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Evaluation Of Parental Challenges To Implement Effective Oral Hygiene Practices In Preventing Early Childhood Caries- A Qualitative Study

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Abstract

Background: Maintaining optimal oral hygiene in children is a critical component of overall health and well-being. Despite widespread awareness of preventive measures, parents face numerous challenges in enforcing good oral hygiene practices among children. Behavioural, cultural and socioeconomic factors contribute to these challenges.

Methods: A narrative review of existing literature was conducted to identify common parental difficulties, underlying determinants and strategies related to paediatric oral hygiene practices.

Results: The review revealed that child resistance, inadequate parental knowledge, cultural beliefs, time constraints and limited access to dental care are major barriers. Socioeconomic disparities further influence parental capacity to supervise oral hygiene increasing risk of dental caries and other oral diseases in children.

Conclusion: Parental challenges in maintaining children's oral hygiene are multifactorial. Targeted educational interventions and improved access to preventive dental services are essential to strengthen oral health practices and improve long-term paediatric oral health outcomes preventing oral diseases.

Keywords: Parental challenges, Oral health behaviour, Early childhood caries, Preschool children, socioeconomic factors

I. Introduction

Children's dental health affects their quality of life and is a crucial component of their general health [1]. The incidence of caries has decreased in France as a result of regular public preventative initiatives and the participation of paediatric dentists and dental surgeons [2,3]. However, among certain at-risk groups, particularly very young children, oral hygiene recommendations are not always followed. As a result, early childhood caries (ECC), a surge in caries incidence, has been noted in children under the age of six.

Any primary tooth in a kid under six years old that has at least one rotted surface (with or without cavitation), a tooth missing because of decay, or a filled tooth surface is considered to have ECC.⁴ ECC has a number of negative effects, including chronic pain, behavioural and sleep difficulties, school absenteeism, and the quality of life of children⁵. Maintaining a high level of ECC is facilitated by parents' ignorance and incapacity to alter family routines, apply proper toothbrushing practices, or feed their children.⁶

To assess how parents perceive dental disease and the primary challenges they face when trying to maintain oral hygiene for children younger than 6 years old. To achieve this, a qualitative research study was conducted in Nashik district, utilizing semi-structured interviews with parents of children in this age group.

The secondary goal was to propose solutions that could assist parents in altering their family habits, aiming to establish educational practices and behaviours that would lead to an enhancement of their children's oral health.

II. Material And Methods

Materials and Methods Study Design and Sampling Strategy This research adheres to the Standards for Reporting Qualitative Research (SRQR). To allow parents to freely share their thoughts on children's oral health and preventive measures such as tooth brushing and dietary habits, individual semi-structured interviews were conducted following a survey form, addressing relevant topics through open-ended

questions and prompts for an effective approach in identifying specific challenges in their daily routines. Each google survey form was distributed to parents with below 6-year kids. In the course of the survey, no guidance was provided since the focus was solely on understanding the parents' knowledge of oral health. As a result, the parents were required to articulate their everyday challenges across various areas on oral hygiene routines for their children.

III. Ethical Considerations

Participants were made aware of the objectives of this research and the format of the interviews. The interviews were recorded. Participants were also informed about the confidentiality of their responses and were entitled to withdraw from the study at any time. Prior to each survey form being distributed, participants were required to give written informed consent. The confidentiality of the data, including audio recordings and transcripts, was assured, and the study received approval from the institutional ethics committee.

IV. Results

Data saturation was achieved after interviewing 385 parents. Only 10 parents declined to participate in the study, stating that they had no interest. The participants reported that their children required dental consultations, with some needing only routine check-ups. Table 1 summarizes the characteristics of the study participants. The majority of the parents were married, and approximately one-third of the mothers were stay-at-home or unemployed. A considerable proportion of the children (300 out of 385) were classified as having a high caries risk. About half of the children brushed their teeth daily, while more than fifty percent consumed soft drinks and had daily snacking habits, indicating potential risk factors for dental caries.

The distribution of oral hygiene practices and parental perceptions among the participating children aged 1–6 years is presented in Tables 1–17 and the corresponding figures. Table 1 shows the age-wise distribution of the study population, with the majority of children belonging to the 4–6 years age group. Subsequent tables illustrate various aspects of children's oral hygiene practices, including brushing frequency, parental assistance during brushing, challenges faced during oral hygiene maintenance, duration of brushing, use of different types of toothpaste, and other preventive practices such as rinsing the mouth after meals and changing toothbrushes. Intergroup comparisons between the age groups of 1–3 years and 4–6 years were also performed using the Chi-square test to determine statistically

significant differences in oral hygiene practices and parental involvement. These findings provide insights into behavioral patterns, parental awareness, and preventive practices related to oral health among young children.

Table no. 1: Distribution as per Age Groups

	Frequency	Percent
1-3 Years	176	45.7
4-6 Years	209	54.3
Total	385	100.0

Table no. 1 shows that among 385 children, 176 (45.7%) were in the age group of 1–3 years, while 209 (54.3%) were in the age group of 4–6 years.

Figure no. 1: Distribution as per Age Groups

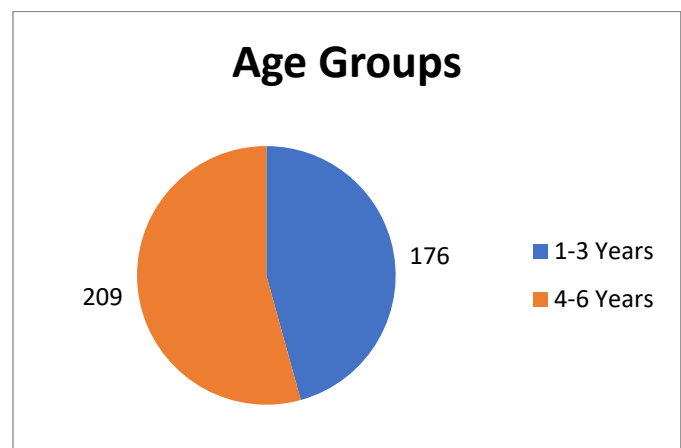


Table no. 2: Distribution as per How often you brush your child's teeth?

	Frequency	Percent
Once Daily	218	56.6
Twice Daily	164	42.6
Thrice Daily	3	0.8
Total	385	100.0

Table no. 2 shows that 218 (56.6%) children brushed once daily, 164 (42.6%) brushed twice daily, and only 3 (0.8%) brushed thrice daily.

Figure no. 2: Distribution as per How often you brush your child's teeth?

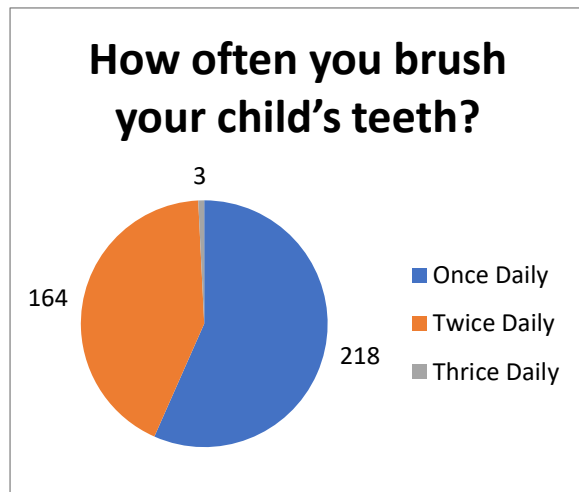


Table no. 3: Distribution as per What kind of challenges do you experience in performing oral hygiene?

	Frequency	Percent
Child is not co-operating during teeth brushing	151	39.2
Child is co-operating during teeth brushing	234	60.8
Total	385	100.0

Table no. 3 shows that 151 (39.2%) parents reported lack of co-operation from their child during brushing, while 234 (60.8%) reported co-operation.

Figure no. 3: Distribution as per What kind of challenges do you experience in performing oral hygiene?

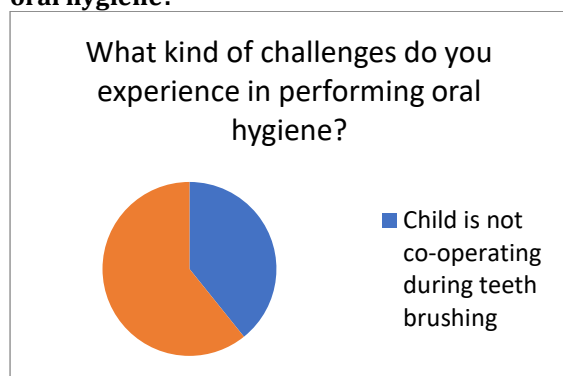


Table no. 4: Distribution as per How important is brushing your child's teeth in preventing cavities?

	Frequency	Percent
Not important	5	1.3
Slightly important	7	1.8
Moderately important	39	10.1
Extremely important	334	86.8
Total	385	100.0

Table no. 4 shows that 334 (86.8%) parents considered brushing extremely important in preventing cavities, 39 (10.1%) moderately important, 7 (1.8%) slightly important, and 5 (1.3%) not important.

Figure no. 4: Distribution as per How important is brushing your child's teeth in preventing cavities?

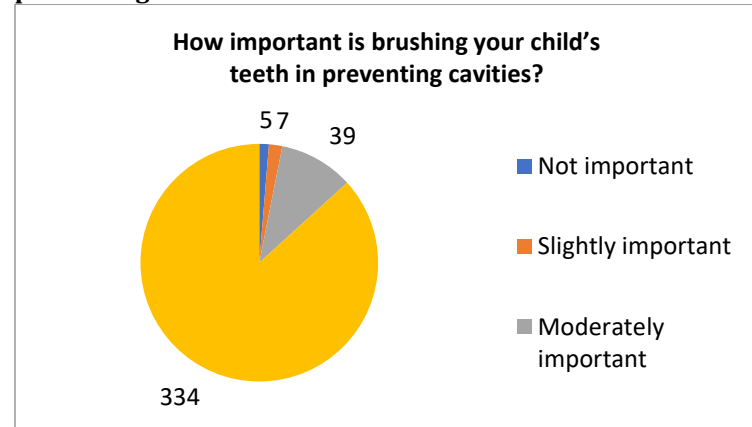


Table no. 5: Distribution as per Which type of toothpaste do you use for your child?

	Frequency	Percent
With Fluoride	174	45.2
Without Fluoride	24	6.2
Herbal Toothpaste	63	16.4
Flavoured Kids Toothpaste	124	32.2
Total	385	100.0

Table no. 5 shows that 174 (45.2%) children used fluoride toothpaste, 24 (6.2%) used non-fluoride, 63 (16.4%) used herbal, and 124 (32.2%) used flavoured kids' toothpaste.

Figure no. 5: Distribution as per Which type of toothpaste do you use for your child?

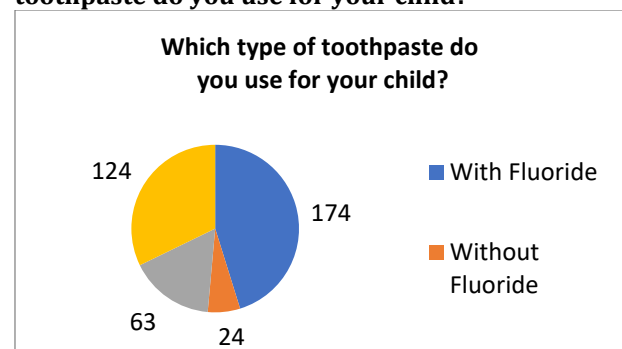


Table no. 6: Distribution as per What is the duration of your child's tooth brushing?

	Frequency	Percent
Less than 30 seconds	39	10.1
30 seconds to 1 Minute	204	53.0
1 Minute to 2 Minutes	127	33.0
More than 2 Minutes	15	3.9
Total	385	100.0

Table no. 6 shows that most children (204, 53.0%) brushed for 30 seconds to 1 minute, 127 (33.0%) brushed for 1–2 minutes, 39 (10.1%) brushed less than 30 seconds, and only 15 (3.9%) brushed more than 2 minutes.

Figure no. 6: Distribution as per What is the duration of your child's tooth brushing?

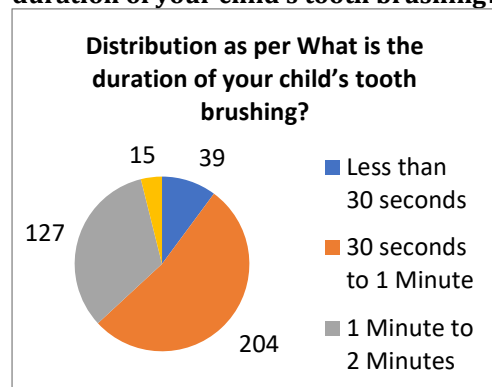


Table no. 7: Distribution as per Do you rinse your child's mouth after every meal?

	Frequency	Percent
Yes	273	70.9
No	112	29.1
Total	385	100.0

Table no. 7 shows that 273 (70.9%) rinsed their child's mouth after every meal, while 112 (29.1%) did not.

Figure no. 7: Distribution as per Do you rinse your child's mouth after every meal?

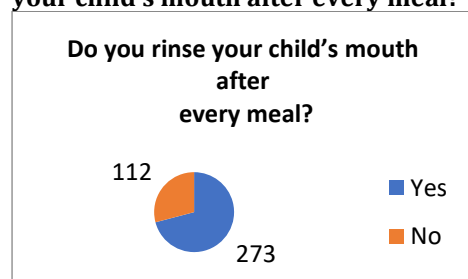


Table no. 8: Distribution as per What is the frequency of changing toothbrush of your child?

	Frequency	Percent
Once in 15 days	12	3.1
Once in a Month	95	24.7
Every 2-3 Months	204	53.0
Once Bristles Frayed Out	74	19.2
Total	385	100.0

Table no. 8 shows that 204 (53.0%) changed toothbrush every 2–3 months, 95 (24.7%) once a month, 74 (19.2%) when bristles frayed, and 12 (3.1%) once in 15 days.

Figure no. 8: Distribution as per What is the frequency of changing toothbrush of your child?

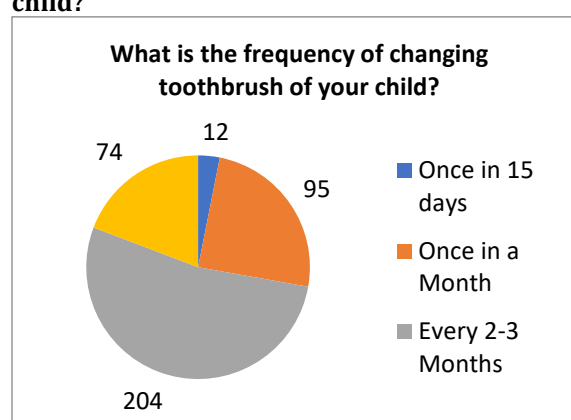


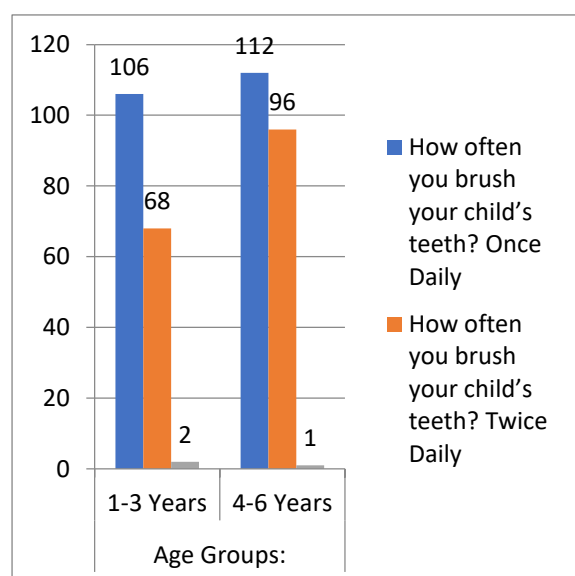
Table 9: Inter group comparison of frequencies of How often you brush your child's teeth? in Age Groups 1-3 Years and 4-6 Years

		Age Groups		Total	Chi-Square value	P value of Chi-Square test
		1-3 Years	4-6 Years			
How often you brush your child's teeth?	Once Daily	106	112	218	2.469	0.291#
	Twice Daily	68	96	164		
	Thrice Daily	2	1	3		
Total		176	209	385		

Chi-Square Tests; # indicates statistically non-significant $p > 0.05$

Figure 9 :Inter group comparison of frequencies of How often you brush your

child's teeth? in Age Groups 1-3 Years and 4-6 Years



($p > 0.05$) for frequencies of How often you brush your child's teeth?

Table 10: Inter group comparison of frequencies of Do you help your child in brushing? in Age Groups 1-3 Years and 4-6 Years

Chi-Square Tests; **indicates statistically highly significant $p < 0.01$.

There was a statistically highly significant difference seen for the frequencies between the groups ($p < 0.01$) with higher freq for Age Groups 4-6 Years with response Yes for Do you help your child in brushing?

Table 11: Inter group comparison of frequencies of What kind of challenges do you experience in performing oral hygiene? in Age Groups 1-3 Years and 4-6 Years

There was a statistically non-significant difference seen for the frequencies between the groups

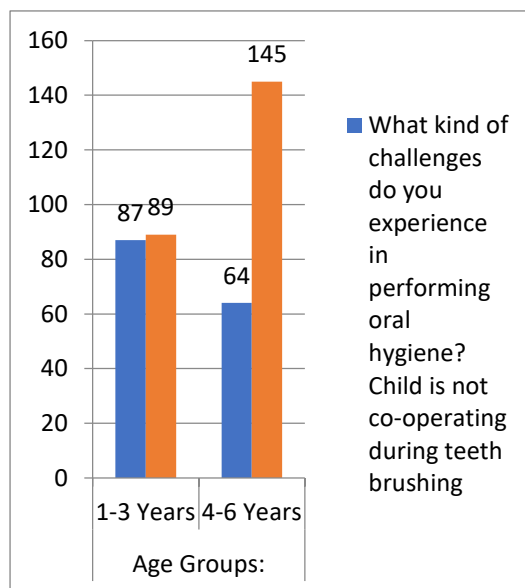
		Age Groups		Total	Chi-Square value	P value of Chi-Square test
		1-3 Years	4-6 Years			
Do you help your child in brushing?	Yes	173	186	359	13.123	0.000**
	No	3	23	26		
Total		176	209	385		

		Age Groups		Total	Chi-Square value	P value of Chi-Square test
		1-3 Years	4-6 Years			
What kind of challenges do you experience in performing oral hygiene?	Child is not co-operating during teeth brushing	87	64	151	14.181	0.000**
	Child is co-operating during teeth brushing	89	145	234		
Total		176	209	385		

performing oral hygiene? in Age Groups 1-3 Years and 4-6 Years

Chi-Square Tests; **indicates statistically highly significant $p < 0.01$.

Inter group comparison of frequencies of What kind of challenges do you experience in



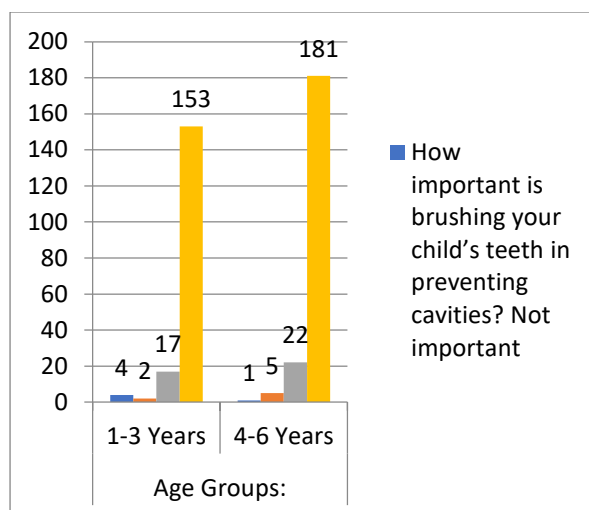
There was a statistically highly significant difference seen for the frequencies between the groups ($p < 0.01$) with higher frequency for Age Groups 4-6 Years with response Child is co-operating during teeth brushing for What kind of challenges do you experience in performing oral hygiene?

Table 12: Inter group comparison of frequencies of Are there any methods used by you to control problems related to cavities in teeth of your child? in Age Groups 1-3 Years and 4-6 Years

Chi-Square Tests; # indicates statistically non-significant $p > 0.05$

Inter group comparison of frequencies of How important is brushing your child's teeth in preventing cavities? in Age Groups 1-3 Years and 4-6 Years

		Age Groups		Total	Chi-Square value	P value of Chi-Square test
		1-3 Years	4-6 Years			
Are there any methods used by you to control problems related to cavities in teeth of your child?	Yes	161	180	341	2.704	0.100#
	No	15	29	44		
Total		176	209	385		



There was a statistically non-significant difference seen for the frequencies between the groups ($p > 0.05$) for frequencies of Are there any methods used by you to control problems related to cavities in teeth of your child?

There was a statistically non-significant difference seen for the frequencies between the groups ($p > 0.05$) for frequencies of How important is brushing your child's teeth in preventing cavities?

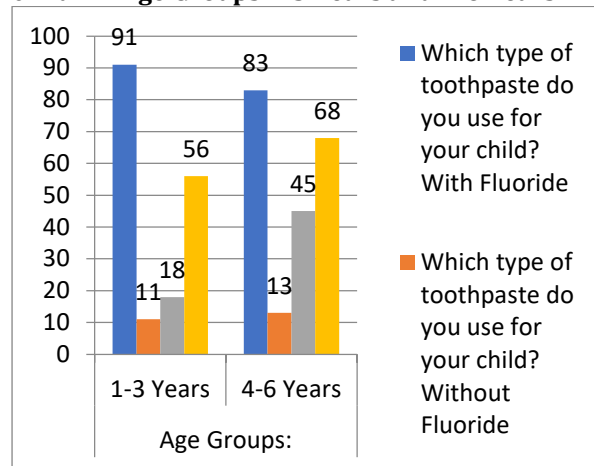
Table 13: Inter group comparison of frequencies of Which type of toothpaste do you use for your child? in Age Groups 1-3 Years and 4-6 Years

		Age Groups		Total	Chi-Square value	P value of Chi-Square test
		1-3 Years	4-6 Years			
Which type of toothpaste do you use for your	With Fluoride	91	83	174	10.516	0.015*
	Without Fluoride	11	13	24		
	Herbal Toothpaste	18	45	63		

child?	Flavoured Kids Toothpaste	56	68	124		
Total		176	209	385		

Chi-Square Tests; *indicates statistically significant $p < 0.05$.

Inter group comparison of frequencies of Which type of toothpaste do you use for your child? in Age Groups 1-3 Years and 4-6 Years



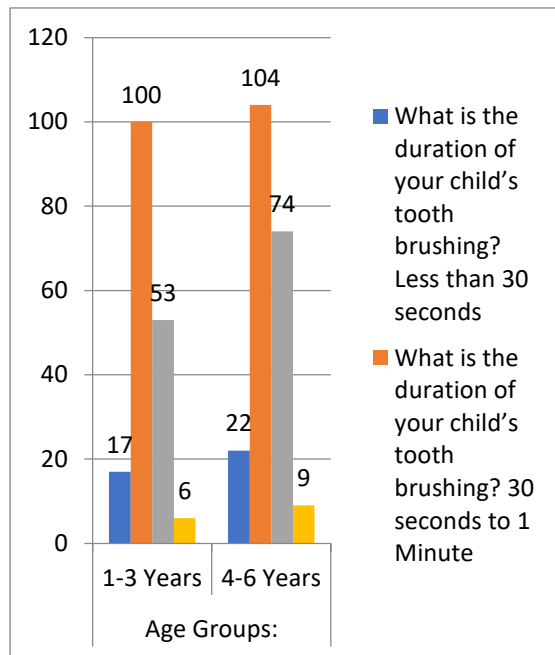
There was a statistically significant difference seen for the frequencies between the groups ($p < 0.05$) with higher frequencies for Age Groups 1-3 Years with response With Fluoride for Which type of toothpaste do you use for your child?

Table 14: Inter group comparison of frequencies of What is the duration of your child's tooth brushing? in Age Groups 1-3 Years and 4-6 Years

		Age Groups		Total	Chi-Square value	P value of Chi-Square test
		1-3 Years	4-6 Years			
What is the duration of your child's tooth brushing?	Less than 30 seconds	17	22	39	1.978	0.577#
	30 seconds to 1 Minute	100	104	204		
	1 Minute to 2 Minutes	53	74	127		
	More than 2 Minutes	6	9	15		
Total		176	209	385		

Chi-Square Tests; # indicates statistically non-significant $p > 0.05$

Inter group comparison of frequencies of What is the duration of your child's tooth brushing? in Age Groups 1-3 Years and 4-6 Years



There was a statistically non-significant difference seen for the frequencies between the groups ($p>0.05$) for frequencies of What is the duration of your child's tooth brushing?

Table 15: Inter group comparison of frequencies of Do you rinse your child's mouth after every meal? in Age Groups 1-3 Years and 4-6 Years

		Age Groups		Total	Chi-Square value	P value of Chi-Square test
		1-3 Years	4-6 Years			
Do you rinse your child's mouth after every meal?	Yes	126	147	273	0.073	0.787#
	No	50	62			
Total		176	209	385		

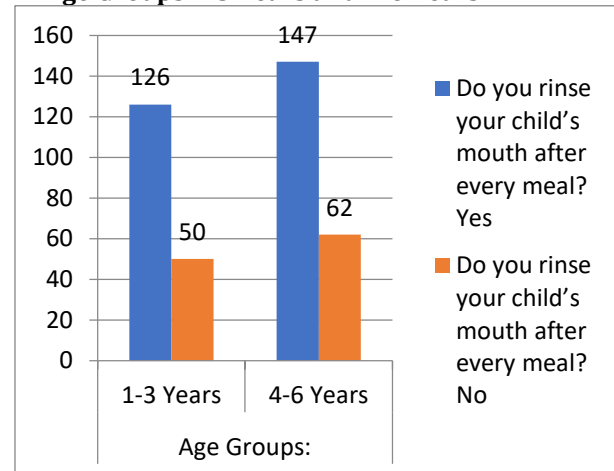
Chi-Square Tests; # indicates statistically non-significant $p>0.05$

		Age Groups			Chi-Square value	P value of Chi-Square test
		1-3 Years	4-6 Years	Total		
Do your child share toothbrush with siblings?	Yes	5	4	9	3.962	0.138#
	No	138	180	318		
	No, the only Child	33	25	58		
Total		176	209	385		

Chi-Square Tests; # indicates statistically non-significant $p>0.05$

Inter group comparison of frequencies of What is the frequency of changing toothbrush of your child? in Age Groups 1-3 Years and 4-6 Years

Inter group comparison of frequencies of Do you rinse your child's mouth after every meal? in Age Groups 1-3 Years and 4-6 Years

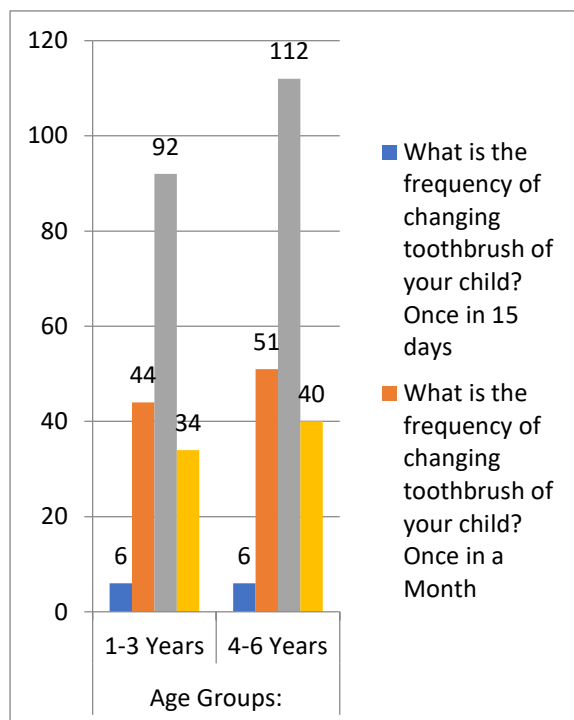


There was a statistically non-significant difference seen for the frequencies between the groups ($p>0.05$) for frequencies of Do you rinse your child's mouth after every meal?

Table 16: Inter group comparison of frequencies of What is the frequency of changing toothbrush of your child? in Age Groups 1-3 Years and 4-6 Years

Chi-Square Tests; # indicates statistically non-significant $p>0.05$
 There was a statistically non-significant difference seen for the frequencies between the groups ($p>0.05$) for frequencies of What is the frequency of changing toothbrush of your child?
 Chi-Square value: 0.073
 P value of Chi-Square test: 0.787#

Table 17: Inter group comparison of frequencies of Do your child share toothbrush with siblings? in Age Groups 1-3 Years and 4-6 Years



There was a statistically non-significant difference seen for the frequencies between the groups ($p>0.05$) for frequencies of Do your child share toothbrush with siblings?

V. Discussion

Research on how parents' psychosocial characteristics affect their kids' dental health behaviour is comparatively lacking.[7] A few cross-sectional studies have discovered a relationship between children's oral health behaviour and their parents' oral health knowledge, attitudes, and beliefs [8–9].[10] Therefore, the current study was designed to better understand the challenges parents face when cleaning their children's teeth at home. Reversing the unfavourable trends is even more urgent when we take into account the increased expense of dental health services overall, the limited availability of clinical dental preventive treatments [11], and potential harm to children's oral health from the COVID-19 pandemic [12, 13]. In addition to their preschool-aged children's usage of dental care services, parents and other caregivers are crucial in monitoring home-based caries prevention (good eating habits, oral hygiene practices) [14]. Therefore, we wanted to concentrate on these behaviours in the current study.

1. Behavioural Resistance from Children

Children often perceive tooth brushing as an unpleasant or unnecessary task. Resistance may include crying, tantrums, or refusal to cooperate.

Short attention spans make consistent daily brushing difficult.

2. Lack of Knowledge and Awareness

Some parents underestimate the importance of primary teeth. Limited understanding of preventive dentistry, fluoride use, and diet–caries relationship. Misconceptions such as “milk teeth don't matter” persist.

3. Time Constraints and Busy Schedules

Dual-working parents often struggle to dedicate time for supervising brushing. Morning routines before school are rushed, leading to skipped brushing. Evening brushing is frequently neglected due to parental fatigue.

4. Socioeconomic Barriers

Financial constraints limit access to dental care products (fluoride toothpaste, floss, mouth rinses).

In low-income households, dental visits are often delayed until problems arise.

Lack of availability of paediatric dental services in rural or underserved areas.

5. Cultural and Lifestyle Factors

Dietary practices high in sugar consumption (snacks, soft drinks) are often normalized.

Traditional beliefs and home remedies may replace evidence-based dental care.

Influence of extended family members may contradict parental oral hygiene instructions.

6. Limited Parental Motivation and Role Modelling

Parents who themselves neglect oral hygiene are less effective in enforcing it on children.

Inconsistent supervision sends mixed signals to children.

Psychological stressors (work stress, family conflicts) reduce parental focus on child's hygiene.

7. Implications of Poor Enforcement

Increased risk of early childhood caries (ECC).

Pain, infection, and difficulty eating or speaking.

Higher likelihood of absenteeism from school.

Long-term consequences such as malocclusion, poor self-esteem, and increased financial burden on families.

8. Strategies to Overcome Challenges

Parental Education

Counselling parents on the importance of primary teeth and preventive care.

Demonstrations of proper brushing techniques during dental visits.

Behavioural Techniques

Use of positive reinforcement (stickers, rewards, praise).

Turning brushing into a game or storytelling activity.

Brushing together as a family routine.

9. Healthcare Professional Support

Regular dental checkups to reinforce parental efforts.

Motivational interviewing techniques by dentists and hygienists.

Community outreach programs targeting oral health awareness.

10. Policy and Community-Level Interventions

School-based oral health programs.

Subsidized dental products for low-income families.

Integration of oral health education into paediatric healthcare services.

VI. Conclusion

Parental enforcement of child oral hygiene is influenced by a complex interplay of behavioural, socioeconomic, cultural, and personal factors. While parents are the primary gatekeepers of their child's oral health, challenges often limit their ability to ensure consistent hygiene practices. Addressing these challenges requires a multifaceted approach involving education, behavioural strategies, community support, and policy-level interventions. By empowering parents and creating supportive environments, it is possible to significantly improve paediatric oral health outcomes.

References:

1. Sharna N., Ramakrishnan M., Samuel V., Ravikumar D., Cheenglembi K., Anil S. Association between Early Childhood Caries and Quality of Life: Early Childhood Oral Health Impact Scale and Pufa Index. *Dent. J.* 2019;7:95. doi: 10.3390/dj7040095.
2. Bourgeois D.M., Llodra J.C. Global burden of dental condition among children in nine countries participating in an international oral health promotion programme 2012–2013. *Int. Dent. J.* 2014;64:27–34. doi: 10.1111/idj.12129.
3. Terrer E., Slimani A., Giraudeau N., Levallois B., Tramini P., Bonte E., Hua C., Lucchini M., Seux D., Thivichon B., et al. Performance of Fluorescence-based Systems in Early Caries Detection: A Public Health Issue. *J. Contemp. Dent. Pract.* 2019;20:1126–1131.
4. American Academy of Pediatric Dentistry . Oral Health Policies Reference Manual. Policy on Early Childhood Caries (ECC): Classifications, Consequences, and Preventive Strategies. American Academy of Pediatric Dentistry, Council on Clinical Affairs; Chicago, IL, USA: 2011. [(accessed on 18 March 2020)]. pp. 47–49.
5. Krisdapong S., Prasertsom P., Rattanasangsima K., Sheiham A. School absence due to toothache associated with sociodemographic factors, dental caries status, and oral health-related quality of life in 12- and 15-year-old Thai children. *J. Public Health Dent.* 2013;73:321–328. doi: 10.1111/jphd.12030.
6. Neves É.T.B., Dutra L.D.C., Gomes M.C., Paiva S.M., de Abreu M.H.N.G., Ferreira F.M., Granville-Garcia A.F. The impact of oral health literacy and family cohesion on dental caries in early adolescence. *Community Dent. Oral Epidemiol.* 2020 doi: 10.1111/cdoe.12520.
7. Hooley M, Skouteris H, Boganin C, Satur J, Kilpatrick N. Parental influence and the development of dental caries in children aged 0-6 Years: A systematic review of the literature. *J Dent.* 2012;40:873-85.
8. Vann WF Jr, Lee JY, Baker D, Divaris K. Oral health literacy among female caregivers: Impact on oral health outcomes in early childhood. *J Dent Res.* 2010;89:1395-400.
9. Buunk-Werkhoven YA, Dijkstra A, van der Schans CP. Determinants of oral hygiene behavior: A study based on the theory of planned behavior. *Community Dent Oral Epidemiol.* 2011;39:250-9.
10. Pine CM, Adair PM, Petersen PE, Douglass C, Burnside G, Nicoll AD, et al. Developing explanatory models of health inequalities in childhood dental caries. *Community Dent Health.* 2004;21(Suppl 1):86-95.
11. Bencze, Z.; Kovalecz, G.; Márton, S.; Gáll, T.; Mahrouseh, N.; Varga, O. Childhood Caries Management in the European Union: A Cross-Sectional Study. *Heliyon* 2021, 7, e06198. [Google Scholar] [CrossRef] [PubMed]
12. Ravaghi, V.; Salomon-Ibarra, C.; Morris, J. Editorial-Child Oral Health; Is There Anything More to Know? *Community Dent. Health* 2020, 37, 108–109. [Google Scholar] [CrossRef] [PubMed]
13. Lyu, W.; Wehby, G.L. Effects of the COVID-19 Pandemic on Children's Oral Health and Oral Health Care Use. *J. Am. Dent. Assoc.* 2022, 153, 789–796.e2. [Google Scholar] [CrossRef] [PubMed]
14. Andrysiak-Karmińska, K.; Hoffmann-Przybylska, A.; Przybylski, P.; Witkowska, Z.; Walicka, E.; Borysewicz-Lewicka, M.; Gregorczyk-Maga, I.; Rahnama, M.; Gerreth, K.; Opydo-Szymaczek, J. Factors Affecting Dental Caries Experience in 12-Year-Olds, Based on Data from Two Polish Provinces. *Nutrients* 2022, 14, 1948. [Google Scholar] [CrossRef] [PubMed]