

A descriptive study to assess the knowledge of oral hygiene among middle school students in selected school of Ranchi, Jharkhand

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Abstract

A descriptive study was undertaken to assess the knowledge of oral hygiene among middle school students in selected School of Ranchi, Jharkhand. The objective of the study was to find the socio demographic profile of the subjects, to assess the knowledge of oral hygiene among the subjects, to find out the association of selected socio demographic variable with knowledge of oral Hygiene. Quantitative research approach was adopted and the research design implies descriptive research design. 100 samples were selected by purposive sampling technique. The data was collected by questionnaires which were divided into two section, Section A- Sociodemographic variables and Section B-Knowledge on oral hygiene. The instrument was developed by the investigator and reliability was found to 0.86. The data were computed and analyzed in terms of percentage and frequency distribution. The findings of the study reveals that majority of students 53% (n=100) had an average level of knowledge regarding oral hygiene; it indicates that middle school students have moderate level of knowledge regarding oral hygiene. The finding reveals that there is significant association, except "Resident" between age, gender, religion, family size, socioeconomic status. After the study the researcher concluded that majority of students were having average knowledge on oral hygiene and there was no significant association found between the Sociodemographic variables.

Keywords: Oral hygiene, Knowledge, Students, Socio demographic variables, Jharkhand.

Introduction

"Poor oral health care can result in poor overall health" (George Taylor)

Health is the level of functional and metabolic efficiency of a living organism. In humans it is the ability of individuals or communities to adapt and self-manage when facing physical, mental or social changes.¹ The World Health Organization (WHO) defined health in its broader sense in its 1948 constitution as "a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity."² Children are the precious gift who is considered to be a resource for future. Healthy children of today will be a healthy citizen for tomorrow.

Poor dental hygiene among the school children has several effects on the children, some more major than others. One of these effects is physical pain which leads to sleeping problems, eating problems and behavioral problems (Low et al., 2000), all of which at such a young age should be avoided as much as possible. The fact is that the little attention paid to the issue of oral hygiene of school aged children especially in the developing countries could be fatally dangerous in advance cases such as in patients with oral cancer, which is the eighth most common worldwide cancer.³ Hence the prevention of dental problems is of utmost importance for school children.

According to American Dental association policy defines oral health as functional, structural, aesthetic, physiologic and psychosocial state of well being and is essential to an individual's general health and quality of life.⁴

A good quality of life is possible if students maintain their oral health and become free of oral disease. A structured questionnaire assessed 785 students' level of oral

health knowledge and practices. About 694(88.4%) students had adequate level of knowledge on causes, prevention, and signs of dental caries, 760(96.8%) on causes and prevention of periodontal diseases, 695(88.5%) on cigarette smoking as cause of oral cancer, and 770(98.1%) students on importance of dental checkups. Majority 717(91.3%) had adequate practice of sugary food consumption; while 568(72.4%) had acceptable frequency of tooth brushing, 19(2.4%) brushed at an interval of twelve hours, and 313(39.9%) visited for checkup. Majority of students had an adequate level of knowledge on oral health but low level of oral health practices. Both genders had similar level of knowledge with male predominance in oral health practices. Age had no influence on the level of oral health knowledge and practices of students.⁵

Dental caries is a major oral health problem in most industrialized countries, affecting 60-90% of school children and the vast majority of adults.⁶ Dental problems are one of the leading problems of children. Oral hygiene is an essential component for prevention of dental diseases.

The children frequently suffer from dental diseases and defects. Dental caries and periodontal diseases are two common diseases in India. Further, they emphasize that a school health program should have provision for dental examination at least once a year and the success of the school health program depends largely on the community health nurse plans the health education in the school provides guidance to the teachers and parents in the matters of oral health.⁷

Maintaining good oral hygiene is considered a lifelong habit. Moreover, these oral habits are said to begin in an early stage of life. In order to follow healthy oral habits, it is important to have good knowledge and attitude towards oral

health. A good knowledge about oral health is essential for oral health related behavior.⁸

The main purpose of dental hygiene is to prevent the buildup of plaques. Poor oral hygiene allows the accumulation of acid producing bacteria on the surface of the teeth. The acid demineralises the tooth enamel causing tooth decay (cavities). Dental plaque can also invade and infect the gums causing gum disease and periodontitis. In both conditions, the effect of poor oral hygiene is the loss of one or more teeth. Many health problems occur in the mouth, such as oral thrush, bad breath and others are considered as the effects of poor oral hygiene.⁹

Most of the dental and mouth problems may be avoided just by maintaining good oral hygiene. Prevention is always better than cure. Good oral hygiene habits will prevent most of the dental problems. Savings the costly dental treatments.¹⁰ Maintaining good dental hygiene should be a lifelong everyday habit. Awareness regarding the importance of oral hygiene has significantly increased in the developed countries, but the modern dietary lifestyle habits are posing a greater risk for oral health. Healthy teeth not only enable to look and feel good that make it possible to eat. Good oral health is very important to the wellbeing of an individual. Daily preventive oral care, with proper brushing and flossing, will help to stop dental problems.⁷

Dental diseases affecting the child are not same as affecting that adult. The target organs are the same like, teeth, gingival, but the etiopathogenesis are different because, primary dentition is morphologically different, food habits are different from that of adult and poor control over maintenance of oral hygiene leads to common dental problems that include dental plaque, dental caries, malocclusion, gingivitis etc.¹¹

Diverse social factors like social status, education, employment status and work condition, physical environment, personal hygiene and health habits, children's healthy development and health services also affect oral health. Oral hygiene habits learnt during childhood are of great importance for one's oral health in later life.¹²

A study conducted by Kamran A et al concluded that Oral hygiene habits, oral health awareness and knowledge level among students is not satisfactory. The participants had poor oral health behavior, insufficient knowledge, incorrect attitude and practice regarding oral health.¹³

The researcher also had an experience from community visit and clinical posting that there are a large number of students suffering from dental caries due to various reasons therefore the researcher felt necessary to conduct a study to assess the knowledge on oral hygiene among middle school children.

Objective

1. To find out the socio demographic profile of the subjects.
2. To assess the knowledge of oral hygiene among the subjects.
3. To find out the association of selected socio demographic variable with knowledge of oral hygiene.

Review of Literature

Priya M. et al.¹⁴ had conducted a descriptive study on "the dental attitudes, knowledge and practice in school children" on 2012 with the aim to investigate the dental attitudes, knowledge and practice of school children in Chennai using a questionnaire. Descriptive research design was used with the sample of 592 subjects (219 males and 373 females). The sampling technique used was simple random method. Data analysis was done using SPSS version 17.0; t-test was used to the mean values. Chi-square test was used to compare the mean values. Result shows that level of knowledge score was statistically significant with $P = 0.004$. There was statistically significant difference with $P = 0.008$ when comparing the frequency of brushing the teeth twice per day among the two different age groups. Comparing the various other factors such as gender, type of school and age groups to the visit to dentist, it was observed that statistically significant difference with $P < 0.0001$ was found when comparing the female children (75.3%) and male children (60.3%) and $P = 0.002$ observed when comparing the younger and older age group who visited the dentist. Therefore the conclusion of the study reveals that overall health knowledge among the surveyed children was low.

Dileep CL et al;¹⁵ had conducted a research survey on "the knowledge, attitude and practice about oral hygiene among teachers" with an aim to assess the knowledge attitude and practice about oral hygiene among teachers in Kanpur. A pilot research study was conducted with the sample of 300 subjects and the sampling technique used was questionnaire method. Data analyses were done by collecting and analyzing the data as percentage, which were based on the number of responses for each variable. The result shows that 84.6% teachers believed that toothbrush was better than finger to clean the teeth while 82.6% teachers had a tendency to change the brush within 2-3 month. Therefore the study concluded that teachers need to be improving their awareness on oral hygiene knowledge, attitude and practice which will facilitate the improvement of oral hygiene awareness among the future citizens.

Mehta A, Kaur G¹⁶ conducted a study on Oral health related knowledge, attitude and practices among 12 years old school children studying in rural areas of Panchkula, India with an aim to assess oral health-related knowledge, attitude, and practices among 12-year-old schoolchildren studying in rural areas of Panchkula, India. A total of 440 children (216 males and 224 females) from 12 schools were included in this study. All the participants were requested to complete a 13-question closed-ended questionnaire. The collected data was analysed using SPSS version 11. The statistical significance of differences between the two genders was determined using the Chi-square test. The findings revealed that only 25% of the participants said that they cleaned their teeth more than once in a day. Thirty-two percent did not clean their teeth daily. Over the preceding 1 year, 45.5% of the children had had some problem with their teeth and/or gums, but only 35.9% visited the dentist. Among these children, 8.2% used

tobacco in some form. Oral health-related knowledge of girls was significantly better than that of boys.

Research Methodology

Research Approach

In the present study a quantitative research approach was found to be suitable to assess the knowledge of oral hygiene among middle school children.

Research Design

The present study follows descriptive research design.

Population

The population of the study comprised of student of middle school (VI-VIII) of selected area of Ranchi, Jharkhand.

Sample and Sample size

The sample in this study is the selected students of middle school of standard VI – VIII. The sample size for the present study is 100.

Sampling Technique

In the present study purposive sampling technique was adopted.

Setting of the study

It is the study environment including the location and experimental setup. The study was conducted among middle school children of class VI-VIII at selected government school of Ranchi.

Tools and Techniques

A self- structured questionnaire was used in the study which consisted of two sections; –

Section A

Demographic variables which include age, gender, religion, size of family, Socio-economic status of the family, residence, and ethnicity

Section B

Knowledge questionnaire on oral hygiene, which includes 30 items

Categorization of knowledge was done based on the scores

1. A score of 1-10 indicates low knowledge.
2. A score of 11-20 indicates average knowledge
3. A score of 21 and above indicates high knowledge

Validity and reliability of the tool

The reliability of the tool was established and the coefficient of internal consistency was computed for self structured tool by using split half technique. Spearman Brown prophecy formula was used to establish the reliability and the result was found to be 0.86, indicating the tool to be reliable.

Results

The data was collected and entered in master sheet. It was interpreted using descriptive and inferential statistics. The data findings were organized and presented under the following section.

Section A: description of socio demographic variable characteristics

Table 1: Distribution of frequency and percentage of selected socio demographic variables

Variables	Frequency	Percentage	
Age	9-10 years	10	10%
	11-12 years	31	31%
	13-14 years	47	47%
	15-16 years	12	12%
Gender	Male	30	30%
	Female	70	70%
Religion	Hindu	85	85%
	Christian	14	14%
	Other	1	1%
Family size	Nuclear family	86	86 %
	Joint family	14	14 %
Socio economic status	Middle socio economic status	6	6%
	Lower socio economic status	94	94%
Resident	Urban	67	67%
	Rural	33	33%
Ethnicity	Tribal	100	100%
	Non-tribal	0	0%

The data presented in table 1 showed the frequency and percentage distribution of selected socio demographic variables of the 100 students. From the table it was It showed that majority of the students were female 70%(n=

70). Data also showed that majority of students 85%(n= 85) belongs to Hindu religion. Data also showed that most of the students 86 % (n =86%) belongs to nuclear family and 14% (n=14) belongs to joint family. Also, 94%(n=93)

belongs to lower socio economic status .Data indicates that 67%(n= 67) resides in urban area and about 33 %(n=33) resides in rural area. All of them belong to tribal ethnicity.

Section B: To assess the level of knowledge regarding oral hygiene among middle school students

Table 2: indicates the scoring of knowledge level regarding oral hygiene.

S. No	Scoring of Knowledge level	Frequency	Percentage
1.	Average knowledge	53	53%
2.	Low knowledge	47	47%

Table 2 indicates that majority of the students had moderate level of knowledge 53%(n =100) and 47% (n=100) have a low level of knowledge regarding oral hygiene.

Section C: It implies association with knowledge level with selected demographic variables.

Table 3: Association of socio demographic variables.

Socio demographic variables		Frequency		X2	Df	Table value	S/NS at 0.05 level
		Low knowledge	Average knowledge				
Age	9-10 years	6	4	4.184	3	3.84	NS
	11-12 years	18	13				
	13-14 years	27	20				
	15-16 years	4	8				
Gender	Male	14	16	0.0019	1	3.84	NS
	Female	33	37				
Religion	Hindu	40	45	0.2011	1	3.84	NS
	Christians	8	7				
Family size	Nuclear	44	42	2.461	1	3.84	NS
	Joint	4	10				
Socio economic status	Middle	2	4	0.55	1	3.84	NS
	Low	46	48				
Resident	Urban	26	41	6.87	1	3.84	S
	Rural	22	11				

Table 3 indicates that all socio demographic variables except “Resident” have lower chi- square value than tabulated value. As per comparison of the tabulated value and chi –square value at 0.05 levels, the majority shows that there is no significant association between socio demographic variables and knowledge among middle school students regarding oral hygiene.

Conclusion

The study was conducted on 100 students of selected middle schools in Ranchi Jharkhand”. The researcher used self structured questionnaire to assess the knowledge regarding oral hygiene. The findings show that there is no significant association between the knowledge and socio demographic variables regarding oral hygiene among middle school students.

Conflict of Interest: None.

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