DOI: 10.1007/BF03262848.
- Mouth Healthy, Thumb Sucking, American Dental Association, 2016, <https://www.mouthhealthy.org/en/az-topics/t/thumbsucking>.
- Pandey M, Singh J, Mangal G, et al. Evaluation of awareness regarding orthodontic procedures among a group of preadolescents in a cross-sectional study. *J Int Soc Prev Community Dent* 2014;4(1):44–47. DOI: 10.4103/2231-0762.131264.
- Hegde AM, Babu AA, Mohammed A, et al. Special needs of special children-parental view. *NUJHS* 2015;5(2):38–44.