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Research Article

A KAP (KNOWLEDGE, ATTITUDE AND PRACTICE) STUDY ON ORAL HYGIENE AMONG SCHOOL GOING CHILDREN IN AND AROUND PALAYAMKOTTAI GOVERNMENT SCHOOLS

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ABSTRACT

Health is a basic right enjoyed by every person, and oral health is an integral part of health. Childhood is an important stage in life where a child begins to display reflexes that promote general hygiene habits. It is important to have a good oral health status in order for a child to have self-esteem, self-confidence, as well as to concentrate in class. Knowledge and attitude of parents promote oral hygiene habits in children. An application of basic health surveys in oral health presents a sound foundation in evaluating the oral health status of a given population, as well as its needs in the future. The objective of the present study is to access the knowledge, attitude, and practice of school children towards oral hygiene. In this descriptive study, a total of 350 school children from Government Schools in and around Palayamkottai were recruited. A closed-ended questionnaire was used as a data collection instrument in the present survey. In general, the participants had low knowledge, good attitude, and low practice regarding oral health. There exists a weak positive correlation between the three variables: knowledge, attitude, and practice. The evaluation of the KAP status of the people will be helpful in conducting an evaluation in the future. Moreover, it will assist public health administrators in evaluating the effectiveness of public health programs planned in a particular area.

INTRODUCTION

The World Health Organization defines oral health as the state of the mouth, teeth, and orofacial structures that facilitate essential functions including eating, breathing, and speaking, while also encompassing psychosocial dimensions such as self-confidence, well-being, and the ability to socialize and work free from pain, discomfort, and embarrassment. Furthermore, the state of oral health covers the full range of the life course, from young ages through to old age, and is an integral part of general health, enabling all people to contribute to society as well as realize their full potential. The WHO Global Oral Health Status Report, 2022, estimated that there are almost 3.5 billion people worldwide suffering with oral diseases.

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Worldwide, 2 billion people are estimated to be suffering from caries among their permanent teeth, with 514 million children suffering from caries among their primary teeth.

Health is one of those essential rights provided to a human being. Oral health is a state of well-being related to general health. Children are those who are going to adopt reflexes in maintaining attitudes towards general hygiene habits. It is the responsibility of parents, teachers, and children themselves to be aware of the significance of oral hygiene. Children can be targeted in order to educate them and motivate them to adopt oral health habits. It is very critical to introduce oral health education in their regular curriculum because this can be implemented at the school level, and this will help in granting awareness as well as developing oral health habits to avoid oriental problems.

"Healthy Smiles, Happy Minds"

As children return to school, their overall health and well-being should be a top priority. One important area that is often ignored is oral hygiene. Having good oral health is vital for a child's self-

esteem, confidence, and ability to concentrate in class. Neglecting oral hygiene can result in painful cavities, unpleasant breath, and even affect how well they can eat. According to the World Health Organization (WHO), more than 90% of children worldwide experience tooth decay. Developing good oral hygiene practices from a young age can help prevent these problems and encourage a lifetime of healthy smiles. Oral diseases remain a significant public health issue globally. Poor oral health can lead to other health conditions and contribute to chronic illnesses. People with poor oral hygiene are at higher risk of developing infections such as endocarditis, digestive issues, heart disease, stroke, bacterial pneumonia, and pre-term birth.

Parental understanding and views on oral health can help in teaching their children proper oral hygiene habits. Simple surveys on oral health offer a reliable way to evaluate the present condition of a population's oral health and identify future needs for dental care. Having knowledge about oral health is seen as a key requirement for adopting healthy habits and improving overall oral well-being. Starting healthy practices early in life makes it easier to maintain them over time. This study aims to understand the current level of knowledge, practices, and awareness regarding oral hygiene among school children in and around Palayamkottai Government Schools.

The goal of this study is to assess the knowledge, attitudes, and practices of school children towards maintaining oral hygiene.

- To validate the collected information about children oral hygiene via survey.
- To demonstrate the collected data in statistical view.
- To reveal the relation or association of this study with sociodemographic variables.

MATERIALS AND METHODS

Study type: Descriptive study

Study design: Cross - sectional study

Study area: Government Schools in and around Palayamkottai

- Aasath Corporation Primary School, Melapalayam.
- Kaaithe Milleth Corporation Primary School, Melapalayam.
- Corporation New Middle School, Vannarpettai.
- Corporation Old Primary School, Vannarpettai.
- Corporation Middle School, Manakaavalam Pillai Street, Palayamkottai.
- Corporation Middle School, Perumal kovil Street, Palayamkottai.

Study period: 4 Months (June 2024 – September 2024)

Sample size: 350 samples

Sampling procedure: non random sampling

Criteria for inclusion:

- Age group 6-13 years
- Both male and female children
- Parents and children who are willing

Criteria for exclusion:

- Age below 6 years and above 13 years
- Parents and children who are not willing

Method of approach: Questionnaire method

Data collection

Information was collected through questionnaire method from their parents which implies the knowledge, attitude and practice of Children on Oral Hygiene.

Data collection procedure

After getting approval from IEC and permission from Block Educational Officer and concerned Head master of Schools, the study was carried out through field survey. The participants were well informed about the study and an informed consent form was obtained from parents and assent form from children.

Data analysis

The collected data were recorded in a Microsoft Excel spreadsheet. The data was analysed using the Statistical Package for Social Science (SPSS - 22).

Questionnaire type

The Questionnaire consists of Closed format questions (WHO based questions). Questionnaire was taken in English language and translated to their local language (Tamil).

Quality assurance

The protocol was reviewed by IEC and the whole procedure of the research was supervised by guide and faculties of Kuzhanthai Maruthuvam Department.

Bias and limitations

There were no interventions to the participants at the time of study. Questions were asked relevant to this study in a proper manner, so the quality of the study is free from bias.

Human participation procedure:

***** No possible risk for the individual during the study

*The personal information of the participants will be kept in a confidential manner.

*The investigator informed about the study to the children and their parents

*The study conducted only after their consent.

Content Theme of Questionnaires

Questionnaires

The questionnaire included information about socio-demographic details and comprised a scored tool with 7 questions on knowledge, 7 questions on attitude, and 6 questions on practice related to oral hygiene.

Data Collection Procedure

Participants were given a standardized, closed-ended questionnaire based on the WHO oral health questionnaire for children. The questions were presented in both the local dialect and English. It was a multiple-choice format, and participants were asked to select the most appropriate answer.

The questionnaire was divided into four sections. In the first section, questions were used to gather information about the socio-demographic background of the participants.

Knowledge

The second section focused on assessing the participants' knowledge about tooth cleaning aids. For the knowledge assessment, each correct answer was awarded a score of one, while incorrect answers and "I don't know" responses were given a score of zero. Participants were categorized into high and low knowledge groups. Those who scored four or more were classified as having high knowledge, while those with a score of three or below were considered to have low knowledge.

Attitude

The third section included questions to explore the attitude and perception of the participants regarding oral health and dental care providers. If a participant's response indicated a positive impact on oral health, they were considered to have a positive attitude. Positive attitude responses were given a score of 1, and negative responses were given a score of -1. Participants with a score of three or higher were considered to have a positive attitude, while those with a score below three were considered to have a negative attitude towards oral health.

Practice

The final section assessed the participants' oral health practices.

Correct answers were given a score of one, while incorrect answers and "I don't know" responses were given a score of zero. Participants who scored four or more were considered to have adequate oral health care practices.

RESULTS AND DISCUSSION

The collected data were recorded in a Microsoft Excel Spreadsheet. The data was analysed using the Statistical Package for Social Science (SPSS – 22).

Descriptive statistics

Descriptive analysis was done. The frequency and percentages were calculated. The p value<0.05 was considered statistically significant.

Inferential statistics

Inferential statistics (Mann-Whitney U test and Kruskal Wallis tests) were used to assess the difference. Correlation coefficient was used to evaluate the relationship between knowledge, attitude and practice using Spearman's rank correlation analysis.

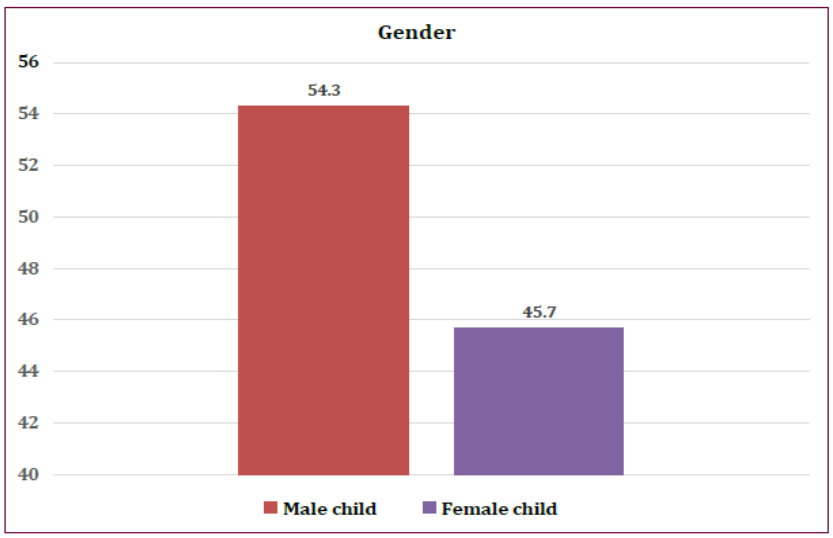
SECTION 1:

Demographic characteristics of the participants

Table 1: Gender

Gender	Frequency	Percentage
Male child	190	54.3
Female child	160	45.7

n=350

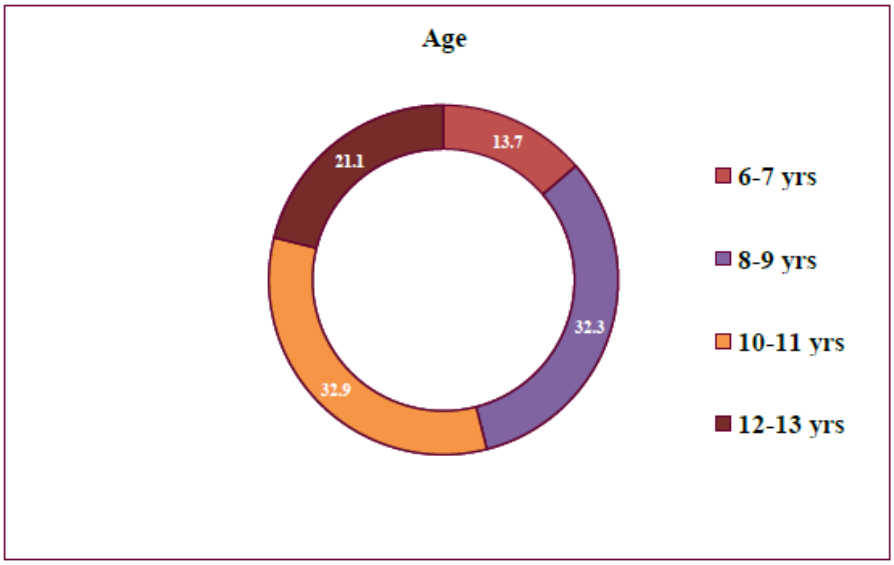


Inference

In this study, 54.3% were male child and 45.7% were female child.

Age	Frequency	Percentage
6-7 yrs	48	13.7
8-9 yrs	113	32.3
10-11 yrs	115	32.9
12-13 yrs	74	21.1

n=350



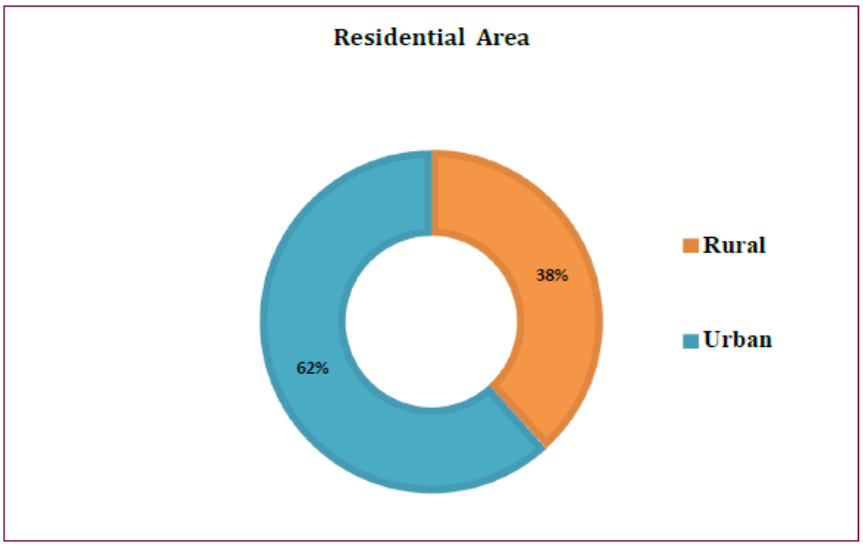
Inference

In this study, 13.7% were 6-7 years, 32.3% were 8-9 years, 32.9% were 10-11years, 21.1% were 12-13 years.

Table 3: Residential Area

Residential area	Frequency	Percentage
Rural	134	38.3
Urban	216	61.7

n=350



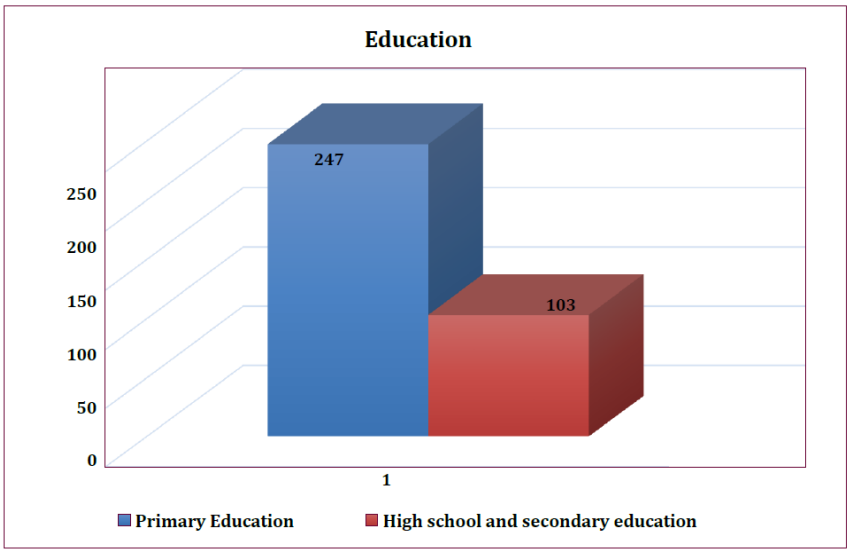
Inference

In this study, 62% were from urban area and 38% were from rural area.

Table 4: Education

Education	Frequency	Percentage
Primary education	247	70.6
High school and secondary education	103	29.4

n=350



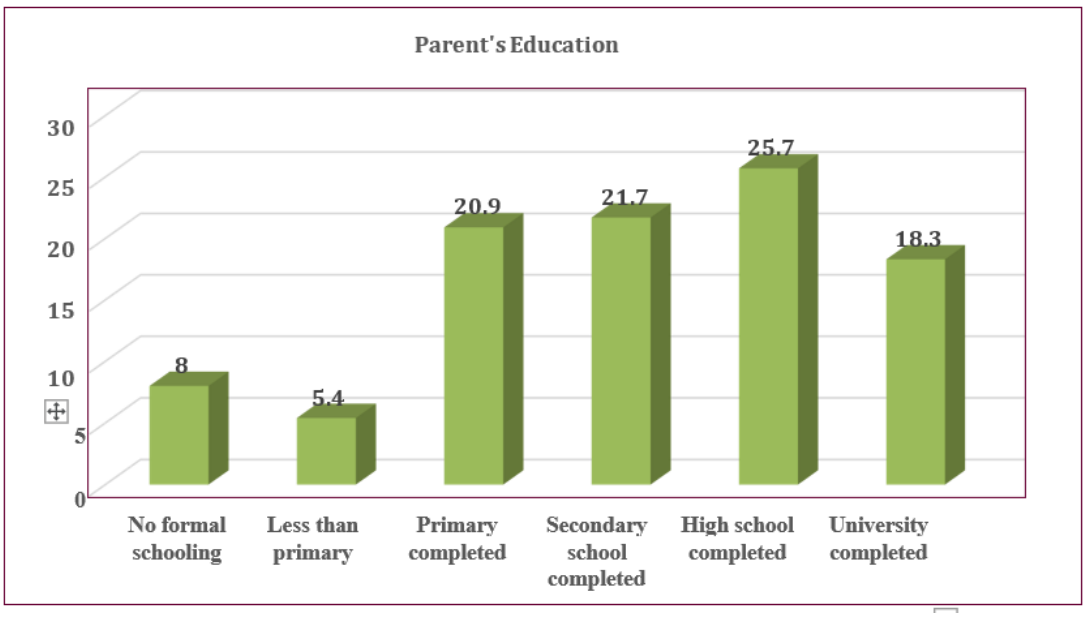
Inference

In this study, 247 students were from primary education and 103 students were from High school and secondary education.

Table 5: Parent's Education

Parent's Education	Frequency	Percentage
No formal schooling	28	8.0
Less than primary	19	5.4
Primary completed	73	20.9
Secondary school completed	76	21.7
High school completed	90	25.7
University completed	64	18.3

n=350



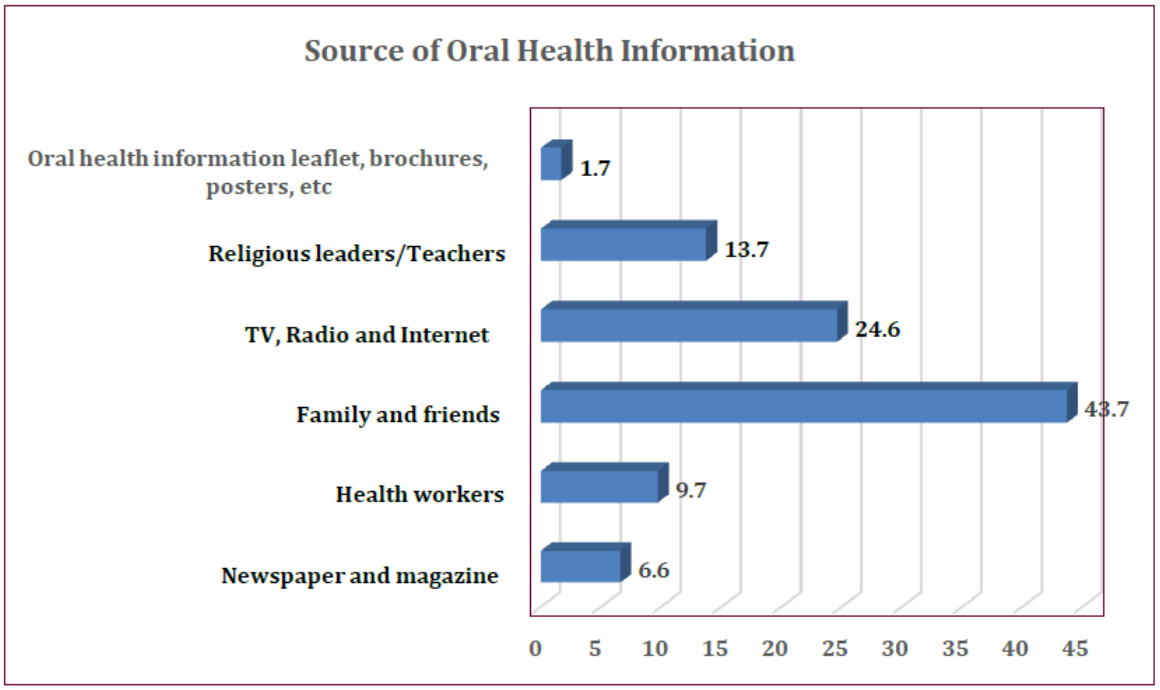
Inference

In this study, 8% of parents belonged to no formal schooling, 5.4% were less than primary, 20.9% were primary completed, 21.7% were secondary school completed, 25.7% were high school completed, 18.3% were University completed.

Table 6: Source of Oral Health Information

Source of oral health information	Frequency	Percentage
Newspaper and magazine	23	6.6
Health workers	34	9.7
Family and friends	153	43.7
TV, radio and Internet	86	24.6
Religious leaders/teachers	48	13.7
Oral health information leaflet, brochures, posters, etc	6	1.7

n=350



Inference

In this study, 6.6% were through newspaper and magazine, 9.7% were through health workers, 43.7% were through family and friends, 24.6% were through TV, radio and internet, 13.7% were through religious leaders/Teachers and 1.7% were through leaflet, brouchers, posters etc.,

SECTION 2

Table 7: Participants response to Knowledge questions

Questions	Response	Frequency	Percentage
1)Knowledge about the use of toothbrush for cleaning teeth	Don't know	8	2.3
	No	11	3.1
	Yes	331	94.6
2)Knowledge about toothbrush frequency per day	Don't know	4	1.1
	No	77	22.0
	Yes	269	76.9
3)Knowledge about the time of brushing/ cleaning teeth	Don't know	22	6.3
	No	177	50.6

	Yes	151	43.1
4)Knowledge about the use of dental floss	Don't know	152	43.4
	No	71	20.3
	Yes	127	36.3
5)Knowledge about soft drinks, Sweets and chocolates affect dental health	Don't know	6	1.7
	No	14	4.0
	Yes	330	94.3
6)Knowledge about the role of fluoride in tooth decay	Don't know	171	48.9
	No	65	18.6
	Yes	114	32.6
7)Knowledge about the role of diet in tooth decay	Don't know	61	17.4
	No	43	12.3
	Yes	246	70.3

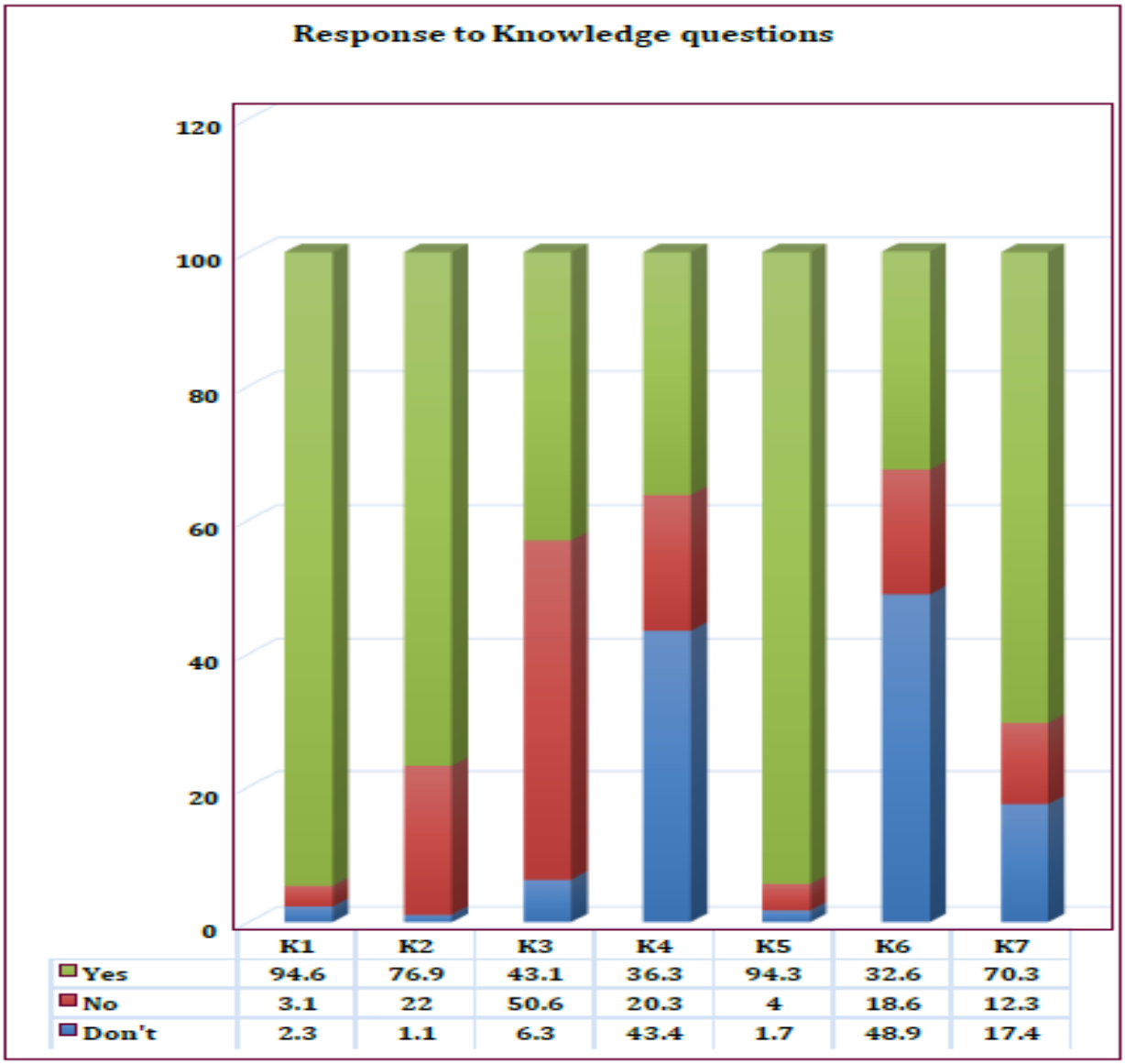


Table 8: Participants response to Attitude questions

Questions	Response	Frequency	Percentage
1)Do you think that dental problem can affect general health?	No	46	13.1
	Yes	304	86.9
2)Do you think that regular visit to the dentist is necessary?	No	91	26.0
	Yes	259	74.0
3)Do you think that immediate replacement of missing natural teeth by artificial teeth is necessary?	No	140	40.0
	Yes	210	60.0
4)Do you think that irregular brushing can cause bad breath?	No	24	6.9
	Yes	326	93.1
5)Do you think dentist, care only about treatment and not prevention?	No	149	42.6
	Yes	201	57.4
6)Do you think that treatment of toothache is important as any other organ of the body?	No	18	5.1
	Yes	332	94.9
7)Are you afraid of going to dentist?	No	194	55.4
	Yes	156	44.6

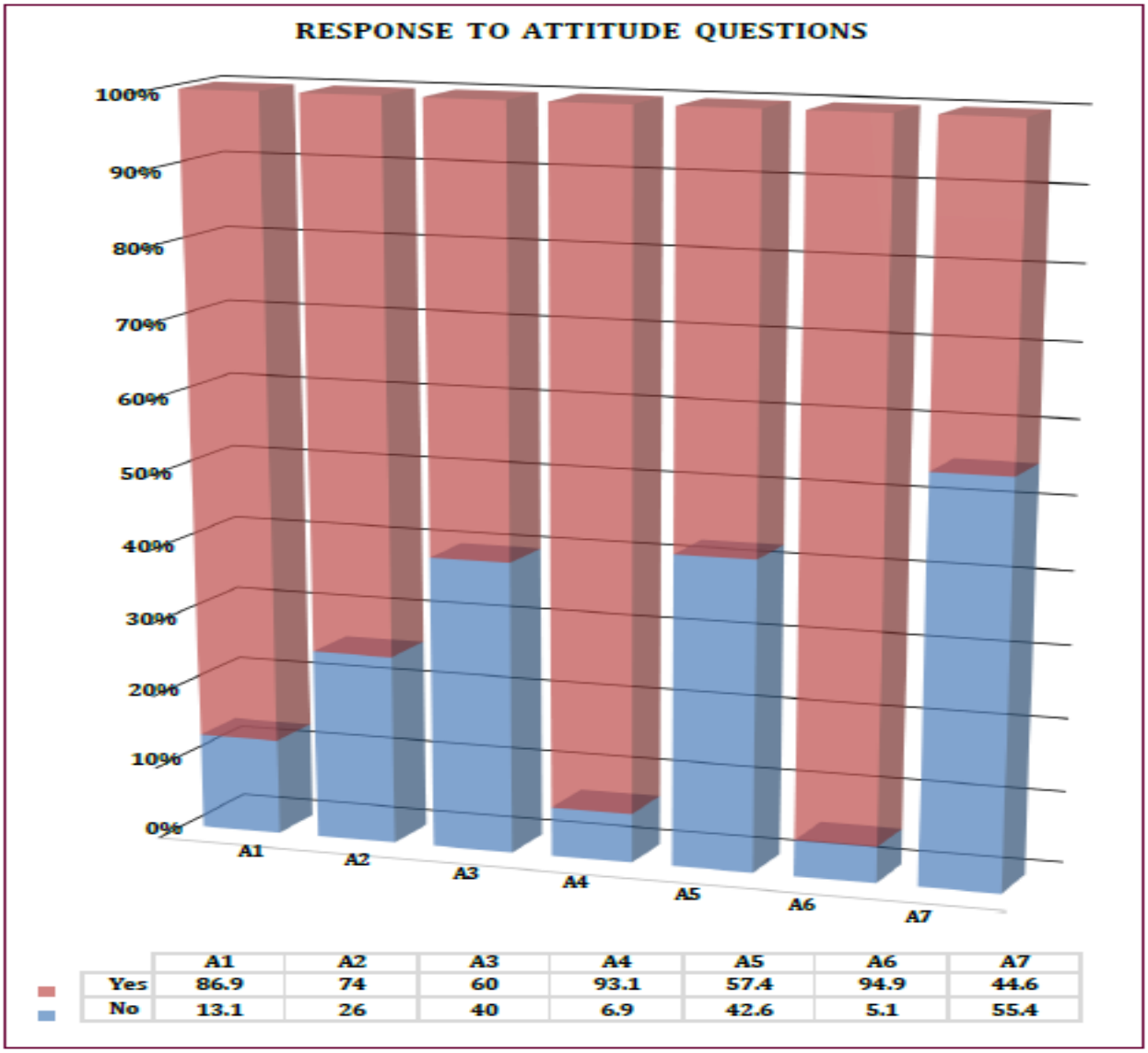
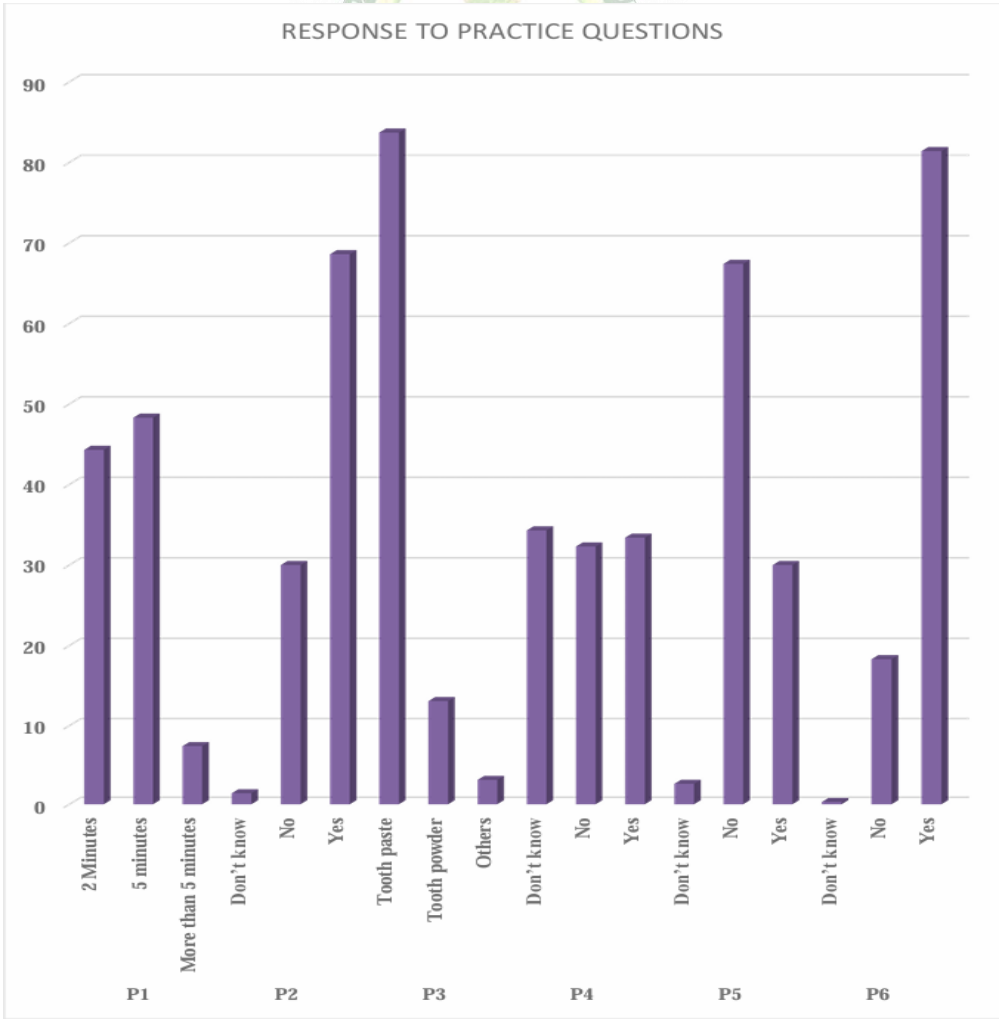


Table 9: Participants response to Practice questions

Questions	Response	Frequency	Percentage
1)Time taken to brush your teeth	2 Minutes	155	44.3
	5 minutes	169	48.3
	More than 5 minutes	26	7.4
2)Cleaning of tongue regularly	Don't know	5	1.4
	No	105	30.0
	Yes	240	68.6
3)The thing used for cleaning your teeth	Tooth paste	293	83.7
	Tooth powder	46	13.1
	Others	11	3.1
4)Use of fluoridated toothpaste	Don't know	120	34.3
	No	113	32.3
	Yes	117	33.4
5)Routine dental check ups	Don't know	9	2.6
	No	236	67.4
	Yes	105	30.0
6)Rinsing mouth after meals	Don't know	1	.3
	No	64	18.3
	Yes	285	81.4

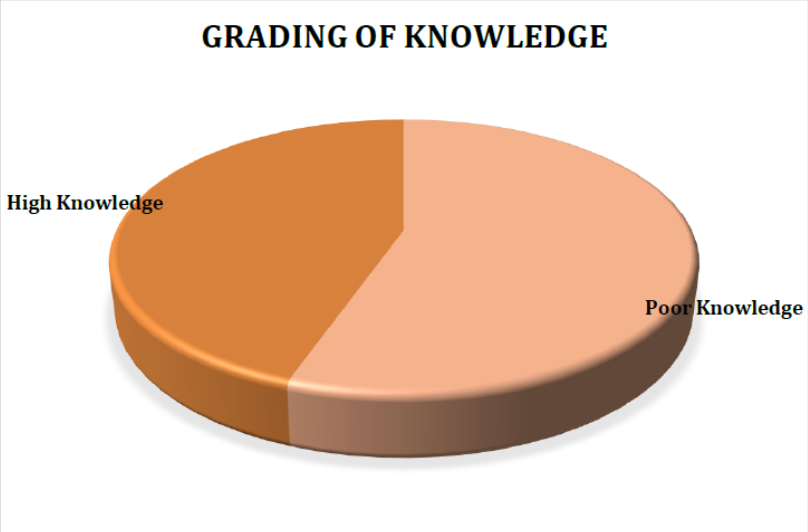


SECTION 3

Table 10: Grading of response to knowledge questions

Knowledge	Frequency	Percentage
Poor (3 and below 3)	194	55.4
High (4 and above 4)	156	44.6
Total	350	100.0

n=350 (Total score 7)



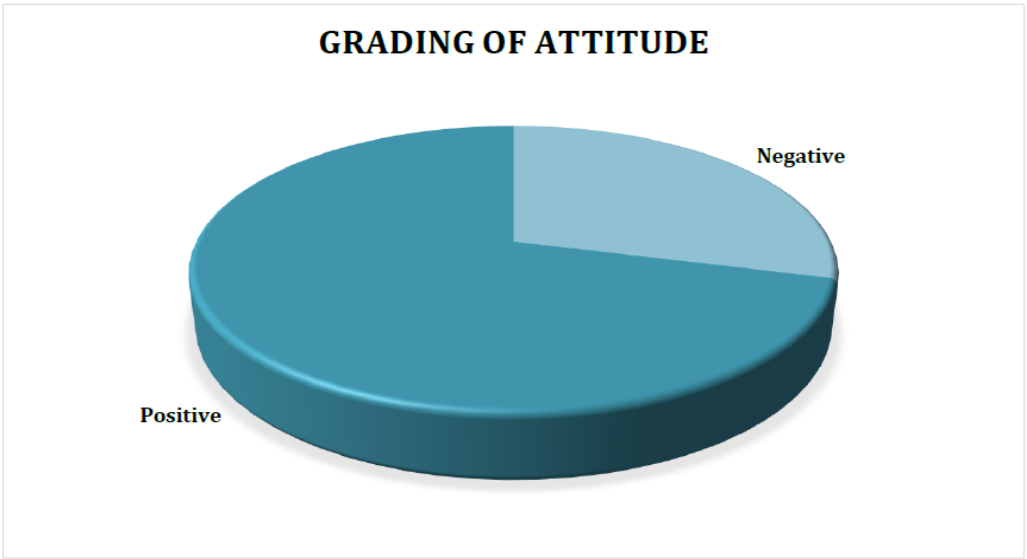
Inference

In this study, 55.4% were poor in knowledge questions, 44.6% were high in knowledge questions.

Table 11: Grading of response to Attitude questions

Attitude	Frequency	Percentage
Negative (less than 3)	102	29.1
Positive (3 or more)	248	70.9
Total	350	100.0

n=350 Total score 7



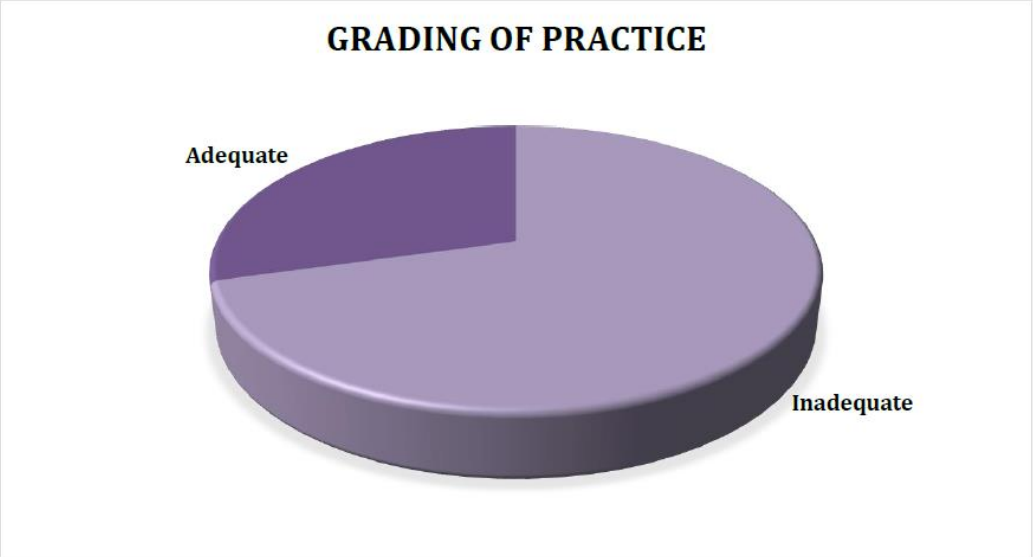
Inference:

In this study, 70.9 % were responded positive to attitude questions, 29.1% were responded negative to attitude questions.

Table 12: Grading of response to Practice questions

Practice	Frequency	Percentage
Inadequate (3 and below)	247	70.6
Adequate (4 or more)	103	29.4
Total	350	100.0

n=350 Total score 6



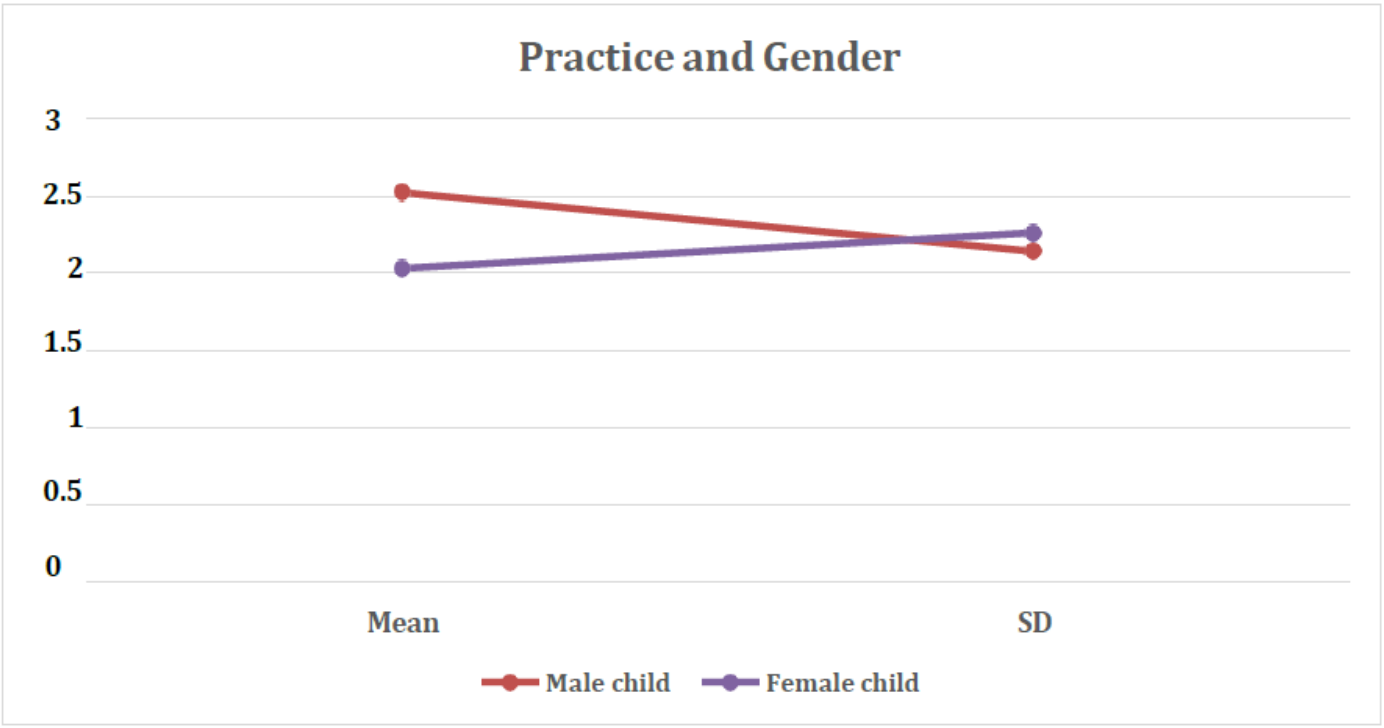
Inference

In this study, 29.4% were having adequate practices, 70.6% were having inadequate practices.

Table 13: Association of Practices of Oral hygiene with Gender

Gender	N	Practice		p value
		Mean	SD	
Male Child	190	2.52	2.14	0.039
Female child	160	2.03	2.26	

n=350 (p value <0.05 is significant)



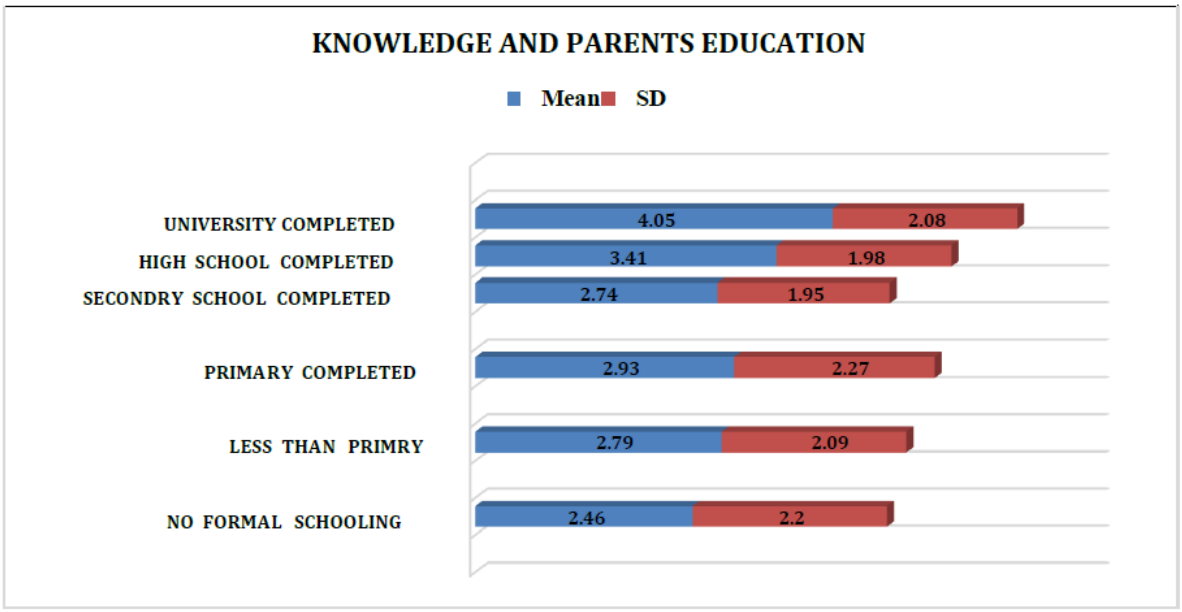
Inference

In this study, there is a significant difference between male children and female children in practice towards Oral hygiene.

Table 14: Association of Knowledge with Parents Education

Parents Education	N	Knowledge		p value
		Mean	SD	
No formal schooling	28	2.46	2.20	0.001
Less than primary	19	2.79	2.09	
Primary completed	73	2.93	2.27	
Secondary school completed	76	2.74	1.95	
High school completed	90	3.41	1.98	
University completed	64	4.05	2.08	

n=350 (p value <0.05 is significant)

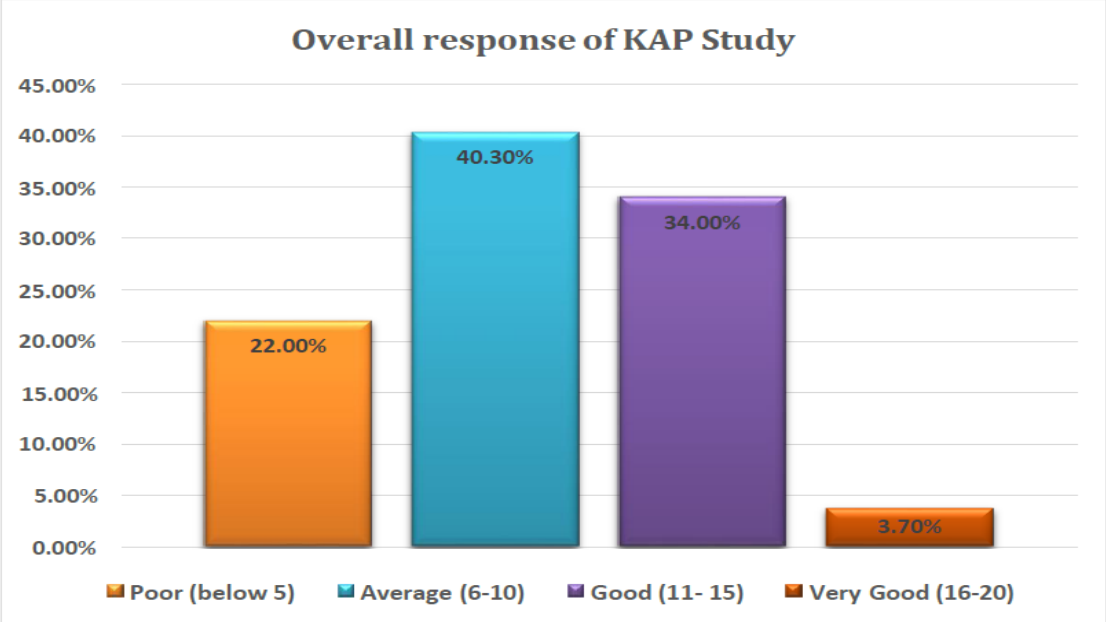


Inference

In this study, there is a significant difference between knowledge and parent's education on oral hygiene.

Table 15: Overall response of KAP study

Score	Frequency	Percentage
Poor (below 5)	77	22.0%
Average (6-10)	141	40.3%
Good (11- 15)	119	34.0%
Very Good (16-20)	13	3.7%
Total	350	100.0



Inference:

In this study, 22.0% of responses were poor, 40.30% of responses were average, 34.00% of responses were good, 3.70% of responses were very good.

Correlation between Knowledge, Attitude and Practice

	Correlation	p value
Knowledge - Attitude	0.031	< 0.001
Knowledge - Practice	0.211	< 0.001
Attitude - Practice	0.039	< 0.001

Correlations were interpreted using the following criteria:

0-0.25 = weak correlation, 0.25-0.5= fair correlation, 0.5-0.75= good correlation, greater than

0.75 = excellent correlation. In the above table, it revealed weak positive linear correlation between Knowledge- Attitude (r= 0.031, p <0.001) , Knowledge-Practice (r=0.211, p <0.001) and Attitude- Practice (r= 0.039, p <0.001).

CONCLUSION

From this study, 40.30% of participants were average in their overall responses, and only 3.70% were very good in terms of oral hygiene. This study shows a surprising contradiction: while participants have a positive attitude towards oral health, their knowledge and actual practices are not up to par. This highlights a significant opportunity for intervention. By addressing the gap between attitude and behavior, we can help individuals improve their oral hygiene habits, which in turn can lead to better overall health. Let's take awareness and turn it into action, making better oral health a reality for everyone.

Although the sample is not representative of the entire population of school-going children in the concerned area, it still reflects the general situation of the population. There is no reason to believe that the sample differs from the rest of the population. The study is intended to serve as an educational assessment of the area. It will also act as a reference point for future evaluations to help measure the effectiveness of planned activities by public health officials. While there are limitations to this type of research, I hope the findings encourage further studies aimed at increasing awareness about the importance of oral health. The study also functions as a baseline for future assessments.

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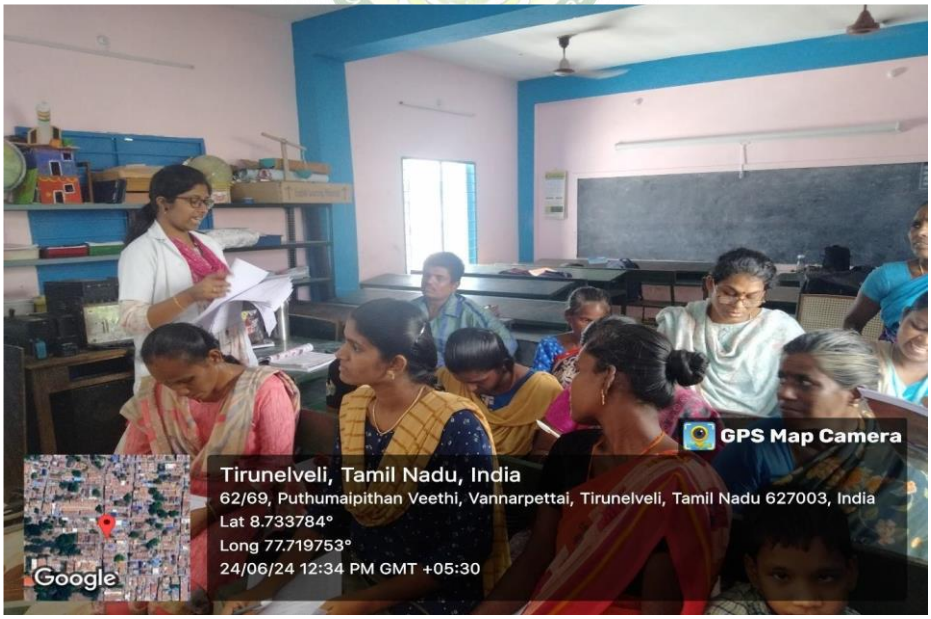
மாநகராட்சி நடுநிலைப்பள்ளி
பெருமாள் சன்னதி தெரு, பாளையங்கோட்டை


GPS Map Camera
Tirunelveli, Tamil Nadu, India
62/69, Puthumaipithan Veethi, Vannarpettai, Tirunelveli, Tamil Nadu 627003, India
Lat 8.733784°
Long 77.719753°
24/06/24 12:34 PM GMT +05:30
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Lat 8.735843°
Long 77.719748°
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