ISSN: 2581-5989
PubMed - National Library of Medicine - ID: 101738774

International Journal of Dental Science and Innovative Research (IJDSIR)

IJDSIR : Dental Publication Service

Available Online at: www.ijdsir.com

Volume – 5, Issue – 2, March - 2022, Page No. : 191 - 198

Assessment of knowledge attitude, practices and barriers towards oral health among special school teachers of Bareilly city

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Citation of this Article: Nandita Gautam, Shivalingesh KK, Arjun Singh, Mhao P. Jungio, Puru Abbey, "Assessment of knowledge attitude, practices and barriers towards oral health among special school teachers of Bareilly city", IJDSIR- March - 2022, Vol. – 5, Issue - 2, P. No. 191 – 198.

Type of Publication: Original Research Article

Conflicts of Interest: Nil

Abstract

Introduction: Education of special schoolchildren on oral health is most important because they are more prone to diseases related to oral health due to their physical and mental limitations and healthy oral habits are developed early in life. The role of teachers during these developmental stages of the child is critical.

Aim: The aim of the study is to assess the knowledge, attitude and practice and barriers towards oral health among special school teachers of Bareilly City**.**

Material and Methods: Thirty schools were selected cluster sampling. The school teachers were asked to complete a questionnaire. The data obtained were tabulated and statistically analyzed. Analysis of variance (ANOVA) was used to compare the mean of knowledge, attitude and practice scores and Kruskal Wallis test was used to compare correlation between knowledge, attitude and practice scores. A p value of <_0.05 was considered significant.

Result: Total 220 questionnaires were completed by primary school teachers. Of that 98 by government school teachers and 122 by private school teachers. 87.3% were females and 12.7 % were males. The age group was between 21-58 years of age. However, they reported difficulties in teaching oral health content in school, such as: the lack of material and/or appropriate activities to teach the subject of oral health properly; children do not receive oral health education at home and/or they are not encouraged by their families; students do not place any value on oral health and/or do not follow guidance provided.

Conclusion: the knowledge regarding oral health among school teachers was fair. Oral Health education must be imparted to preschool and primary school teachers as a

part of National Oral Health care Program on a regular basis and further studies must be done to assess their awareness levels and make the necessary changes in further education modules.

Keywords: Barriers; special school; teachers; Bareilly City

Introduction

The importance of imparting lessons on hygiene to infants and pre-school children had been recognized as early as 1878.[1,2]The task of educating these youngsters is by far the most demanding, necessitating the hiring of teachers with specialized qualifications and training. The enormous influence that a school teacher has not only in encouraging good health habits, but also in supporting general development, is being increasingly recognized in both the scientific and social communities.[3] Schools have developed their own health programs over time, based on the health state of their students. However, only a small percentage of them genuinely promote dental health.

School-based health education programs have been shown to improve children's understanding, allowing for better control of the disease process, and are regarded an effective and low-cost option for the democratization of health knowledge.[4]

As a result, allowing school employees to provide information about health care to students would assist them in gaining the knowledge, skills, and attitudes necessary to maintain and improve their oral health. Schoolteachers are regarded key agents in school health programs in this context, and a lack of training and support makes it more difficult to conduct school health education interventions effectively. These professionals interact with children on a daily basis, and they also maintain relationships with the schoolchildren's families and communities, allowing them to act as multipliers of health both inside and outside of the institutions where they operate.[5]

However, factors relating to staff and their environment, such as their perceptions of their role in health education and the effectiveness of their interventions, as well as the support and amenities provided by principals for these activities, are significant barriers influencing the effectiveness of implementation and maintenance of such activities.[5]As a result, it's critical to look at schoolteachers' perspectives on their facilities and challenges in order to create the right environment for them to develop and implement health programs and put their knowledge into practice.[6]

The aim of this study was to assess the knowledge, attitude, practice and barriers towards oral health among special school teachers, which affect the implementation of oral health education in school settings.

Materials and Methods

Between September 2021 and October 2021, 220 special school teachers in Bareilly City participated in a descriptive cross-sectional study. A stratified cluster sampling strategy was used to choose thirty schools. The manner of instruction was employed to stratify the students. All of these schools were given a number, and schools were chosen from a list of random numbers. There were 98 teachers from public schools and 122 from private schools. Teachers who were absent for any reason on the day of data gathering, such as sick leave, were not included in the study.

However, the number of absentees was insignificant and had no bearing on the study's outcome. A total sample size of 220 was required. The research tool was essentially a closed-ended questionnaire that was pretested in a pilot study with 50 teachers in similar settings. The 39-item questionnaire collected data on school teachers' sociodemographic, oral health-related

knowledge, behaviours, and awareness, as well as their approaches to schoolchildren's oral health.

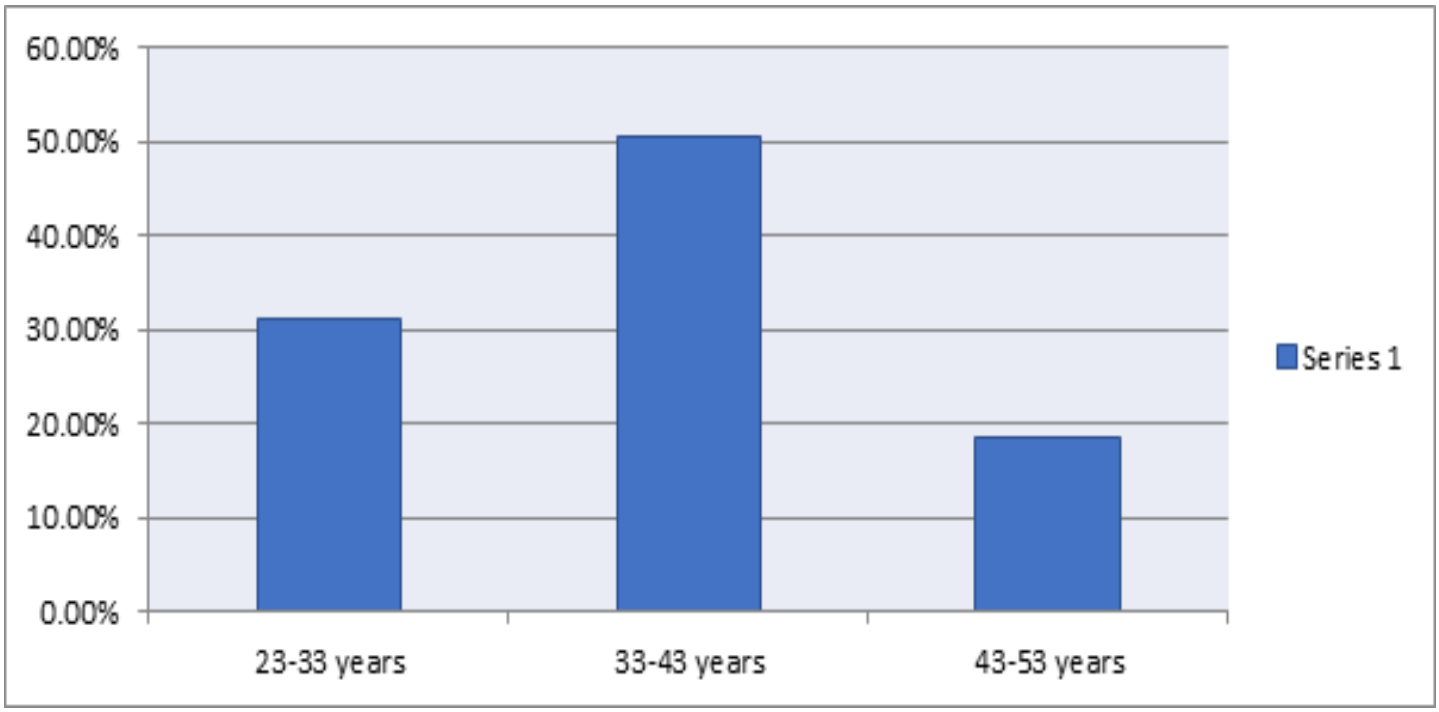
A questionnaire was given to the school teachers to fill out. The questionnaire was given out in English, but any respondent who didn't understand the meaning of any of the questions owing to a language barrier was given enough clarification by one of the authors to be able to respond fairly to the questions. After the respondents' questionnaires were gathered, a presentation on the fundamentals of oral hygiene was given. All of the selected school principals, administrators, and management gave their permission to conduct the study. The school teachers gave their informed consent.

All of the participants were guaranteed that their responses would be kept private. The collected information was collated and statistically analysed. The mean of knowledge, attitude, and practice scores were compared using analysis of variance (ANOVA), and the correlation between knowledge, attitude, and practice scores was compared using the Kruskal Wallis test. The significance level was set at a p value of 0.05.

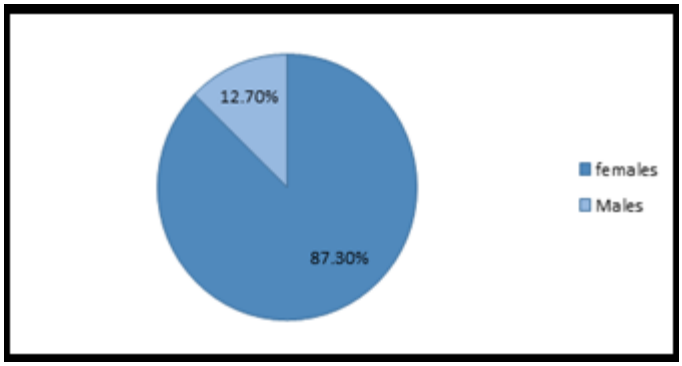
Results

Our aim in this study was to assess the oral health knowledge and attitude of school teachers towards oral health practices by administering questionnaires. Totally, 220 school teachers participated in this questionnaire survey 31.07% were 23-33 age group, 50.49% were 33-43 age group and 18.45% were 43-53 age group (figure 1). 87.3% were females and 12.7 % were males.

Graph 1: Depicts that distribution of study population based on age.



Graph 2: depicts that distribution of study population based on gender.



Knowledge of Dental Caries

Around 47% of the participants believed that bacteria and sugar are the main causes of dental caries, whereas 53.5 percent of the instructors said that regular brushing and avoiding eating between meals could help to lower the incidence of dental caries among schoolchildren. [Table/Fig-3].

Table 1: Knowledge of oral diseases among study population

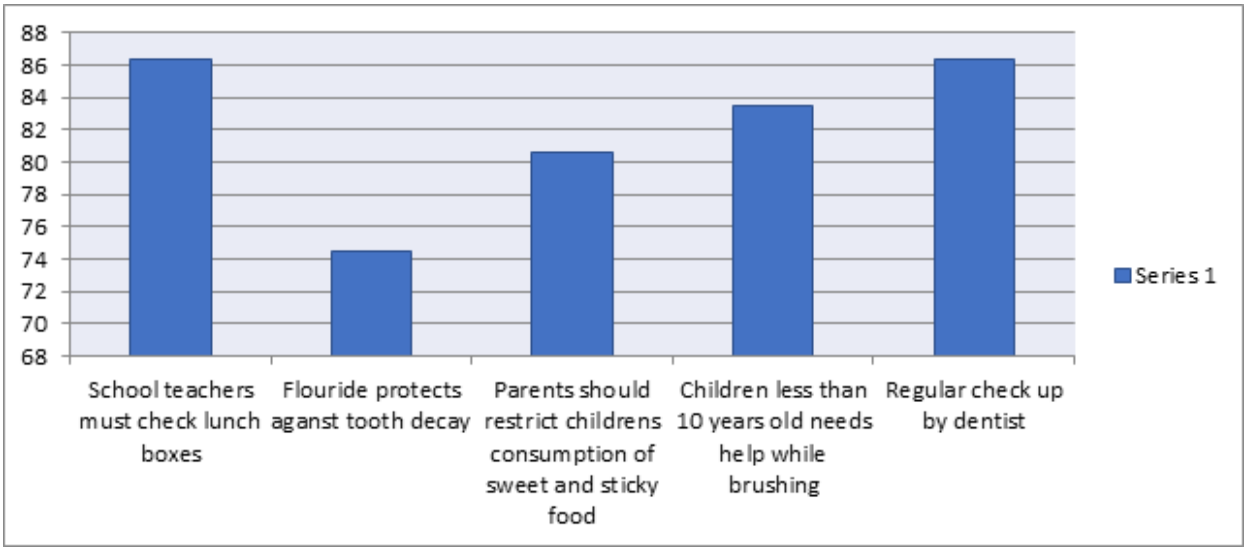
Knowledge of oral diseases	Frequency	Percentage
Causes of tooth decay		
Bacteria	55	25
Bacteria + sugar	100	47
Others	53	26
None of above	4	2
Prevention of tooth decay		
Regular brushing	83	39.3
Regular brushing + avoiding sweets	30	14.2
Regular dental visit	53	24.6
Others	46	22
Causes of gum disease		
Irregular tooth brushing	66	31
Plaque and calculus	89	42
Consuming sweets	32	15
None of the above	25	12
Prevention of gum disease		
Balanced diet	30	14
Avoiding smoking	32	15
Regular visits	25	12
Regular brushing	125	59
Prevent gum bleeding		
Regular brushing	8	4
Toothbrush, paste, floss	59	28
Vitamin C	125	59
Don't know	20	9

Table 2: Oral hygiene practices among the study population.

Oral hygiene methods practiced	Frequency	Percentage
Frequency of brushing		
Once daily	27	12.7
Twice daily	175	82.5
Thrice daily	5	2.4
More than 3 times	5	2.4
Brushing time		
Less than 1 min	6	3
1 minute	42	20
brushing time 2 minutes	105	49.5
More than 2 min	58	27.5
Materials to clean teeth		
Brush + toothpaste	195	92
Brush + tooth powder	8	4
Brush + toothpaste +	6	3

mouthwash		
Others	0	0
Type of brush		
Soft	88	41.5
Medium	113	53.3
Hard	6	2.8
Do not know	5	2.4
Frequency of brush change		
Monthly	38	18
3 monthly	118	56
6 monthly	40	19
Yearly	16	7
Last dental visit		
6-12 monthly	36	17
1-2 yearly	59	28
Never	45	21
Frequency of visit to Dentist		
When I have dental pain	80	38
Never	44	21

Graph 3: Attitude of school teacher regarding oral health of children.



According to the teachers, cavities, poor breath, bleeding gums, and toothache were the most common oral health problems among students. Only 42% of teachers strongly agreed that it is the responsibility of school teachers to provide children with oral health education. More than half of the teachers did not provide kids with any oral health education. Teachers were also asked about how they could improve oral health education in their classrooms. Approximately 59 percent of respondents agreed that regular dental visits and annual dental checks would assist to raise awareness among students and instructors. It would also aid in the acquisition of new knowledge about these diseases and, as a result, in their prevention. Schools might host awareness camps and seminars that included games, competitions, and dramatic presentations. Prizes in the shape of toothpaste, brushes, and other dental hygiene aids can also be given to the kids, which would pique their interest even more.

The difficulties and barriers teachers felt they encountered when teaching oral health content to students were obtained from their responses.

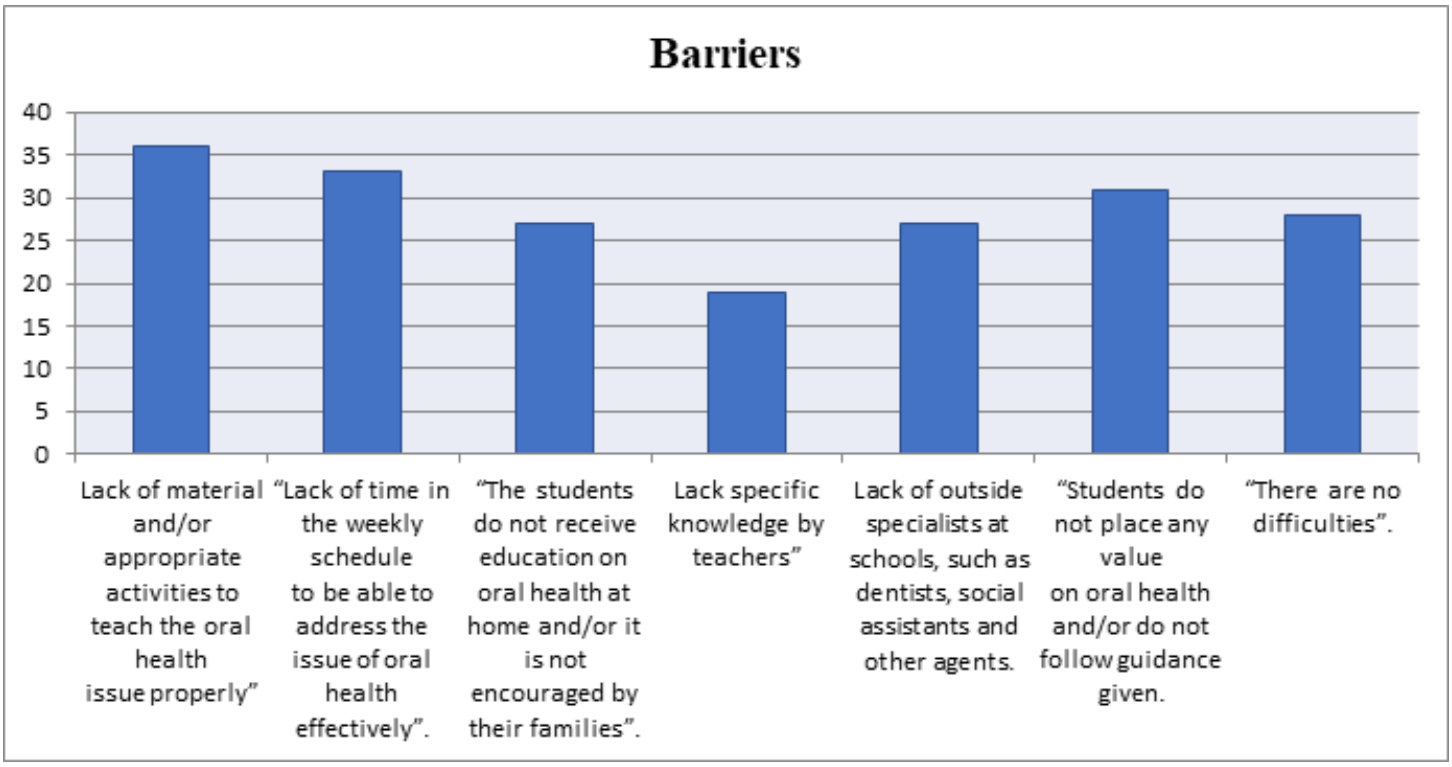
Barriers

1. Lack of material and/or appropriate activities to teach the oral health issue properly

2. Lack of time in the weekly schedule to be able to address the issue of oral health effectively
3. The students do not receive education on oral health at home and/or it is not encouraged by their families
4. Lack specific knowledge by teachers
5. Lack of outside specialists at schools, such as dentists, social assistants and other agents.

Students do not place any value on oral health and/or do not follow guidance given.

Graph 4



Discussion

It is impossible to overstate the value of developing healthy habits at a young age. School plays an important role in oral health by providing instruction that can help children develop good behaviors. As a result, schoolchildren are protected from a variety of illnesses. It is critical to educate youngsters about oral health since healthy dental habits are formed early in life (Vishwanathaiah, 2016). A pivotal role is played by school teachers to promote oral health activities in children on a daily basis. (Duijster et al., 2015)

Females made up 87.3 percent of the participants in our study. This is in line with a study by Kompalli et al., in which females made up 82 percent of the study population. 7 Around half of the participants were aware of the bacteria and sugar that cause tooth caries. Around the same amount of people felt that brushing their teeth regularly may help prevent gum disease. This, however, is consistent with findings by Nyandindi et al.,[8] and Khan et al.,[9]. It contradicts a research conducted in China by Paul Lang. [10]

Vitamin C supplementation, according to 59 percent of school teachers, is useful in preventing gum bleeding. While it is true that a vitamin C shortage causes scurvy, which causes mouth bleeding, it is not the primary cause of gum disease.[9] Approximately 9% of them have no understanding what causes bleeding gums or how to prevent it. Gum disease awareness is lacking among school teachers, which must be remedied through health education. In our study, all of the teachers washed their

teeth on a daily basis. Around 82 percent of the participants in the study brushed their teeth twice a day. Brush and paste were utilized by the majority of the teachers (92 percent). This is supported by a study conducted by Ling Zhu.[12] In contrast to other research, where over 67 percent of the study population used mouthwash in addition to brushing and flossing, just 7 teachers stated using mouthwash in addition to brushing and flossing. However, as compared to previous studies, the percentage of teachers brushing twice daily is higher in ours. According to Vanka[13] and Kompalli et al.[7] investigations, 78 percent of teachers wiped their tongue and 87 percent rinsed their mouth after each meal.

Brushing the teeth with a soft bristle's toothbrush is recommended.[11]In our survey, however, 53% utilized medium bristled brushes and 42% used soft bristles brushes. Every three months, about 56% of people replaced their brushes. In our study, the number of people who change their toothbrush every three months was higher than in a study by Ling Zhu.[12] The number of months used by an individual, as well as the fraying of the bristles, determine when the toothbrush should be replaced. The efficacy of the tooth brush is reduced when the bristles become frayed.

Schoolteachers noted one of the challenges in working with dental health education as a lack of material with clear and accurate information in a language that the kid could understand. Teachers said they need resources that are produced with clear and precise information and written in a language that students can understand. Teachers in North Carolina and Tanzania reported statistical results on this barrier to teaching oral health issues.[8]

After an educational poster campaign in the Canton of Bern, Switzerland, Lieger et al. assessed the knowledge of school teachers regarding the emergency management of dental trauma.[14] The authors discovered that instructors who worked in schools where posters were distributed had a higher understanding of how to handle tooth injuries than teachers who did not work in schools where posters were not distributed.

Frujeri and Costa evaluated the influence of an educational intervention on different groups of professionals from the city of Brasília, DF, Brazil, including elementary school teachers, by means of a lecture addressing the knowledge and prevention and emergency management of the avulsed tooth.[15] After providing information, the authors saw a statistically significant shift in the performance of professional groups. Gaining specific expertise, on the other hand, does not guarantee that teachers will remain motivated and eager to conduct educational activities in their classrooms.[16]As previously stated, teachers' development and dedication to oral health education might be hampered by a lack of time and a vast number of daily tasks. Integrating oral health into a general health promotion curriculum and activities is one method to overcome this barrier.

Conclusion & Recommendations

Hygiene is an integral part of Indian culture and a way of life. Schoolchildren can function as change agents and ambassadors for health messages in their homes. The special school teachers in our study had a reasonable understanding of oral health. Their understanding of gum disease and treatment choices was limited.

The knowledge regarding oral health among school teachers was fair. Their attitude toward maintaining dental hygiene was similarly unsatisfactory. Special school teachers must receive oral health education on a regular basis as part of the National Oral Health Care Program, and further research must be conducted to

measure their knowledge levels and make the necessary improvements in future instruction modules.

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