

A COMPARATIVE STUDY TO ASSESS THE LEVEL OF KNOWLEDGE REGARDING ORAL HYGIENE AMONG SCHOOL AGE CHILDREN IN SELECTED GOVERNMENT AND PRIVATE SCHOOLS AT UDAIPUR

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Abstract

Oral hygiene is associated with keeping teeth- gums & tongue clean and healthy. Children have less knowledge about oral hygiene and impact of bad oral hygiene on overall health. Therefore present study aims to assess and compare the knowledge regarding oral hygiene among school age children studying in selected private and government schools of Udaipur district. Quantitative non experimental comparative research design was used to conduct study. Only 60 children were selected as samples based on exclusion and inclusion criteria through non-probability convenient sampling techniques. The mean knowledge score of children was 15.96 ± 2.88 , whereas mean knowledge score of private school children was 16.4 ± 3.035 and government school children mean knowledge score was 15.36 ± 2.84 . The findings revealed that there was no significant association between knowledge score with selected demographic variables of children and there was no significant difference in the knowledge score of private and government school children.. Study concluded that oral hygiene among school children must be addressed preferably for healthy life of tomorrow's youth.

Keywords: Oral hygiene, school children, government school, private school, knowledge.

INTRODUCTION

Oral health is an important part of general health of body. Unfortunately, oral hygiene practice is very low in our society. Dental carries and periodontal problems are due to poor oral hygiene practices.¹ Several factors including poor dietary and oral hygiene habits as well as social class have been reportedly related to caries occurrence in preschoolers.² It is further reported that those in the lower social classes tend to have higher caries occurrence.³ Oral self-care practices have been proved to be an effective preventive measure at individual level for maintaining good oral health as par of general health. Studies have shown that brushing, particularly with fluoride tooth pastes, reduces dental caries. Regular dental checkup and non-smoking are recommended for maintaining optimal oral health. To improve oral health of the populations, WHO has set the promotion of self care of as one of the goals for the year 2020. Recommended oral self-care (ROSC) includes tooth brushing more than once a day, lesser consumption of sugar containing snacks once daily or rarely and regular use of fluoride containing tooth paste.⁴ Oral hygiene practice is an important step towards good oral health. Baral et al conducted a study to obtain information on methods of brushing, frequency of brushing and the material that the school children use for brushing children use for brushing.

Result shows that majority children (60%) brush once a day. Lack of oral hygiene awareness is the key factor for poor oral hygiene and poor oral health.² Though many studies are conducted in different parts of the World, the review of literature indicates that there is a great deficiency in baseline data concerning the oral health of Indian school children. Hence an attempt has been made to determine the oral hygiene status of school children of age 8- 12 years. The high incidence of oral problems in school children provoked us to select the following topic for the study.

OBJECTIVES

1. To identify level of knowledge regarding oral hygiene among school age children.
2. To compare the level of knowledge regarding oral hygiene practices among school age children of government & private schools.
3. To find out the association of level of knowledge with selected socio-demographic variable.

HYPOTHESIS (AT 0.05 SIGNIFICANCE LEVEL)

H₁: There will be significant difference in the level of knowledge of school age children of government & private schools

H₂: There will be significant association between levels of knowledge and the selected socio-demographic variable

RESEARCH METHODOLOGY

Research approach

Quantitative and evaluative approach was used for the study

Research Design

Non experimental comparative research design was used to conduct study.

Research Setting

Study was conducted at Vidya Niketan Senior secondary school and St. Anthony Senior secondary school Udaipur.

Population

Study population consisted of all children who were between 8-15 years of age in selected schools.

Sampling technique and sample

60 students selected through non-probability convenient sampling technique.

Research Tool

The tools selected for the present study divided in two sections.

Section I

Socio-demographic variables included 15 items such as age, education, gender, religion, occupation, monthly income, type of family, birthing order, status of mother, dietary pattern of family and profession of father.

Section II

Structured knowledge questionnaire to assess the level of knowledge regarding oral hygiene. Structured questionnaire consists of 24 questionnaires for assessing the knowledge of children. Based on total scores obtained, the level of knowledge divided into three levels. Those who scored below 0-8 were in poor level of knowledge category, between 9-17 were in average level of knowledge category and between 17-24 were in good level of knowledge category

Prior to tool administration all subjects were given an information sheet, explaining the purpose and outcome of study. Informed consent was taken from participants and self explanatory tools were administered to participants. Permission for study was taken from concerned authorities

RESULTS

According to **table 1**, out of 60 students, 53 (88.33%) were from the age group of 12-13 years, 50 (83.33%) were males, 60 (100%) belonged to Hindu religion, 37 (61.66%) were having Nuclear family, 60 (100%) were having pucca house, 47 (78.33%) were residing in urban community, father of 19 (31.66%) students were literate, mother of 21(35%) students were literate, 20 (33.33%) students family was having monthly income below and equal to 10,001 - 15,000, 32 (53.66%) students were having < 2 number of brother and sisters in family, 25(41.66) students were having second birth order in family, father of 32(53.33%) students were doing business, mother of 47(78.33%) students were house wives and 50 (83.33%) student had vegetarian type of dietary pattern.

The data given in **table 2** revealed that, among 60 school age children, 34 (56.67%) children were having average knowledge score and 26 (43.33%) children were having good level of knowledge. As per **table 3**, While comparing in between govt. and private school children, among 30 private school age children, 15 (50%) children from private schools were having average knowledge score and 15 (50%) children from private schools were having good level of knowledge while among 30 govt. school age children, 19 (63.33%) children from govt. schools were having average knowledge score and 11 (36.67%) children from govt. schools were having good level of knowledge.

The overall mean knowledge score among school age children was 15.88, and SD was 2.96. Whereas according to **table 4** mean knowledge score of private school children was 16.4 ± 3.035 and government school children mean knowledge score was 15.36 ± 2.84 . From table-4 it is well depicted that the value of unpaired 't test is 1.3601 (2.00) shows that there is no statistically significant difference in the level of knowledge regarding oral hygiene of school age children of government and private schools. Hence the research hypothesis H_1 was rejected.

The data in **table 5** shows that there is no significant association between level of knowledge and selected demographic variables such as age, school, gender, religion, monthly income, type of family, house facilities, community, father education, mother education, number of brothers and sisters in family, birth order in family, profession of father, profession of mother and dietary pattern of family, at < 0.05 level. Hence the research hypothesis H_2 was rejected.

Table: 1. Distribution of sample according to socio demographic variables (N=60)

S. No.	Demographic Variables	Samples	
		Freq.	%
1	School		
a)	Govt.	30	50%
b)	Private	30	50%
2.	Age (in years)		
a)	8-9 years	00	00
b)	10-11 years	00	00
c)	12-13 years	53	88.33%
d)	14-15 years	07	11.67%
3	Gender		
a)	Male	50	83.33%
b)	Female	10	16.67%
4.	Religion		
a)	Hindu	60	100%
b)	Muslim	00	00
c)	Christian	00	00
d)	Others	00	00
5	Type of family		
a)	Nuclear	37	61.67%
b)	Joint	23	38.33%
6	House facility		
a)	Kaccha House	00	00
b)	Pucca House	60	100%
7	Community		
a)	Rural	13	21.67%
b)	Urban	47	78.33%
8.	Father's Educational status		
a)	Illiterate	02	3.33%
b)	Literate	19	31.67%
c)	Matriculate	16	26.66%
d)	Graduate	16	26.66%
e)	Post Graduate	07	11.67%
9.	Mother's Educational status		
a)	Illiterate	05	8.33%
b)	Literate	21	35%
c)	Matriculate	15	25%
d)	Graduate	13	21.67%
e)	Post Graduate	06	10%
10.	Monthly income		
a)	Below 5000 Rs.	08	13.33%
b)	5001-10000 Rs.	16	26.66%
c)	10001-15000 Rs.	20	33.33%
d)	Above 15000 Rs	16	26.66%
11	Number of brother and sisters in the family		
a)	< 2	32	53.33%

b)	> 2	28	46.67%
12.	Birth order in the family		
a)	1	14	23.33%
b)	2	25	41.67%
c)	3	13	21.67%
d)	Above 3	08	13.33%
13.	Profession of father		
a)	Service	25	41.67%
b)	Business	32	53.33%
c)	Labour	00	00
d)	None	03	5%
14.	Profession of mother		
a)	House wife	47	78.33%
b)	Employed	10	16.67%
c)	Self employed	03	5%
d)	Labour	00	00
15.	Dietary pattern of the family		
a)	Vegetarian	50	83.33%
b)	Non vegetarian	01	1.67%
c)	Both a and b	09	15%

Table: 2- Level of knowledge among school children regarding oral hygiene.

Level of knowledge among school children regarding oral hygiene	Knowledge Score (N=60)	
	Freq.	%
Poor Knowledge (0-8 score)	00	00
Average Knowledge (9-17 score)	34	56.67%
Good Knowledge (17-24 score)	26	43.33%

Table 3 Comparison of govt. school and private school children knowledge regarding oral hygiene

Level of knowledge among school children regarding oral hygiene	Knowledge Score			
	Private School (n=30)		Govt. School (n=30)	
	f	%	f	%
Poor Knowledge (0-8 score)	00	00	00	00
Average Knowledge (9-17 score)	15	50%	11	36.67%
Good Knowledge (17-24 score)	15	50%	19	63.33%

Table: 4 Govt. and private school children knowledge regarding oral hygiene. N=60

Knowledge score	Mean	Mean %	SD	df	Unpaired 't' value	p-value
Private School	16.4	68.33%	3.03	58	1.3601(NS)	0.17908
Govt. School	15.37	64.05%	2.84			

Table: 5 Associations between scores of knowledge in children with socio-demographic variables
N=60

S. No.	Variables	Poor	Average	Good	df	χ^2
1	School					
a)	Govt.	00	19	11	1	1.085NS
b)	Private	00	15	15		
2.	Age (in years)					
a)	8-9 years	00	00	00	1	2.536NS
b)	10-11 years	00	00	00		
c)	12-13 years	00	32	21		
d)	14-15 years	00	02	05		
3	Gender					
a)	Male	00	31	19	1	3.47 NS
b)	Female	00	03	07		
4.	Religion					
a)	Hindu	00	34	26	1	1.06 NS
b)	Muslim	00	00	00		
c)	Christian	00	00	00		
d)	Others	00	00	00		
5	Type of family					
a)	Nuclear	00	23	14	1	1.16NS
b)	Joint	00	11	12		
6	House facility					
a)	Kaccha House	00	00	00	1	1.06NS
b)	Pucca House	00	34	26		
7	Community					
a)	Rural	00	08	05	1	.016NS
b)	Urban	00	26	21		
8.	Father's Educational status					
	Illiterate					1.68 NS
a)	Literate	00	01	01	4	
b)	Matriculate	00	13	06		
c)	Graduate	00	08	08		
d)	Post Graduate	00	08	08		
e)		00	04	03		
9.	Mother's Educational status					
	Illiterate					2.10NS
a)	Literate	00	04	01	4	
b)	Matriculate	00	13	08		
c)	Graduate	00	07	08		
d)	Post Graduate	00	07	06		
e)		00	03	03		
10.	Monthly income					
a)	Below 5000 Rs.	00	03	05	3	1.51NS
b)	5001-10000 Rs.	00	10	06		
c)	10001-15000 Rs.	00	12	08		
d)	Above 15000 Rs	00	09	07		
11	Number of brother and sisters in the family					
a)	< 2	00	21	11	1	2.22NS
b)	> 2	00	13	15		

12.	Birth order in the family					
a)	1					0.82NS
b)	2	00	09	05	3	
c)	3	00	13	12		
d)	Above 3	00	08	05		
		00	04	04		
13.	Profession of father					
a)	Service	00	13	12	2	1.33 NS
b)	Business	00	20	12		
c)	Labour	00	00	00		
d)	None	00	01	02		
14.	Profession of mother					
a)	House wife	00	28	19	2	1.96NS
b)	Employed	00	03	07		
c)	Self employed	00	03	00		
d)	Labour	00	00	00		
15.	Dietary pattern of the family					
a)	Vegetarian	00	28	22	2	0.77NS
b)	Non vegetarian	00	01	00		
c)	Both a and b	00	05	04		

S- Significant

NS- Not significant

DISCUSSION

The present study was aimed at assessing the baseline knowledge of school age children regarding oral hygiene. The key focus of the present study was oral hygiene as many studies and reports revealed prevalence of poor oral hygiene among school age children.

A study conducted by **Konwar G et al (2019)** highlighted that majority of students 53% (n=100) had an average level of knowledge regarding oral hygiene.⁵ Present study revealed that school age children were having average (56.67%) and good (43.3%) level of knowledge regarding oral hygiene. Our finding supported by a study conducted by **Nayana & Umarani J. (2014)** with the similar results.⁶

Our study found that there was no statistically significant difference in the level of knowledge regarding oral hygiene of school age children of government and private schools. The similar results were supported partially by a study conducted by **Prinkya N et al (2021)**⁷. A study conducted by **Reddy KS et al (2018)**⁸ also partially supported findings of our study about comparison of knowledge between school age children of government and private schools regarding oral hygiene.

Present study found that there was no significant association between level of knowledge and selected demographic variables such as age, school, gender, religion, monthly income, type of family, house facilities, community, father education, mother education, number of brothers and sisters in family, birth order in family, profession of father, profession of mother and dietary pattern of family. Our finding also partially supported by the study conducted by **Patel Kisha et al (2017)**⁹ which revealed that there was significant association between knowledge and practice with selected demographic variables such as gender, educational status, ordinal position in the family, education of parents, any previous knowledge regarding oral hygiene and source of knowledge, only no. of children in the family (12.10) was not significant at 0.05 level. Thus it can

be interpreted that there is a no significant association between knowledge and practice of school age children with their no. of children in the family. Our study findings also supported partially with similar findings from the study conducted by **Abolia et al (2009)**¹⁰.

CONCLUSION

The study concluded that there was average level of knowledge among school age children without any statistical difference between govt. and private school. This study also showed that there was no significant association between the knowledge score and the demographic variables of the school age children. Further study suggest for educational intervention to promote proper oral hygiene among school age children.

LIMITATIONS

Though, the study was conducted with the best efforts, still perfection is rare and following limitations can be outlined- The small size of the sample made it difficult to draw generalization, Convenient sampling technique was used for conducting this study which restricts the generalization of result. A structured questionnaire was used for data collection which restricts the amount of information that can be obtained from the respondents, only knowledge was assessed; no attempt was made to assess their attitudes and practice due to time shortage and less resources.

Source of Funding

Researcher had self-financed the present study.

Conflict of Interest

There was no conflict of interest involved while conducting the present study.

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