



# Oral Health Knowledge & Awareness among Special Education Teachers & Care Takers Working for Special Children

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**Abstract :** *Disabled children are usually dependent on others for their care. Parents, siblings, care takers often render this care. Unfortunately, the majority among the care takers lack the knowledge of proper oral health care themselves and thus fail to recognize its important resulting in not applying proper oral health behaviour. The aim of the present study was to determine the oral health knowledge of health care workers, special education teachers in a special children's centre. A total of 80 caretakers, teachers of special need children were picked for study. Pre test was taken and lecture about oral health knowledge was delivered. The post test was taken and results were noted. The obtained data was given for statistical analysis. Results obtained were statistically significant by chi square test ( $p < 0.001$ ). During pre-lecture test 40% knowledge was seen among oral health whereas almost 94% was seen after lecture. In conclusion before lecture were found to have less knowledge among special education teachers and care takers but post lecture was noted that oral health knowledge was improved among the study group.*

**Keywords** – *care takers, oral health knowledge, parents, special health care needs, teachers*

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## I. INTRODUCTION

Children and youth with special health care needs are “those who have or are at increased risk for a chronic physical, developmental, behavioural, or emotional condition and who also require health and related services of a type or amount beyond that required by children generally” [1]. Maintaining optimal oral and dental health in intellectually and/or physically challenged children is of utmost importance, as these children usually suffer from several associated general health problems in addition to their primary condition. Poor dental health not only further compromises their general health but may also aggravate negative interaction with these children [2]. The special children need continuous dietary supervision and assistance in maintaining optimal oral hygiene due to their poor intellectual development and compromised neuromuscular coordination. It is important that health care workers in special children's centre understand the importance of optimal oral health. It is contemplated that health care workers with good oral health knowledge and preventive practices would play a better role in maintaining optimal oral health in the special children under their care [3].

Parents/care takers and health care workers of special children's centre play a vital role in maintaining optimum oral health in these children. Similarly, health care workers with good oral health knowledge and

practices are likely to play a positive role in oral health care of special children. The aim of the present study was to determine the oral health knowledge of health care workers in a special children's centre.

## II. MATERIALS AND METHOD

### Study Area

This study was carried out in National Institute for Empowerment of Persons with Multiple Disabilities, Muttukadu, kovalam, East coast road, TamilNadu. In this Institute 80 caretakers, teachers of special need children were picked for study.

### Study Design

A cross-sectional study was conducted among special education school teachers & care takers.

### Ethical Considerations

The study protocol was reviewed and approved by our Institutional Ethics Committee (REF: IHEC-I/0216/21), and prior permission was procured from the institution authorities for conducting the study. As well as we got signed informed consent from the subjects.

### Inclusion & Exclusion Criteria

Caretakers, teachers of special health care need children were included in this study.

Special education teachers, care takers not willing to participate were excluded from the study.

### Procedure

A Pre questionnaire consisting of 15 close-ended questions on general oral health knowledge, oral hygiene maintenance for special children prevention & management was given to the 80 special education teachers & care takers and the responses were noted. A brief lecture was delivered to the teachers regarding the importance of primary teeth, diet and nutrition, oral hygiene maintenance, feeding practices, causes and sequelae of early childhood caries, significance of initial and frequent dental visits, sources of fluorides, causes for tooth decay, and treatment of carious primary teeth & treatment options for special children. After the lecture Post questionnaire was given to the teachers & care takers. Responses were recorded. The obtained data was given for statistical analysis. Chi square test were used for analysis and it is statistically significant ( $<0.001^*$ ).

## III. RESULTS

The present study evaluated the oral health knowledge among special education teachers & care takers who work special children. Total sample of 80 females were 52 and males were 28.

Table represents total of 15 close ended questions during pre-lecture and post lecture regarding knowledge of oral health which comprises of oral health for special child, knowledge on oral hygiene measures, knowledge on fluorides, dental caries and mode of treatment choice for special health care needs. The results were statistically significant ( $<0.001^*$ ).

Figure 1 represents that knowledge on oral health of special child and oral hygiene measures to undertake for the same. During pre-lecture 52.5% had known about the oral health was compromised on special child after lecture the response was 100%. The reason for compromising was 27.5% correct response while after lecture was 93%.

Oral hygiene measures were 15% correct response before lecture where as 94% was correct after lecture. Knowledge on powered tooth brush was unknown for 12% subjects but post lecture it was 100%. Pre lecture 30% were known about aids apart from brushing whereas post lecture 87% were known.

Figure 2 represents that knowledge on fluorides, sources for fluoride. During pre-lecture 30% had knowledge in post lecture it was 100% knowledge about sources of fluoride available.

Figure 3 represents that causes for dental caries, frequency of sugar intake for dental caries and sugar substitutes which decreases tooth decay. During pre-lecture 20% of samples had known about reasons for tooth decay but post lecture 95% had increased knowledge on tooth decay and frequency of sugar intake for special children.

Figure 4 represents mode of treatment to be delivered for special children. Before the lecture only 6% had knowledge that dental treatment possibility for special child. Where as after lecture delivered almost 98% had gained knowledge on dental treatment possibility, oral health management and mode of treatment choice.

Overall results showed statistically significant ( $p < 0.001^*$ ) that oral health knowledge among special education teachers, care takers seem to improvised in post lecture.

#### IV. TABLES AND FIGURES

TABLE: Oral Health Knowledge Among Special Education Teachers, Care Takers

QUESTIONS	OPTIONS	PRE	POST	P
Is Oral health of special	Yes	42	80	<0.001*
Child Compromised?	No	38	0	
Why it is compromised?	Correct response	22	74	<0.001*
	Wrong response	58	6	
Oral hygiene	Correct response	12	75	<0.001*
	Wrong response	68	5	
Mode of cleaning	Correct response	24	78	<0.001*
	Wrong response	56	2	
Knowledge about powered	Correct response	10	80	<0.001*
	Wrong response	70	0	
Aids apart from brushing	Correct response	24	69	<0.001*
	Wrong response	56	11	
Knowledge on fluoride	Yes	20	80	<0.001*

	No	60	0	
What does fluoride do?	Yes	8	74	<0.001*
	No	72	6	
Sources of fluoride	Correct response	16	78	<0.001*
	Wrong response	64	2	
Causes for dental caries	Correct response	54	80	<0.001*
	Wrong response	26	0	
Frequency of sugar intake	Correct response	16	76	<0.001*
	Wrong response	64	4	
Sugar substitutes	Correct response	22	75	<0.001*
	Wrong response	58	5	
How to maintain oral health	Correct response	15	80	<0.001*
Of special child?	Wrong response	35	0	
Dental treatment is	Yes	64	80	<0.001*
Possible for special child?	No	16	0	
Mode of treatment choice	Correct response	44	80	<0.001*
For special child	Wrong response	36	0	

*Chi square test, statistically significant*

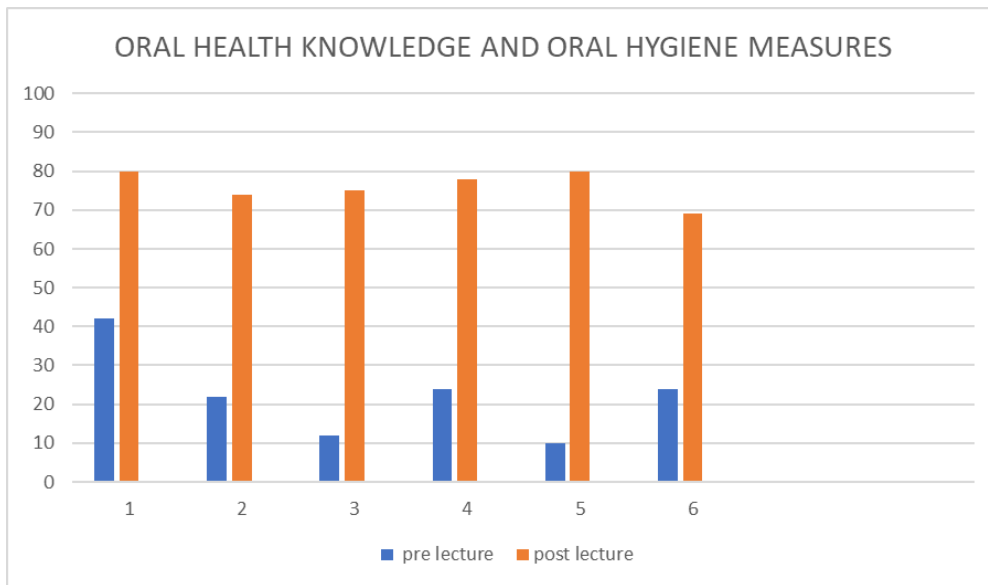


Fig 1: oral health knowledge & oral hygiene measures

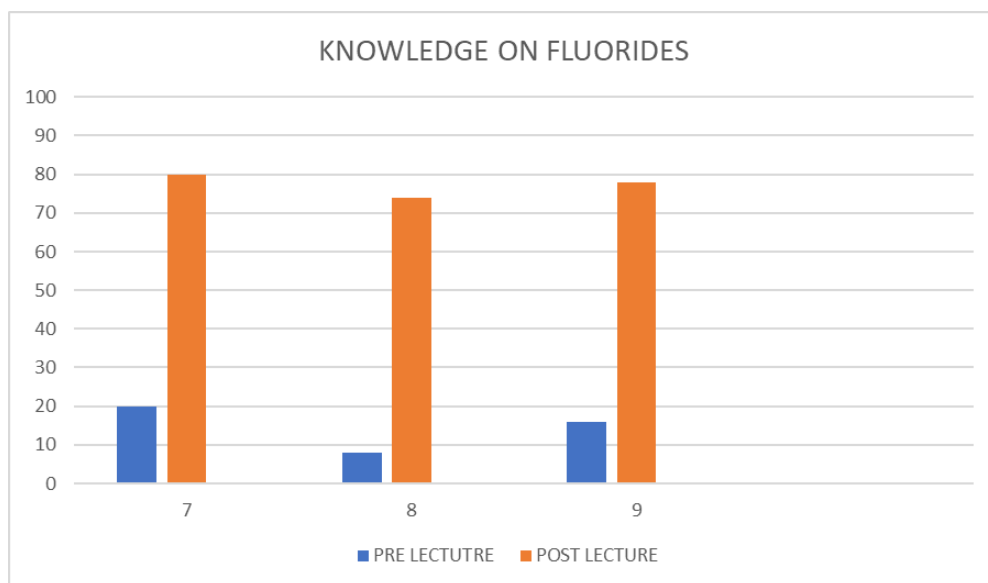


Fig 2: Knowledge on fluorides

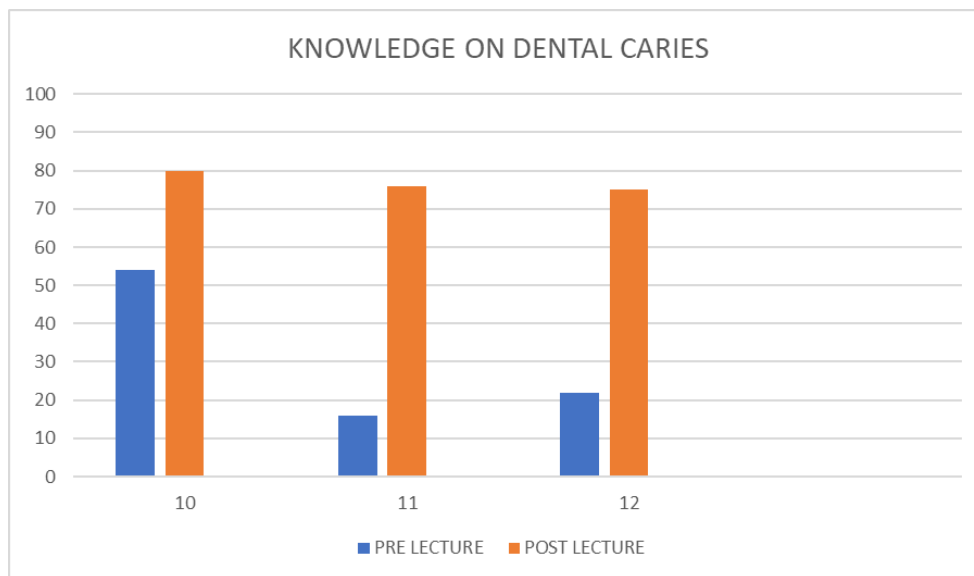


Fig 3: Knowledge on Dental caries

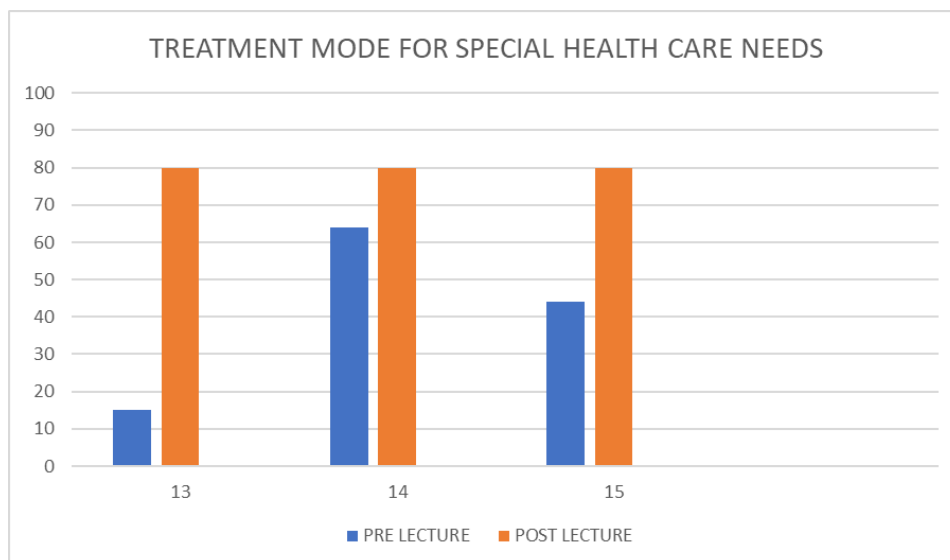


Fig 4: Treatment mode for special health care needs

## V. DISCUSSION

Oral health in special needs patients is one of the most desolated aspects of care. The degree of unmet dental needs amongst this populace is highly compromised when compared to the general population. Therefore, it is crucial that those who care for these individuals are knowledgeable about preventive measures and are aware of them in order to keep this group's dental health at its best [4]. It is known that good oral health can help in improving general health, self-esteem, social integration, and thereby the quality of life [5]. It has been demonstrated that oral health education is well recognized and shows improvement of attitudes and knowledge towards dental health care, especially among caregivers of special needs patients [6]. The study aims to assess the caregiver's knowledge, attitude, and practice of oral health-promoting factors towards special children.

The level of oral health knowledge among special education teachers and care takers was recorded. 80% of teachers and care takers before the lecture were unknown about the compromising of oral health of special child and reason behind it. Post lecture they came to know about the importance of special child oral health and it should not be compromised. Out of 80 only 12 had responded correctly for oral hygiene measures and the remaining subjects were not knowing about the importance of powered tooth brush or other aids apart from brushing. 69 out of 80 replied that there is an association between oral health on general health, replied that special children are more prone to oral health related problems and the need of cleaning of teeth is essential, the role of caregivers is utmost important in providing daily care of teeth, thus caregivers should have knowledge on preventive oral hygiene measures. Because of their aversive behaviour, uncooperativeness it is essential to have knowledge on aids apart from brushing such as mouth washes, powered tooth brushes.

The level of knowledge on fluorides among teachers and care takers was poor 30% in pre lecture test they were unknown about the sources of fluoride and the purpose of fluoride and fluoridated tooth paste to prevent tooth decay. In post lecture test there was a greater improvement among the group almost 94% came to know about the purpose of fluoride, sources available and fluoridated tooth paste. This gives an idea on maintaining proper oral hygiene and prevention of tooth decay.

Dental caries plays a major role in special health care needs as we can see they are more prone for frequent sugar intake, chocolates, sugary food items and making them pouch inside the mouth and not chewing it is the major cause for dental caries. The 20% care takers had knowledge on dental caries and causes for tooth decay. After the lecture the group had knowledge on frequency of sugar intake, and substitutes for sugar such as tooth friendly lollipops, xylitol chewing gums, probiotics can be given for special child.

Finally, the special education teachers and care takers had a thought that dental treatment is impossible for special child. After the lecture they had knowledge on possibility of treatment and mode of treatment and oral maintenance of special child. After educating the group they gave best output of results and gained knowledge on proper oral hygiene measures, fluoride supplements, not to compromise their oral health, prevention of dental caries and mode of treatment to deliver for special health care needs. There are high chances of a positive impact on caregivers and children by conducting educational programs and dental exhibitions in a simple, easy, and effective way to communicate the importance of maintaining proper oral hygiene [7].

## VI. CONCLUSION

From the study, it is concluded that through the post lecture test teachers and care takers have gained more knowledge among oral hygiene measures, fluorides, dental caries and treatment of choice for special health care needs and its importance. This study also emphasizes the need to initiate a positive attitude toward oral hygiene measures, diet restrictions, use of fluoridated supplements, and treatment modalities. More such measures need to be taken by the doctors to ensure that adequate knowledge and training is received by special education teachers and care givers who can impart to the parents of special children.

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