

# Assess the Knowledge Regarding Oral Hygiene Habits among School-Age Children in a Selected Schools in Kannur District

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**Abstract:** The study titled "Assess the Knowledge Regarding Oral Hygiene Habits among School-Age Children in a Selected School in Kannur District" aimed to evaluate the level of awareness and practices related to oral hygiene in children aged 10–13 years. A non-experimental descriptive design was adopted, and data were collected from 30 participants using convenience sampling and structured questionnaires. The findings revealed that none of the children exhibited excellent knowledge, 6.7% had good knowledge, 56.6% had average knowledge, and 36.7% had poor knowledge about oral hygiene. A significant association was observed between the children's age and their knowledge, but no association was found with other socio-demographic variables such as gender, parental education, and family history of dental issues. The study underscores the need for improved oral health education and awareness programs targeted at school-age children to prevent dental diseases and promote better oral health practices.

**Keywords:** Assess, Knowledge, Oral Hygiene Habits, School-Age Children.

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## I. INTRODUCTION

Oral hygiene is a crucial component of overall health, particularly in children, as it influences their physical, social, and emotional well-being. Poor oral hygiene practices can lead to preventable issues such as dental caries, periodontal diseases, and other complications that adversely affect growth and quality of life. Globally, oral diseases impact 3.5 billion people, with children in low- and middle-income countries being most affected. In India, over 70% of schoolchildren experience dental caries, highlighting an urgent need for improved awareness and preventive strategies in oral hygiene. Despite the critical role of oral hygiene, many children lack proper knowledge and habits, often due to limited guidance and unhealthy dietary practices.

Studies have consistently demonstrated the prevalence of poor oral health knowledge and its consequences. Research in Chennai (Priya et al., 2012) found that only 30% of children had adequate oral health awareness, while a study in Panchkula (Mehta et al., 2012) revealed that less than half

brushed their teeth more than once a day. Similarly, Kamath and Ananth (2014) reported that while 52% of rural Mangalore children brushed twice daily, advanced knowledge of oral hygiene was lacking. These findings underscore the pressing need for targeted educational programs to bridge the knowledge gap and promote effective oral hygiene practices among school-aged children. This study aims to assess the knowledge of oral hygiene habits among children in Kannur district, identify gaps, and explore associations with socio-demographic variables to guide future interventions.

## II. MATERIALS AND METHODS

The study was conducted in a selected school in Kannur district to assess the knowledge of oral hygiene habits among school-age children. A descriptive non-experimental design was employed, and the sample size consisted of 30 children aged 10–13 years. The participants were selected using a convenience sampling technique. The demographic variables included age, gender, religion, type of family, parental

education, parental occupation, previous knowledge of oral hygiene, family history of dental diseases, and any prior history of dental issues.

A structured questionnaire was developed as the tool for data collection. It comprised two sections: demographic variables and 30 multiple-choice questions assessing knowledge of oral hygiene. The tool was validated by nursing experts, and necessary modifications were made based on their feedback. Data collection was carried out with prior permission from the school authority and informed consent from participants. Ethical clearance was obtained from the research committee of Canossa College of Nursing. Privacy and confidentiality were maintained throughout the study by anonymizing participant information and ensuring that the data was used solely for research purposes.

The data collection process involved administering the questionnaire to participants in a classroom setting, ensuring a standardized environment. The study was limited by its small sample size and the use of a convenience sampling method, which may affect generalizability. Furthermore, the reliance on self-reported data could introduce bias. Despite these limitations, the study provides valuable insights into the oral hygiene knowledge of school-age children, paving the way for future research and educational interventions.

### III. RESULTS

The study assessed the knowledge of oral hygiene habits among 30 school-age children in a selected school in Kannur district. The findings revealed that none of the participants (0%) had excellent knowledge, while 6.7% demonstrated good knowledge, 56.6% had average knowledge, and 36.7% had poor knowledge of oral hygiene habits.

Table 1 Frequency and Percentage Distribution of Socio-Demographic Variables

SL. NO	Demographic Variables	Frequency (f)	Percentage (%)
	AGE		
	10 years	17	56.7
	11 years	11	36.7
	12 years	2	6.6
	13 and above	0	0
	GENDER		
	Male	20	66.7
	Female	10	33.3
	RELIGION		
	Hindu	28	93.3
	Christian	0	0
	Muslim	2	6.7
	Others	0	0
	TYPE OF FAMILY		
	Nuclear	14	46.7
	Joint	13	43.3
	Extended	3	10
	FATHER'S EDUCATION		
	Uneducated	1	3.3
	Primary education	9	30
	High school	13	43.3
	Degree and above	7	23.4
	MOTHER'S EDUCATION		
	Uneducated	0	0
	Primary education	5	16.7
	High school	14	46.7
	Degree and above	11	36.6
	FATHER'S OCCUPATION		
	Private	10	33.3
	Government	2	6.7
	Others	18	60
	Nil	0	0
	MOTHER'S OCCUPATION		
	Private	3	10
	Government	3	10
	Others	5	16.7
	Housewife	19	63.3
	PREVIOUS KNOWLEDGE		
	Magazine	1	3.3
	Health member	17	56.7

	Classroom	8	26.7
	Mass media	4	13.3
	<b>FAMILY HISTORY</b>		
	Mother	9	30
	Father	1	3.3
	Siblings	2	6.7
	Others	6	20
	Nil	12	40
	<b>PREVIOUS HISTORY</b>		
	Yes	8	26.7
	No	22	73.3

The analysis of socio-demographic variables showed that the majority of participants were aged 10 years (56.7%), and 66.7% were male. Most children (93.3%) belonged to the Hindu religion, and 46.7% came from nuclear families. Regarding parental education, 43.3% of fathers and 46.7% of mothers had high school-level education. Additionally, 60% of fathers were engaged in occupations such as business or agriculture, while 63.3% of mothers were housewives.

Chi-square analysis revealed no significant association between knowledge of oral hygiene habits and most socio-demographic variables, such as gender, parental education, and family history of dental diseases. However, a significant association was observed between age and knowledge of oral hygiene habits, indicating that age was a determining factor in the level of awareness.

Table 2 Association between knowledge regarding oral hygiene habits among school-age children and selected socio-demographic variables among school-age children

SL.NO	DEMOGRAPHIC VARIABLES	LEVEL OF KNOWLEDGE				DEGREE OF FREEDOM	CHI SQUARE CALCULATED VALUE	TABLE VALUE	SIGNIFICANCE
		E	G	A	P				
1.	AGE								
	10 years	0	1	9	7400				
	11 years	0	1	6		9	27.93	16.92	*Association
	12 years	0	0	2					
	13 and above	0	0	0					
2.	GENDER								
	Male	0	1	107	92	3	6.74	7.82	No association
	Female	0	1						
3.	RELIGION								
	Hindu	0	2	17	9				
	Christian	0	0	0	020	9	1.08	16.92	No association
	Muslim	0	0	0					
	Others	0	0	0					
4.	TYPE OF FAMILY								
	Nuclear	0	1	10	380				
	Joint	0	1	4		6	7.47	12.59	No association
	Extended	0	0	3					
5.	FATHER'S EDUCATION								
	Uneducated								
	Primary education	0	0	1	0				
	High school	0	1	6	2	9	4.97	16.92	No association
	Degree and above	0	0	8	5				
6.	MOTHER'S EDUCATION								
	Uneducated								
	Primary education	0	0	0	0				
	High school	0	1	2	2	9	2.40	16.92	No association
	Degree	0	1	8	5				
		0	0	7	4				

7.	FATHER'S OCCUPATION Private Government Others Nil	0 0 0 0	2 0 0 0	5 1 1 0	3 1 7 0	9	4.93	16.92	No association
8.	MOTHER'S OCCUPATION Private Government Others Housewife	0 0 0 0	0 0 0 2	1 2 3 10	2 1 2 7	9	13.77	16.92	No association
9.	PREVIOUS KNOWLEDGE Magazine Health member Classroom Mass media	0 0 0 0	0 2 0 0	1 9 5 2	0 6 3 2	9	2.66	16.92	No association
10.	FAMILY HISTORY Mother Father Siblings Others Nil	0 0 0 0 0	1 0 1 0 0	5 1 0 4 7	30125	12	9.41	21.03	No association
11.	PREVIOUS HISTORY Yes No	0 0	1 1	4 13	38	3	0.72	7.82	No association

These findings highlight a gap in oral hygiene knowledge among school-age children and the need for targeted educational interventions to improve awareness and practices in this population.

#### IV. DISCUSSION

The study evaluated the knowledge of oral hygiene habits among school-age children in Kannur district and revealed that the majority (56.6%) of children had average knowledge, while 36.7% had poor knowledge. Only 6.7% demonstrated good knowledge, and none had excellent knowledge.

These findings align with prior studies, such as those by Priya et al. (2012) and Mehta et al. (2012), which also highlighted significant gaps in oral hygiene awareness among children. The lack of excellent knowledge suggests a pressing need for educational initiatives tailored to this population.

The significant association between age and knowledge levels indicates that as children grow older; their awareness of oral hygiene improves, potentially due to increased exposure to health education or parental guidance. However, no significant associations were found with other socio-demographic factors such as parental education or family history of dental diseases.

This finding underscores the importance of age-appropriate and targeted educational interventions in schools to address knowledge gaps and instill lifelong oral hygiene practices.

#### V. CONCLUSION AND RECOMMENDATIONS

The study concluded that the knowledge of oral hygiene habits among school-age children was predominantly average or poor. These findings emphasize the need for improved oral health education programs in schools. Recommendations include:

- Implementing structured oral hygiene education sessions for children, with age-appropriate content.
- Engaging parents and teachers in oral health promotion to ensure consistent reinforcement of good practices.
- Conducting community-based awareness campaigns to address broader gaps in oral hygiene knowledge.
- Encouraging regular dental check-ups and introducing practical demonstrations, such as proper brushing techniques, in schools.

These efforts can help bridge knowledge gaps and promote better oral health practices among children, fostering healthier communities in the long term.

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INSTITUTIONAL ETHICS COMMITTEE

Ms. Gladys Santhosh

29<sup>th</sup> November 2023

B.Sc. Nursing student

Canossa College of Nursing

Cherukunnu -670301

IEC study ref no. : 112/2023

Dear student,

Sub: Approval of research proposal by the IEC

I wish to inform you that your research project titled "Assess the knowledge regarding oral hygiene habits among school- age children in a selected schools in Kannur district" has been approved by the Institutional Ethics Committee (IEC) Canossa College on 29/11/23.

THE APPROVAL OF IEC IS VALID TILL END OF THIS STUDY.

NOTE THE FOLLOWING:

1. Waiver of consent is not applicable for the student.
2. IEC approval for inclusion of 30 participants only.
3. Submitt annual study status report in the prescribed format
4. Keep the IEC informed of the following:
  - The occurrence of serious adverse events (SAE)/AE/protocol violations and /death, during the study period, in the IEC specified format.
  - Protocol amendment in IEC specified format.
  - (a) Discontinuation (b) Abandonment
5. In case of record review, submit the CMS permission letter to IEC.
6. The IEC will issue the number dues certificate only on submission of study commission report in prescribed format.

With best wishes

Principal, Canossa College of Nursing



Chairperson Ethical Committee