



## KNOWLEDGE, ATTITUDE AND PRACTICES TOWARDS ORAL HEALTH OF THEIR CHILDREN AMONG PHYSICIANS, TEACHERS AND NON-WORKING MOTHERS IN NALGONDA, TELANGANA

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### ABSTRACT

**Introduction:** Basic knowledge of qualified general physicians and school teachers related to oral health is quite different compared to non-working mothers. Studies comparing the knowledge, attitude and practice among them are scarce.

**Aim:** The study aimed to assess the knowledge and awareness regarding the maintenance of oral health in children of general physicians, school teachers and non-working mothers.

**Materials And Methods:** A cross-sectional questionnaire survey was conducted among three groups of general physicians, school teachers, and non-working mothers with 50 participants in each group residing in the city of Nalgonda. The data regarding the oral health knowledge, attitude, and practices (KAP) in the children of participants were collected using a self-prepared questionnaire. The comparative analysis of data was done with Mann-Whitney U test and t-tests and  $p < 0.001$  was considered statistically significant.

**Results:** Knowledge regarding the presence of fluoride in toothpaste was highest in 60% general physicians compared to only 32% of school teachers and 12% non-working mothers. Awareness of oral health problems such as bad breath, bleeding gums, and toothache, discoloured or missing teeth were remarkably high in schoolteachers. Furthermore, 76% of children of school teachers practised brushing twice daily and preferred going to a pediatric dentist (68%) than a general dentist.

**Conclusion:** Knowledge and awareness regarding oral health in children was fair among general physicians and school teachers. Least knowledge was observed in non-working mothers. Thus, Oral health education at a primary level should be done for better provision of oral health care in all the subjects.

**KEYWORDS :** General Physicians, School teachers, Non-working mothers, Oral health care, Oral health education.

### INTRODUCTION:

Oral health is considered as fundamental to the general health and well-being of an individual. Oral diseases qualify a significant public health problem owing to their higher prevalence and significant social impact on an individual's life.<sup>1</sup>

Oral health education begins from the footsteps of an individual's awareness regarding oral health care. Lack of adequate oral health knowledge, negative attitude towards dental health and unhealthy oral hygiene practices contribute to oral health-related problems and have a profound effect on the quality of life. Hence an individual should be aware of various oral health problems such as bleeding gums, bad breath, discolored tooth, knocked out/avulsed tooth, toothache, deleterious oral habits and on appropriate preventive measures to be taken. Many KAP (Knowledge-Attitude-Practice) studies regarding their child's oral health were conducted on school teachers, general physicians and non-working mothers.<sup>2-16</sup> However, studies' comparing the oral health KAP among all the three individuals is scarce.

The present study assesses the oral health knowledge and awareness of general physicians, school teachers and non-working mothers in their children.

### MATERIALS AND METHODS:

A cross-sectional survey was conducted by the Department of Pedodontics and Preventive Dentistry, Narketpally, Nalgonda and a protocol of the survey was submitted to the Institutional Ethical Committee (KIDS/IEC/2017/4), and ethical clearance was obtained.

All the participants were residents of Nalgonda city, and they were informed about the purpose needed for the survey and written informed consent was obtained.

The data on oral health KAP was collected by the principal investigator using a well-structured questionnaire.<sup>9</sup> The KAP questionnaire was translated to the local language (Telugu), and the validity was checked by experts. A power analysis of 15 participants was taken to check the feasibility of self-administration, readability, comprehension, and consistency of response from the participants. All the participants were requested to fill the questionnaires, and a single investigator collected them immediately and checked for its completeness. Based on the response rate of the pilot study with a margin of error fixed at 0.8, the sample size was calculated to be 150 with a 95% confidence interval (CI) level.

The method used for sample selection was simple random sampling, with one fifty study participants were selected accordingly. The participants were the General physicians working at the Medical College; school teachers of private school and non-working mothers, walk-in patients of Dental College and divided into three groups of 50 each. A total of 15 questions were self-prepared by a single and principal investigator. The first part of the questionnaire included the necessary demographic data of the participants. The second part consisted of questions regarding the presence of fluoride in toothpaste, oral health problems such as bleeding gums, bad breath, discoloured tooth, knocked out/ avulsed tooth, toothache, deleterious oral habits and measures taken to prevent the same. [Table 1]

**TABLE 1**

#### a. Social -Demographic Variables of Respondents

Sl.no	Variables
1	Name
2	Age/ Sex
3	Occupation
4	No. of children

5	Age of child/ children	
<b>b. Questionnaire form to assess KAP regarding the maintenance of oral health care</b>		
Sl.no	Variables	Respondents
1	Do you know that your toothpaste contains fluoride?	Yes No
2	What do you think is the reason for bleeding gums?	Too much tooth brushing Improper tooth brushing Retained food deposits on the tooth surface Any injury to gums All the above
3	Have you ever noticed bad breath from your child's mouth?	Yes No
4	Measures taken for good oral hygiene	Mouth rinsing Brushing after meals Cleaning of tongue Any other measures All the above
5	Did your child ever complain of toothache?	Yes No
6	The reason for tooth ache can be	Tooth decay Alleged history of trauma Erupting tooth Gum swelling All the above
7	Did you ever observe your child indulging in oral habits like-?	Thumb sucking Lip sucking Nail or pencil biting Any other None
8	Do you think these oral habits will have any effect on teeth?	Yes No
9	Have you ever noticed a discolored front milk tooth?	Yes No
10	Reasons for discolored milk tooth are	Ignore the tooth problem Take the child to the dentist. Wait for the permanent tooth to erupt
11	In case of loss of a permanent front tooth due to a sudden fall, what immediate measures will you take?	Search for the lost tooth Ignore the tooth & take him to a dentist Put the lost tooth back in the same position. Carry it in a tissue or handkerchief Carry it in a wet condition like water or saline
12	Do you prefer your child to be taken to a pediatric dentist or any general dentist or any others for a dental problem?	Pediatric Dentist General Dentist. Others
13	Reasons for taking a child to a dentist	Only if the child has pain or swelling Tooth decay Trauma to tooth Discolouration of teeth
14	How often do you take your child to a dentist?	Once in 6 months once in a year never when necessary
15	How often does your child brush his/her tooth?	Once-daily Twice daily Thrice daily

All the participants were requested to mark the most appropriate response. The response rate in the present study was 97% and these filled responses were tabulated and statistically analyzed using SPSS version 21.0 software and  $p < 0.001$  was considered statistically significant.

**RESULTS:**

The Mann-Whitney U test was used to compare the knowledge,

attitude, and practice related to oral health in school teachers, non-working mothers and general physicians. The *t*-test was used to compare the mean percentage scores for knowledge, attitude, and practices among the three groups.

Knowledge regarding the presence of fluoride in toothpaste was highest in 60% general physicians followed by 32% school teachers. 88% of non-working mothers were not aware that their paste contains fluoride.

The most common oral health problems include bleeding gums, bad breath, discolored tooth, knocked out/avulsed tooth, toothache, and deleterious oral habits such as mouth breathing, thumb sucking. The primary cause of bleeding gums was considered to be improper tooth brushing by 52% school teachers, while 40% of both general physicians and non-working mothers found the reason to be an injury to gums. Only a fraction of the study population considered the role of retained food deposits in bleeding gums. [Graph 1]

Bad breath was mostly noticed in 80% of children of non-working mothers, followed by 56% of school teachers and 40% general Physicians. Mouth rinsing was the most common measure practiced by 80% of non-working mothers to control lousy breath while teachers and general physicians preferred brushing teeth after meals as a better option.

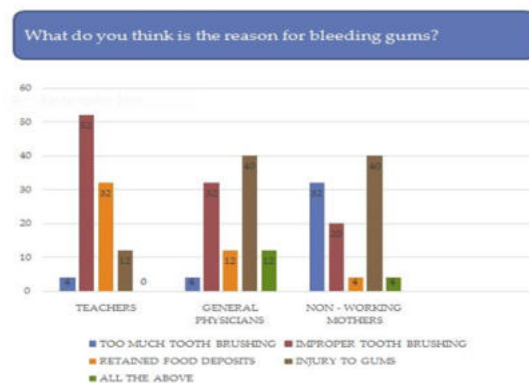
More than 60% of the study population did not notice toothache in their children. Nevertheless, all the participants were aware that toothache was caused by multiple factors such as tooth decay, erupting tooth, alleged history of trauma, and gum swelling.

Although most of the study population were not aware that their children are indulging in oral habits, the most frequent habit observed is nail-bitingly followed by thumb sucking and lip sucking/mouth breathing. This could be attributed due to increased anxiety levels in children.

More than 70% of general physicians and non-working mothers have not noticed any discolored primary front tooth, while 56% of teachers noticed it.

In such cases, teachers and general physicians preferred to take the child to the dentist while non-working mothers preferred to ignore the tooth problem. This increased awareness in school teachers might be because children spend more time in school than at home.

If there is a loss of a permanent anterior tooth due to sudden fall, the first line of preference in the study population was to: ignore the tooth and take the child to a dentist, followed by carrying the lost tooth in wet and dry conditions respectively. Only 4% of general physicians considered the importance of the lost permanent tooth while none of the school teachers and non-working mothers thought the necessity to search for the lost tooth.



**Graph 1:** Knowledge of teachers, general physicians, and non-working mothers regarding bleeding gums.

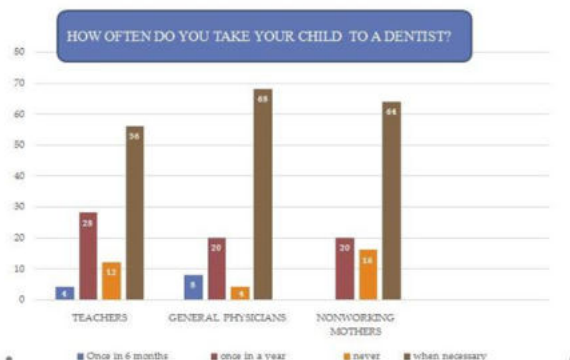
The attitude of non-working mothers is least, and 72% of non-working mothers preferred to take their children to a general dentist either due to lack of awareness or lack of financial resources. 68% school teachers and 64% general physicians preferred a pediatric dentist as they are well aware of the fact that high-quality treatment care for their child

can only be provided by an expert and not a general dentist.

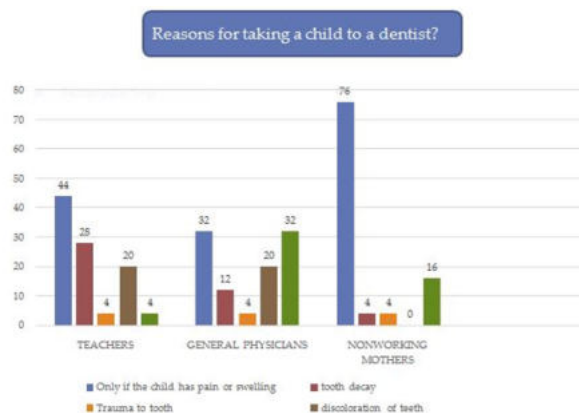
Most of the study population preferred to take the child to a dentist only when it is necessary rather than regular dental visits. [Graph 2]

The most common reason for a dental visit was pain or swelling followed by tooth decay, trauma and discoloration. [Graph 3]

Brushing their child twice daily was practiced by 76% school teachers, followed by 52% general physicians and 12% non-working mothers.



**Graph 2:** Knowledge of teachers, general physicians, and non-working mothers about a dental visit.



**Graph 3:** Attitude of teachers, general physicians, and non-working mothers about a dental visit.

## DISCUSSION:

Dental health education begins from the footsteps of an individual's awareness regarding oral health. KAP surveys related to Knowledge, Attitude and Practice can gather information about what respondents know about dental health and disease.<sup>3</sup>

In this study, 34% were aware of fluoride in the toothpaste, out of which the knowledge was highest in general physicians followed by school teachers. Similar results were reported by Pradeep Kumar (2015) where 38.2% of the participants were aware of fluoridated toothpaste.<sup>13</sup>

In this present study, 76% of school teachers thought that the teeth should be cleaned twice daily. Similarly, Wyne et al., (2002)<sup>14</sup>, Ahmad (2015)<sup>9</sup> and Amith et al., (2013)<sup>5</sup> reported 51.3%, 68% and 91% respectively of teachers who opted cleaning twice daily. Non-working mothers have less knowledge about the importance of brushing in the maintenance of gingival health when compared to teachers and general physicians. Mothers had poor knowledge and attitude towards oral health, which reflected in their poor oral health practices towards their children.<sup>8,15-16</sup>

In our study, most of the study population (above 90%) preferred to take the child to a dentist only when it is necessary rather than regular dental visits. This was in contrast, where every participant believed that regular visit to the dentist was necessary.<sup>10</sup>

School teachers were more knowledgeable (92%) about the dental visit that had to be once in 6 months.<sup>5</sup>

In contrast, Wyne et al. (2002) reported only 41% of school teachers thought the frequency of routine dental checkup visits should be every six months.<sup>14</sup>

Most of the teachers know the importance of visiting a dentist regularly; they visited only if there was a problem. "The most common reason for school teachers consulting the dentist was a toothache, followed by routine dental checkup, tooth decay, trauma".<sup>7</sup>

Mehrotra V (2015) stated that general physicians had the attitude of visiting the dentist once in every six months and 94% of study participants considered that routine dental care and checkups are essential for pediatric patients.<sup>1</sup>

In the present study, most of the non-working mothers (76%) and less than 50% of general physicians and school teachers visited the dentist only when their child complains of pain. Similarly, Sukhabogi et al., reported 86% of the entire study population visited the dentist during tooth pain.<sup>12</sup>

The present study revealed that the knowledge and awareness among the school teachers were inadequate in case of dental trauma which was in accordance to a study conducted by Sreelakshmi et al.<sup>11</sup> Hence, educative programs are very essential for teachers, as they are the first responders in case of emergency dental trauma in schools.

Knowledge and attitude regarding the oral health of children in school teachers were satisfactory. Amjad HW (2002) found that the knowledge of teachers towards oral health was satisfactory, and their attitude is incredibly flattering.<sup>14</sup>

In a study by Maganur et al. (2017), knowledge of oral health among school teachers was quite impressive, and all the teachers were aware of the importance of a healthy mouth.<sup>6</sup>

A study by Sekhar V (2014) reported that their knowledge was fair.<sup>4</sup> In contrast, Sukhabogi et al. (2014) reported that there is a tremendous need to improve oral health KAP among school teachers.<sup>12</sup>

The knowledge, attitude and practice of oral health in children was found to be satisfactory among school teachers and general physicians in most of the aspects, but there is an increased need to improve the same in non-working mothers. These results cannot be generalized to the whole population as the survey was conducted in a single geographical area and role of other factors like age, sex, socio-economic status, education level, teaching experience must be taken into consideration.

## CONCLUSION:

The present study concluded that the oral health-related knowledge, attitude and practices were highest in general physicians, followed by school teachers and least in non-working mothers.

Any individual with adequate oral health knowledge, positive dental attitude and regular practice would play an essential role in the maintenance of oral health and thereby in the prevention of oral diseases. Therefore, improving the KAP of non-working mothers would positively influence their children's oral health as well as their quality of life.

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