

ASSESSMENT OF KNOWLEDGE ON DENTAL HYGIENE AMONG MIDDLE SCHOOL CHILDREN BETWEEN 6 TO 12 YEARS

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Abstract

Dental hygiene is a fundamental component of preventive healthcare that significantly influences an individual's overall health and quality of life. Proper oral hygiene practices including regular tooth brushing, flossing, and routine dental check-ups are essential for maintaining healthy teeth and gums and preventing common oral diseases such as dental caries, gingivitis, and periodontitis (American Dental Association [ADA], 2020). Despite advances in dental care and increased public awareness, oral health problems remain prevalent across populations worldwide.

Keywords Assessment, children

INTRODUCTION

The World Health Organization (2021) emphasizes that poor oral health is a major public health concern, particularly because it is largely preventable. Inadequate dental hygiene has been linked to a range of systemic conditions including cardiovascular disease, diabetes, respiratory infections, and adverse pregnancy outcomes. This growing body of evidence underscores the importance of integrating oral health education into broader public health strategies.

However, barriers such as limited access to dental services, lack of awareness, and socioeconomic disparities continue to hinder the adoption of proper dental hygiene practices, especially in underserved communities (Centers for Disease Control and Prevention [CDC], 2022). Understanding the factors that influence oral hygiene behaviors is essential for designing effective interventions and educational programs.

One of the key factors in determining children's oral health outcomes is the knowledge and behavior surrounding dental hygiene. Research has shown that many children, particularly those from lower socioeconomic backgrounds, are not well-informed about the importance of oral health and the correct practices for maintaining it (Petersen, 2016). Studies have also highlighted the role of parents and caregivers in shaping children's oral hygiene habits. However, without sufficient knowledge themselves, many parents may struggle to provide the guidance their children need to maintain good oral health. This study focuses on assessment of knowledge on dental hygiene among middle school children between 6 to 12 years

METHODOLOGY

This study was designed as a descriptive cross-sectional study.

setting: The study was conducted for middle school children at Rishi Matric higher secondary school, Ranipet.

population:

"Population is an aggregate of totality of all subjects that possess a set of specification (Polit and Hungler 2004)."

target population:

It refers to the entire group of people or objects to which the research wishes to generalize to study findings. The target population of the present study will be middle school children (6-12 years) who fulfill the inclusion criteria.

accessible population:

Accessible population refers to the portion of the population to which the researcher has reasonable access, may be a subset of the target population in this study, accessible population where the middle school children age between (6 to 12 years) those who were available during the time of data collection.

variables:

Variables are qualities, properties or characteristics of person, things or situation that changes or vary

independent variables:

The independent variable of present study was Demographic characteristics (age, gender, family, place of residence, income, occupation of father and mother).

dependentvariable:

Level of knowledge regarding dental hygiene among middleschoolchildren(9-12years)

SAMPLE:

The sample is a group of people who have been selected from a large population to provide data to researcher. The sample comprised of 50 children since school setting.

SAMPLINGTECHNIQUE:

Sampling technique is the process of selecting the study sample for theresearch. For this study the research will adopts, Convenient sampling Technique.

CRITERIAFORSAMPLINGSELECTION:

INCLUSIONCRITERIA:

1. Childrenwhoarewillingtoparticipateinthestudy
2. Childrenwhoarephysically,mentallyabletoanswerforthestudy
3. Childrenwhoareattheage between6 to 12 years

EXCLUSIONCRITERIA:

1. Children'swhoarenotPresentduringthestudy
2. Childrenwhoarenotwillingtoparticipateinthestudy

SELECTIONOFINSTRUMENTSANDTOOLS:

Section-A Demographic variables.

Section-B- StructuredKnowledgequestionnaire.

DESCRIPTIONOFTHE TOOL:

SECTION-A:

DEMOGRAPHICDATA

It is deal withdemographic variablessuchasageofthe beneficiaries, gender, Placeof residence, religion, education of the beneficiaries.

STRUCTUREDKNOWLEDGEQUESTIONNAIRE:

The questions were selected and three options were given below each questions. The structured questionnaire consisted of 20 multiple choice questions, and each questions had three options which included correct answers. The participants were free to choose any one option for each questions. The score was calculated by dividing the total number of obtained score by the total number of maximum score and expressed in percentage.

SCORINGINTERPRETATION:

S.NO	SCORE	PERCENTAGE	LEVELOFKNOWLEDGE
1	1-9	<40%	Inadequate
2	10-15	40-80%	ModeratelyAdequate
3	15-20	>80%	Adequate

Scoringtechnique=(Number ofCorrectAnswers/TotalQuestions)×100%

DATA COLLECTIONPROCESS:

The prior permission was obtained from the head of the organization. Chosen the selected school After obtaining consent from the study samples, the samples was selected by using Simple Randomsampling technique. The researchers will collect the demographi data of the sample and administer the structure knowledge questionnaire on level of knowledge regarding the dental hygieneThe samples was informed that the anonymity was maintained. The collected data was data analyzed by using descriptive and inferential statistics.

PLANFOR DATA ANALYSIS:

Data analysis enables the researcher to organize summarize evaluate interpret and communicate numerical information. Data analysis was done by using descriptive and inferential statistics.

RESULTS:

Table 1: Frequency and percentage distribution of demographic variables of middle school children (Rishi matric higher secondary school, Ranipet). (N=50)

S.No	Demographic Profile	Components	Frequency	Percentage
1.	Age in years	A) 6-8 years B) 9-10 years C) 11-12 years D) Others	0 4 37 9	0% 8% 74% 18%
2.	Gender	A) Male B) Female	23 27	46% 54%
3.	Type of family	A) Nuclear family B) Joint family C) Extended family	22 28 0	44% 56% 0%
4.	Place of residence	A) Rural B) Urban	20 30	40% 60%
5.	Family income	A) 5000-10000 B) 10000-25000 C) Above 25000	6 28 16	12% 56% 32%
6.	Occupation of father	A) Daily wages B) Farmer C) Private employee D) Government employee	19 12 15 4	38% 24% 30% 8%
7.	Occupation of mother	A) Daily wages B) Home maker C) Private employee D) Government employee	8 36 5 1	16% 72% 10% 2%

P<0.05=Significant, >0.05=Not significant.

The above table-1 depicts the demographic variables of children in middle school (Rishi matric higher secondary school, Ranipet). The above table-1 depicts the demographic variables of students in school (Ranipet). According to the age of the student, 6-8 years, (1%) were in the age 8-9 years, (8%) were in the age of years 9-12 years (72%). Reporting the Gender, the Male and Female were 27 (54%) and 23 (46%) respectively. Determining the place of residence, Rural and Urban were 30 (60%) and 20 (40%) respectively. According to the education, 7th standard 25 student (50%) were in the 8th, standard 25 students (50%) .

TABLE 2- Frequency and percentage distribution of level of knowledge regarding the dental hygiene

S.No	Level of practice	Frequency	Percentage
1.	Inadequate Knowledge	3	6%

2.	Moderatelyadequate	39	78%
3.	Adequateknowledge	8	16%

The above table shows the frequency and percentage distribution of level of knowledge regarding dental hygiene among middle school childrens the level of practice were separated under 3 categories Inadequate knowledge, Moderately adequate knowledge and adequate knowledge according to this 6% percentage students having Inadequate knowledge, 78% students having moderately adequate knowledge and 16% of students having adequate knowledge.

Table 3: Association between demographic variable and level of knowledge regarding dental hygiene among middle school children (N=50)

S.NO	DEMOGRAPHIC VARIABLE	INADEQUATE	MODERATELY ADEQUATE	ADEQUATE	SIGNIFICANCE
1	Age of the student a) 6 to 8 years	0	0	0	Df=5 Chi-s=10.928 P =0.0009 P<0.01 Significant
	b) 8 to 9 years	1	3	0	
	c) 9 to 12 years.	1	32	4	
	d) others	1	4	4	
2	Gender A) Male	3	20	0	Df=2 Chi-s=9.879 P =0.0017 P<0.01 Significant
	B) Female	0	19	7	
3	Type of family A) Nuclear family	1	20	1	Df=4 Chi-s=4.2 P =0.0404 P<0.05 Significant
	B) Joint family	2	19	7	
	C) extended family	0	0	0	
4	place of residence a) urban	0	18	7	Df=2 Chi-s=7.73 P = P<0.01 Significant
	b) rural	3	21	1	
5	Family income a) 5000 to 10,000	0	3	3	Df=4 Chi-s=6.055 P =0.0139 P<0.05 Significant
	b) 10,000 to 25,000	2	23	3	

	c)above 25,000	1	13	2	
6.	occupationoffather a)dailywages	1	16	2	Df=6 Chi-s=4.211 P =0.0402 P<0.05 Significant
	b)farmer	1	9	2	
	c)privateemployee	1	12	2	
	d)governmentemployee	0	2	2	
7.	occupationofmother a)dailywages	1	5	2	Df=6 Chi-s=7.32 P =0.0068 P<0.05 Significant
	b)homemaker	1	31	4	
	c)privateemployee	1	2	2	
	d)governmentemployee	0	1	0	

NS:NotSignificant,S: Significant

P<0.05=Significant,>0.05=Not significant.

The above depicts showed that there is a four significant type of family, family income, occupationofthe father, occupationofthe mother, association betweendemographic variable and three not significant demographic variable age ,gender, place of residence of knowledge of Dental hygiene among middle school children in selected school Ranipet (Rishi matric higher secondary school, Ranipet). Hence the Hypothesis. H1-There will be significant association of knowledge of dental hygiene between selected demographic among school children in selected school with demographic variable among school children was partially accepted.

DISCUSSION

Data analysis shows that the frequency and percentage distribution of sdemographic variables among community peoples based on demographic variables. This table consists of Age, Gender, Family, Place ofresidence, Familyincome ,occupationaloffather, occupation of mother.

Frequency and percentage distribution of level of knowledge regarding Dental hygiene middle school children. Ranipet. 3 (6%) belongs to Inadequate Knowledge, 3(6%) belongs to Moderately adequate knowledge and 39 (78%) were belongs to Adequate Knowledge 8(16%).

The finding showed that there was significant association between the demographic variableand levelofknowledge, ageofthe studentandtheplaceofresidenceat p<0.05level, Hence research hypothesis H2 was partially accepted.

Amini et al. (2021): Oral Health Knowledge and Practices Among Children in Iran was conducted to assess the level oforal health knowledge and practices among primary schoolchildren in Tehran. Cross-sectional survey of 500 primary schoolchildren aged 8–12 years.The study found that while most children were aware of the importance of brushing their teeth, only 45% brushed twice a day, and only 25% used fluoride toothpaste. The majority of children reported consuming sugary snacks at least once a day.

The finding of the study serve as basis for the nursing professional and the students to conduct further studies in different aspects of Dental hygiene. The nursing researcher can do various studies to find out the knowledge of Dental hygiene.

RECOMMENDATIONS:

- ☐ Studies can be including more number of variable.
- ☐ Similar studies can be conducted on large samples so it could be generalized.
- ☐ Nurse researcher can conduct experiments study on Dental hygiene.

CONCLUSION

The main conclusion of this present study was to assess the Knowledge On Dental Hygiene among Middle school children between 6 to 12 Years in a selected school at Ranipet. The excavated results support revealed that there was significant $p < 0.05$ in the knowledge of dental hygiene among middle school children.

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