



ORIGINAL RESEARCH ARTICLE

Parents' perceptions of the dental and oral health in children in Janakpur

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ABSTRACT

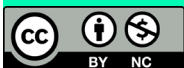
Background: Parents along with clinicians play a key role in achieving the best oral health outcomes in their young children. Early childhood and adolescents are heavily reliant on parents/caregivers for day-to-day routine, which includes oral health practices such as brushing, flossing, and healthy dietary intake.

Objective: To assess the parents' perception regarding the dental and oral health of their school-going children.

Methods: A cross-sectional study was conducted among parents of school going children regarding their perception of the dental and oral health of their children in Janakpur. The study tool was a questionnaire-based which contained basic information of participants and 25 questions related to the dental and oral health of their children. Data were analyzed for frequencies, percentage, mean and standard deviation.

Results: Out of total 215 participants, 77.2% participants were aware that primary teeth were as important as the permanent teeth. 96.7% of the participants believed that the main causative agent of cavities in teeth was eating too much sugar. Among the major problems, 89.3% children had experienced cavities according to their parents. 96.3% parents believed that the schools should provide dental health education.

Conclusions: Increasing parents' knowledge about children's oral health, raising awareness of the importance of regular dental check-ups, and fostering positive attitudes toward their children's oral health underscore the need for more effective educational programs. Strengthening community-based interventions is crucial for enabling parents to adopt more informed behaviors regarding their children's oral health.



INTRODUCTION

Early childhood oral health practices and outcomes are considered pivotal in determining oral health trajectories across the life course, and can impact oral health and disease occurrence in adulthood.¹ Since parents are the most influential social force affecting a child's development during early childhood, it is well-established that interventions aimed at improving parents' knowledge and attitudes about oral and dental health effectively prevent dental issues in children.²

Parents along with clinicians play a key role in achieving the best oral health outcomes in their young children.³ Early

childhood and adolescents are heavily reliant on parents/caregivers for day-to-day routine, which includes oral health practices such as brushing, flossing, and healthy dietary intake. Prospectively educated parents would be more apt to teach better oral hygiene skills to their kids, which decreases the risk for dental caries and other oral health related diseases.⁴

Some parents might not schedule regular visits to dentists or notice early manifestations of oral disease since they think that primary teeth are temporary, and would shed on its own after a period of time, therefore less critical. Such beliefs will postpone diagnosis and treatment of the oral condition, with adverse effects on the oral health, nutrition, and self-esteem, ultimately affecting the general health of the child.^{5,6}

Good oral health is crucial for overall health and well-being in school going children. Children's oral and dental health depends significantly on parents' awareness, knowledge, education, and socioeconomic status.⁷ This study assessed parent's perception of oral and dental health of their children in Janakpur, Nepal.

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Table 1: Parent's response on oral and dental care of their children

Parents perception on oral and dental care		Frequency	Percent
How many children do you have?	1	30	14.0
	2-3	185	86.0
What is the age of your youngest child?	3-6 years	11	5.1
	7-12 years	177	82.3
	Above 12 years	27	12.6
How important do you think dental and oral health is for your child's overall health?	Very important	191	88.8
	Important	24	11.2
At what age do you think a child should first visit a dentist?	Before 1 year	166	77.2
	1-2 year	28	13.0
	3-5 years	10	4.7
	Only when there is a problem	11	5.1
Do you think baby teeth (primary teeth) are as important as permanent teeth?	Yes	166	77.2
	No	25	11.6
	Not sure	24	11.2
What do you believe is the main cause of cavities in children?	Eating too much sugar	208	96.7
	Poor brushing habits	7	3.3
Are you aware of the role of fluoride in preventing tooth decay?	No	215	100.0
How often does your child brush their teeth?	Twice a day	142	66.0
	Once a day	56	26.0
	Occasionally	8	3.7
	Never	9	4.2
Do you supervise or assist your child while brushing?	Always	26	12.1
	Sometimes	9	4.2
	Never	180	83.7
Do you know fluorides prevent decay?	No	215	100.0
Does your child use fluoride toothpaste?	Yes	26	12.1
	No	9	4.2
	Not sure	180	83.7
How often does your child floss?	Never	215	100.0
Does your child consume sugary snacks or drinks frequently?	Daily	182	84.7
	A few times a week	26	12.1
	Rarely	7	3.3
Do you think prolonged use of pacifiers or bottle feeding have an effect on your child's teeth?	Yes	21	9.8
	No	22	10.2
	I don't know	172	80.0
Do you think that some oral habits such as (digit sucking, lip and cheek biting) can affect your child teeth?	Yes	10	4.7
	No	190	88.4
	I don't know	15	7.0
Do you think oral habits can be prevented?	Yes	10	4.7
	No	190	88.4
	I don't know	15	7.0
How often does your child visit the dentist?	Once a year	15	7.0
	Never	200	93.0
What is the main reason for your child's dental visits?	Toothache or cavity	15	7.0
	Never visited	200	93.0
How would you describe your child's experience at the dentist?	Positive	8	3.7
	Neutral	196	91.2
	Negative	11	5.1
Do you think dental treatments for children are affordable?	Yes	12	5.6
	No	188	87.4
	Somewhat	15	7.0
What prevents you from taking your child to the dentist regularly?	Cost	205	95.3
	Lack of time	10	4.7
Are you worried about your child's dental health?	Yes	203	94.4
	No	12	5.6
What dental problems has your child experienced?	Cavities	192	89.3
	Toothache	12	5.6
	Malaligned teeth	11	5.1

Do you believe that schools should provide dental health education?	Yes	207	96.3
	Not sure	8	3.7
Where do you usually get information about children's dental health?	Dentist	16	7.4
	Family/Friends	15	7.0
	TV/Radio	184	85.6

METHODS

This was a descriptive cross-sectional study conducted among parents of school going children regarding their perception of the dental and oral health of their children. In total 215 parents participated in the study. This study received ethical clearance from Madhesh Institute of Health Sciences Institutional Review Committee (MIHS-IRC/081/082-011)

Based on the study of Hammouri et al., using formula $n = \frac{Z^2pq}{d^2}$, where $p=73\%$, $q=1-p=27\%$, $d=6\%$ margin of error, and Z at 95% confidence interval, the sample size was calculated as 210.24. However, in the final study 215 children's parents will be included.

The study tool was a questionnaire which had prior undergone validity testing. In addition, the reliability testing was also done. The Cronbach's alpha value was obtained as 0.79. The questionnaire consisted 2 parts. First part was related to basic information of participants and the second part was containing 25 questions related to the dental and oral health of their children. Total of 240 questionnaires were sent to the parents through the students. Later on only 215 fully filled questionnaires were returned.

Statistical analysis, in this study, was done using Statistical Package for the Social Sciences Software SPSS version 23 (IBM, Chicago, IL, USA). Data were analyzed for frequencies, percentage, mean and standard deviation.

RESULTS

The study included 215 parents, with a response rate of 89.58%. Of the total of 215 study subjects, all were females (100%). Majority of the participants (66.5%) had education level of bachelor's degree. The frequency of youngest children was between the age of 7-12 years (82.3%).

About 88.8% of the parents think that the dental and oral health is very important for their children's overall health. 77.2% participants thought the first visit to the dentist should be done before 1 year of age. 77.2% participants were aware that primary teeth were as important as the permanent teeth. 96.7% of the participants believed that the main causative agent of cavities in teeth was eating too much sugar. 84.7% of parents responded that their children consumed sugary snacks or drinks daily (Table 1).

About 66% of the parents claimed that their children brushed their teeth twice daily but 83.7% of the parents never supervised their children while brushing. All the participants (100%) in this study were unaware of the importance of fluoride in preventing tooth decay. About 93% of the parents

never visited their children to the dentists. The higher cost of treatment for children prevented 95.3% of the parents from taking their children to the dentists. 94.4% of the parents were worried about their child's dental health. 96.3% of parents believed that the schools should provide dental health education (Table 1).

DISCUSSION

Parents play a significant role in raising awareness about oral and dental health and ensuring adherence to treatment processes. Nevertheless, a lack of knowledge, anxiety, or misconceptions about oral and dental procedures often negatively affects this cooperation. Parental attitudes and knowledge about oral health are critical factors that directly impact children's experiences during dental visits and their long-term oral and dental health.⁸

The American Academy of Pediatric Dentistry (AAPD) recommends that children have their first dental visit between 6 months and 1 year of age and attend regular dental check-ups every six months. Regular dental examinations help detect children's oral and dental problems early, including changes in tooth color.⁹ In the study by Tokuç et al., it was reported that nearly 50% of the children were taken to the dentist for the first time between the ages of 4–6 due to dental pain.¹⁰ Studies frequently report that parents tend to take their children to the dentist only when complaints arise.^{10,11} In another study, Alaa et al. found that most parents believed their children's first dental visit should occur between the ages of 3–6.¹² In this study, 166 (77.2%) parents reported that the first dental visit should be before the age of 1. Parents should be actively educated to ensure that their children receive preventive care and maintain oral health before the onset of dental caries.

Access to oral and dental health services is an important factor affecting a child's oral and dental health. Low income and educational levels delay access to these services and complicate the general health of their children. In families with low income, social and financial constraints prevent giving adequate importance to oral and dental health, with related expenditures often being deprioritized. Consistent with the findings of other studies in the literature.^{8,10}

Untreated carious primary teeth can lead to various complications, including pain, infection, eating and sleeping problems, growth and developmental delays and early loss of teeth.¹³ Caries in primary teeth can significantly impact children's growth and development and may result in serious infection. According to the American Dental Association (ADA), children with healthy primary teeth are more likely to have healthy permanent teeth. Additionally, it is well established that caries in the primary dentition increases the risk of caries

development in the permanent dentition.¹⁴ In the study by Winnier et al., 71.8% of parents stated they preferred visiting a dentist for the treatment of primary teeth, whereas 28.2% managed the situation by using medication only, assuming the primary teeth would naturally fall out.⁸ Another study found that 43.6% of participants believed that primary teeth do not require proper care because they will eventually fall out.¹⁵ These findings are supported by other studies in the literature.¹⁶ On contrary, in this study, 77.2% of parents considered primary teeth an integral entity in child's health and were concerned regarding the primary teeth.

Dentistry adopts the view that early interventions can reduce or even eliminate future caries. Children who receive preventive dental care early in life are more likely to utilize future preventive services and incur lower dental treatment costs. Therefore, educating parents on oral and dental health should primarily aim to prevent caries in children. Evidence shows that such education is highly effective in reducing caries incidence.^{17,13}

Recently, fluoride applications are among the most common and effective methods for preventing dental caries. Topical fluoride applications that come into contact with enamel are particularly effective in caries prevention. According to a study by Jahandideh et al., 51.5% were unaware of the role of fluoride in preventing caries. In the study by Abdat et al., 50% of mothers reported not knowing that fluoride could prevent caries.⁹ Conversely, Abduljalil et al. found that 64.7% of parents were aware of fluoride's role in preventing dental caries.¹⁸ In a 2016 study, 69% of participants reported not knowing whether their toothpaste contained fluoride, and only 31% believed fluoride-containing toothpaste should be used.¹⁶ Similarly, Sabbagh et al. found that 75.6% of participants were unaware of pit and fissure sealants, a finding corroborated by Sowmya et al.^{19,20} In this study, 100% of parents stated that they were unaware of the role of fluoride to make teeth more resistant to decay.

The number of children brushing their teeth twice daily was comparatively higher. 66% of parents reported that their children brushed twice a day. Adair et al. stated that children are more likely to be caries free if their teeth are brushed twice daily with fluoride toothpaste, with parental involvement and in an environment where sugar is controlled.²³ In this study, 96.7% of the parents were aware that eating too much sugar

can cause tooth decay. The results of this study were in support to the results of studies conducted by Moulana et al. and Wyne et al.^{21,22}

Increasing parents' knowledge about children's oral health, raising awareness of the importance of regular dental check-ups, and fostering positive attitudes toward their children's oral health underscore the need for more effective educational programs. Additionally, it is evident that health policies should focus on promoting more accessible and cost-effective services that encourage children's oral and dental health. Strengthening community-based interventions is crucial for enabling parents to adopt more informed behaviors regarding their children's oral health.

CONCLUSION

One of the biggest obstacles parents face in providing oral and dental health services for their children is a lack of awareness. Parents often visit the dentist only when necessary and fail to benefit from professional dental care. This situation may stem from insufficient information provided to parents by healthcare and social service workers about oral and dental health, leading to a lack of awareness. Moreover, a low level of parental education is considered one of the factors contributing to insufficient knowledge about their children's oral and dental health. Considering that oral health habits acquired during childhood have lasting effects throughout life, parental awareness initiatives and the development of community-based oral health policies are of great importance.

CONFLICT OF INTEREST: None

FINANCIAL DISCLOSURE: None

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AVAILABILITY OF DATA AND MATERIALS: The datasets used and analyzed for the study are available from the corresponding author upon reasonable request.

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