

# Evaluation of Knowledge, Attitude, and Practices of Government Primary School Teachers in Faridabad City Regarding Oral Health

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## ABSTRACT

**Background:** Schoolteachers have a massive capacity for shaping the oral health status of children. Teachers help in behavioral shaping and the total progress of schoolchildren. They are thought to apply a substantial impact on their students. Overall health-promoting school seeks workforce well-being as well as their working conditions and thus employ the tactics of health promotion in the workplace.

**Aim:** To assess the existing knowledge, attitude, and practices of government primary school teachers in Faridabad city regarding oral health.

**Materials and methods:** The study was conducted on 220 government primary school teachers in Faridabad city. The questionnaires were distributed individually to the teachers on the visit to their institution. The data was compiled and subjected to statistical analysis. The study was evaluated in various groups like age, gender, educational qualification, and teaching experience. Oral health education was given to the teachers and mentioned the importance of regular dental check-ups in children. Data were analyzed using Statistical Package for Social Sciences version 21.

**Results:** The findings of this study indicated that oral health knowledge was good but oral health attitudes and practices were moderate among government primary school teachers in Faridabad city.

**Conclusion:** The study determined that there is a need to improve the oral well-being information and habits of the primary school teachers so that they can deliver proper oral health instructions to the students.

**Keywords:** Educational personnel, Oral health, School teachers.

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## INTRODUCTION

Oral health promotion is an essential tool for enhancing public health outcomes. The World Health Organization (WHO) describes oral well-being as “a condition of being free from oral and facial pain, mouth and throat malignancy, oral illness, and lesions, periodontal problems, tooth decay, tooth loss. Bad oral health alters the quality of life by diminished oral functioning, missing school time, shortfall of work hours, etc.<sup>1</sup>

Instructing children about oral health is crucial since healthy oral habits are created at a young age. The value of delivering knowledge on oral hygiene to children had been identified as early as 1878. Schools provide an efficient platform for advocating oral health.<sup>2</sup>

Primary school teachers have a massive capacity for shaping the oral health status of children.<sup>3</sup> They need knowledge and a constructive attitude toward oral health. They are more influential on children than parents in the situation. The regulations given by educators are usually pursued by the students.<sup>4</sup>

The child goes through active developmental phases. The role of teachers during these developmental stages is very vital.<sup>5</sup> If teachers are well trained and encouraged on oral health, they may be able to convey their understanding to the students.<sup>6</sup>

Teachers are believed as examples to broadcast principles of life.<sup>7</sup> It is important to convince the schoolteachers to routine dental consultation, so the early recognition and the treatment of dental caries and related problems may be recommended.<sup>8</sup> Fifty million hours are dropped globally from schools due to oral ailments. A school is a spot that molds the behavior, attitude, and views

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toward life.<sup>9</sup> Therefore, offering oral health knowledge to primary school children is essential as it is the age during which the child begins to realize the fundamental oral cleanliness procedures and is highly susceptible to dental diseases.<sup>10</sup> The advancement of health through school has been a significant aim of the WHO, The United Nations Children’s Fund (UNICEF), The United Nations Educational, Scientific, and Cultural Organization (UNESCO), and other global agencies since the 1950s to inspire the participation of health institutions and agencies in the upgrade of well-being through schools.<sup>11</sup> In India, there are residents of more than 1 billion, and 70% of the citizens live in rural regions, schools can operate as a link between the questers and the givers of oral health proficiency.<sup>12</sup>

A school oral health team should be employed to promote the oral health of all people who are working and studying at school.

This group may comprise teachers, students, parents, administrators, and health care workers. This team will be accountable for the organization and observing oral health education and strategies and their action proposals. They should execute oral health education with a range of learning and teaching ways with the help of digital aids.

Overall health-promoting school seeks workforce well-being as well as their working conditions and thus employ the tactics of health promotion in the workplace. The schools should enhance the oral health promotion ahead of their responsibility for better results. They should also be sensitive and appreciate cultural needs.

In each stage of oral health promotion, there should be appropriate planning, execution, and assessment.<sup>13</sup> The oral health education and enactment is the responsibility of every health personnel as well as the school teachers for shaping the upcoming generation of the society.

**MATERIALS AND METHODS**

This descriptive cross-sectional study was carried out in 220 government primary schools in Faridabad city, Haryana, to evaluate their knowledge, attitude, and practice about oral health.

The sample size was estimated using nMaster software (version 2, CMC, Vellore). At absolute precision of 5% and a 95% confidence interval, a sample size of 220 is found to be enough. Multistage random sampling technique has been utilized to select schools in Faridabad city and all eligible government primary school teachers were selected. Teachers who are teaching children in government primary school (1–5th class) and teachers who have given their consent for participation were included in this study. The questionnaires were distributed individually to the teachers on the visit to their institution. The questionnaires were filled out by teachers under the direct supervision of the chief investigator. The questionnaires were collected from the teachers on the same day. Data was entered into the digital spreadsheet (Microsoft Excel).

For assessment of the knowledge, attitude, and practice of respondents, correct answers to the questions in the knowledge section were given a score of 1, while wrong answers, including non-response answers, were scored 0. For the attitude section, favorable responses were given 1 and unfavorable responses were given 0. Right responses to practice questions were given a score of 1, while the wrong answers were scored 0. Data were analyzed using Statistical Package for Social Sciences (SPSS) version 21. Descriptive and inferential results were obtained. Categorical data were compared by using the Chi-square test. Cronbach’s alpha was

calculated for the questionnaire to assess internal consistency. The value of Cronbach’s alpha was calculated as 0.72. The level of statistical significance was set at 0.05.

The study was evaluated in various groups like age, gender, educational qualification, and teaching experience. Oral health education was given to the teachers and mentioned the importance of regular dental check-ups in children.

**RESULTS**

Table 1 shows that a gender-wise comparison of mean knowledge, attitude, and practice scores, showed that mean knowledge score and mean attitude scores were significantly high among females as compared to males. While mean practice scores did not show a statistically significant gender-wise difference.

Table 2 shows that age group-wise comparison of mean knowledge, attitude, and practice scores, showed that mean knowledge score, mean attitude score and mean practice score did not show a statistically significant difference among different age groups.

Table 3 shows that teaching experience-wise comparison of mean knowledge, attitude, and practice scores, showed that mean knowledge score, mean attitude score, and mean practice score did not show a statistically significant difference among different subgroups.

Table 4 shows that educational qualification-wise comparison of mean knowledge, attitude, and practice scores, showed that mean knowledge score, mean attitude score, and mean practice score did not show a statistically significant difference among different subgroups.

**DISCUSSION**

Schoolteachers are the finest health personnel accessible to instruct their students about oral health and be familiar with the existing oral health concept.<sup>14</sup>

There have been numerous knowledge, attitude, and practice studies performed on oral health throughout India, but very few studies have been done in the government primary schools in Faridabad city, Haryana. The current study evaluated the knowledge, attitude, and practice of oral health among the government primary school teachers of Faridabad city. The surveys were filled by the teachers without disturbing the ongoing academic activities of schools. The questions were enclosed in two different languages that were easy to understand by the primary school teachers.

**Table 1:** Gender-wise comparison of mean knowledge, attitude, and practice scores

Gender		Mean knowledge score	Mean attitude score	Mean practice score
Males	Mean	7.7826	4.6812	4.9275
	N	69	69	69
	Std. deviation	1.09,638	0.65,288	1.48,837
Females	Mean	8.2384	4.8940	5.1126
	N	151	151	151
	Std. deviation	0.97,781	0.79,290	1.45,393
Total	Mean	8.0955	4.8273	5.0545
	N	220	220	220
	Std. deviation	1.03,588	0.75,681	1.46,394
p-value		0.001, S	0.034, S	0.263, NS

\*Std. deviation; standard deviation

**Table 2:** Age group-wise comparison of mean knowledge, attitude, and practice scores

Age group		Mean knowledge score	Mean attitude score	Mean practice score
Up to 34 years	Mean	8.2857	4.8810	5.1429
	N	42	42	42
	Std. deviation	0.80,504	0.83,235	1.64,645
35–44 years	Mean	7.9829	4.8718	5.1026
	N	117	117	117
	Std. deviation	1.15,954	0.73,741	1.44,069
45 years and above	Mean	8.1803	4.7049	4.9016
	N	61	61	61
	Std. deviation	0.90,385	0.73,811	1.38,690
Total	Mean	8.0955	4.8273	5.0545
	N	220	220	220
	Std. deviation	1.03,588	0.75,681	1.46,394
<i>p</i> -value		0.479, NS	0.273, NS	0.739, NS

\*Std. deviation = Standard deviation

**Table 3:** Teaching experience wise comparison of mean knowledge, attitude, and practice scores

Teaching experience		Mean knowledge score	Mean attitude score	Mean practice score
Up to 5 years	Mean	8.3289	4.8684	5.2763
	N	76	76	76
	Std. deviation	0.83,886	0.85,389	1.62,971
5–10 years	Mean	7.9394	4.9697	4.7879
	N	33	33	33
	Std. deviation	0.93,339	0.72,822	1.40,885
More than 10 years	Mean	7.9820	4.7568	4.9820
	N	111	111	111
	Std. deviation	1.15,980	0.69,040	1.34,828
Total	Mean	8.0955	4.8273	5.0545
	N	220	220	220
	Std. deviation	1.03,588	0.75,681	1.46,394
<i>p</i> -value		0.064, NS	0.227, NS	0.337, NS

\*Std. deviation; standard deviation

**Table 4:** Educational qualification wise comparison of mean knowledge, attitude, and practice scores

Educational qualification		Mean knowledge score	Mean attitude score	Mean practice score
Diploma	Mean	8.3684	4.8421	5.5789
	N	19	19	19
	Std. deviation	0.59,726	0.83,421	1.60,955
Graduates	Mean	7.9109	4.7228	4.9406
	N	101	101	101
	Std. deviation	1.13,225	0.74,992	1.46,166
Postgraduates	Mean	8.2300	4.9300	5.0700
	N	100	100	100
	Std. deviation	0.97,292	0.74,203	1.43,023
Total	Mean	8.0955	4.8273	5.0545
	N	220	220	220
	Std. deviation	1.03,588	0.75,681	1.46,394
<i>p</i> -value		0.071, NS	0.104, NS	0.171, NS

\*Std. deviation; standard deviation

Oral health awareness was provided to the teachers and mentioned the importance of regular dental check-ups in children.

In the present study, most of the teachers had a knowledge that toothache and cavities indicated dental decay while one-quarter of the teachers did not exhibit knowledge that sweet foods are bad for oral health. All the participants agreed to the fact that children should be given oral health education in schools. Only a few teachers in the current study especially female teachers who were more than 34 years of age exhibited a good attitude and practice regarding regular consultation with dentists irrespective of toothache. This observation was supported by another study led in 2012 by Eswar P, Devaraj CJ for evaluating the causes for use and nonuse of dental facilities among persons visiting dental college hospitals in India and they found that 35.3% of the participants' causes of the previous dental visit was due to tooth pain. None of them had visited a dentist for a regular dental examination.<sup>15</sup>

Males get their oral hygiene check-ups done at least once a year as compared to females and participants with more than 10 years of teaching experience expressed this good oral hygiene practice. Another finding is that teachers who participated with more than 34 years of age and with 5–10 years of teaching experience exhibited lesser knowledge regarding the number of primary teeth. The present study also revealed that teachers with more than 10 years of teaching experience exhibited good knowledge about this subject. Regardless of age and teaching experience category, this finding can be supported and differed with age and teaching experience, respectively by a previous study which was conducted by Mota A, Oswal KC, Sajnani DA, Sajnani AK among preprimary and primary school teachers in Mumbai and evaluated their knowledge, attitude, and approaches toward oral health. They suggested that teachers exhibited a lack of essential information on primary and permanent teeth and only 45.4% of the teachers understood that primary dentition comprises 20 teeth and more than half of their participants undertake dental visits at least once a year.<sup>16</sup>

Oral health knowledge is an indispensable prerequisite for health-related habits. Corresponding to Carneiro et al., there is a connection between increased knowledge and better oral health because people who understand oral health perception, most possibly have a feeling of personal influence over their oral health.<sup>17</sup>

In the present survey, females possessed more knowledge about gum disease as compared to males. This fact was supported by another survey which was conducted among schoolteachers in Lucknow by Singh P, Singh I, Gupta ND, et al. In their study, no statistical significance was observed between oral health knowledge and the attitude of schoolteachers concerning their educational status. This information can validate the present study in which the teachers did not show any significant statistical difference regarding knowledge of oral health irrespective of their educational qualification.<sup>18</sup>

In this present study, female participants have good oral hygiene practices as compared to males and also most of the participants were from the age of 35–44 years and they accounted for using toothpaste and toothbrush as cleaning assistance and brushing twice daily for 2 minutes. This statement was validated by the ADA (American Dental Association) guidelines. They were mostly postgraduates and had a teaching experience of more than 10 years. This was justified by a study done in Pondicherry in the year 2014 by Sekhar V et al., in which 92% of the participants had good oral hygiene practice with the proper cleaning aid.<sup>7</sup>

Almost all the female teachers had a good perspective on the fact that taking care of oral health is very important as compared

to males. This can be corroborated by a research done by Amith HV, D'Cruz AM, and Shirahatti RV to determine the knowledge, attitude, and practice about oral health amongst the rural government primary school teachers of Mangalore, India, and in their study, they observed that females had better knowledge and practice regarding oral health as compared to males.<sup>19</sup>

Oral health is the mirror of the overall well-being of a person. The upkeep of oral hygiene shapes a small yet substantially important part of everyday life. Efficient oral hygiene is the only useful method to avoid caries and periodontal diseases. Thus, awareness about essential oral cleanliness procedures is a requirement for everyone other than dentists.<sup>20</sup>

A pertinent conclusion in the present study was most of the participants, especially males had exhibited a bad attitude in giving importance to treatment in primary dentition as they think it is temporary and will fall out in any way. These participants were having more than 10 years of teaching experience and all of them were graduates. This points out that there is a very lack of insight into the significance of primary dentition by primary school teachers.

The mean knowledge and attitude scores were high among females as compared to males and mean practice scores did not show any statistical difference in terms of gender. There was no difference in various age groups, teaching experience, and educational qualification comparison among mean knowledge, attitude, and practice scores. This conclusion was supported by the research done by Amith HV, D'Cruz AM, and Shirahatti RV in Mangaluru. In their study, there was a substantial variation between the genders with females achieving superior mean knowledge, practice, and overall scores. Educational criterion did not make any major inconsistency in the insight and practice on oral well-being.<sup>19</sup>

Educators in all fields should be encouraged to include oral health in their teaching curriculums and activities. They should be motivated to make the syllabus exciting and encouraging for students to acquire good oral health understanding and behaviors and to make healthy decisions. When tutoring a functional skill such as a tooth brushing method, the teachers must understand, and be capable of brushing their teeth properly first. This is especially crucial as teachers are often thought of as a good example by students.<sup>19</sup>

Several schools have the opportunity of afternoon meals where they see to it that balanced nutrition is supplied for the children. Frequently eating junk foods would not only be a hazard factor for obesity but also dental illnesses. Thus, it is the obligation of both the teachers and the parents to observe the children's nutrition. Teachers must check lunch containers and make sure that parents send nutritious food.<sup>7</sup>

Each school should hire a dental health instructor to deliver the essential knowledge about oral hygiene to the teachers as well as children and the subject matter should be included in the curriculum so that cognizance concerning oral hygiene is well combined with the teachers as well children.<sup>21</sup>

School dental health services should compulsorily organize demonstrations or lectures on the prevention of oral diseases during school celebrations and parent-teacher meetings to include the teachers and parents in the oral health promotion of the child.<sup>22</sup>

Research has advocated adequate knowledge of teachers concerning oral health in developed countries, but teachers in developing countries testified to have an improper understanding of oral health despite having sufficient educational qualifications.<sup>23</sup>



A reliable oral health instruction program must encourage the addition of subjects, knowledge, and practices.<sup>24</sup>

The WHO indicated that the insufficiency of the teaching techniques and educational kits used for training classes remained one of the reasons for the decrease in the excellence of teaching. Additionally, it revealed that the best teaching technique is one that can allow providers to perform services correctly, and it depends to a certain extent on the learners.<sup>25</sup>

Preceding studies with oral health education seminars or workshops for training school teachers on school-based oral health tutoring have echoed reliable results of enhancements in teachers' oral health awareness and attitudes.<sup>26</sup> School children as educated by teachers are not only significant as far as preventing disease amongst themselves in the present, but also their future role as adults and opinion front-runners of the succeeding generation.<sup>27</sup>

A genuinely good teacher never stops studying. The health tutoring in school today and tomorrow will be only good if teachers are accountable for its performances.<sup>28</sup> The findings of this study indicated that oral health knowledge was good but oral health attitudes and practices were moderate among government primary school teachers in Faridabad city. This study also determined that there is a need to improve the oral well-being information and habits of the primary school teachers so that they can deliver proper oral health instructions to the students.

## CONCLUSION

This study provides background information to get an insight into the understanding of government primary school teachers of Faridabad city regarding their oral health. The findings of this study indicated that oral health knowledge was good but oral health attitudes and practices were moderate among government primary school teachers in Faridabad city. The study also determined that there is a need to improve the oral well-being information and habits of the primary school teachers so that they can deliver proper oral health instructions to the students.

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