Available online at http://www.journalcra.com

International Journal of Current Research
Vol. 10, Issue, 03, pp.66588-66591, March, 2018

INTERNATIONAL JOURNAL OF CURRENT RESEARCH

ISSN: 0975-833X

RESEARCH ARTICLE

COMPARISON OF ORAL HEALTH STATUS, ORAL HEALTH KNOWLEDGE AND ORAL HYGIENE PRACTICES IN NON-SIGHTED AND SIGHTED INSTITUTIONALIZED CHILDREN OF SANGLI

Dr. Sridevi Tamagond, *Dr. Nikhil Zaparde, Dr. Sachin Gunda, Dr. Anil Patil and Dr. Sandhyarani, B.

Post Graduate Student, Bharati Vidyapeeth Deemed University Dental College

ARTICLE INFO

Article History:
Received 22nd December, 2017
Received in revised form
17th January, 2018
Accepted 19th February, 2018
Published online 28th March, 2018

Key words:
Dental Caries,
Oral Hygiene,
Visually Impaired,
Oral Health Status, Plaque.

ABSTRACT

Introduction - Oral health is an important aspect of health for all children, but it is all the more important for children with special health needs. Visually impaired individuals are at a greater risk of developing oral diseases like periodontal disease and dental caries because of greater difficulty in attaining good oral hygiene.
Method - In our study, a total of 42 Non sighted and sighted children were asked a questionnaire in their language in order to evaluate the Oral hygiene practices and Oral health knowledge. Later, DMF/def index and OHI-S index was recorded to determine Oral health status.
Results - There was no significant difference in Oral hygiene practices, and Oral Health Knowledge amongst both the groups however the blind group had high caries score and poor oral hygiene as compared to the sighted group and the difference was statistically significant.
Conclusion - Non-Sighted children are burdened with the heavy load of dental caries and periodontal problems as compared to sighted children in spite of having similar oral hygiene practices and oral health knowledge

Citation: Dr. Sridevi Tamagond, Dr. Nikhil Zaparde, Dr. Sachin Gunda, Dr. Anil Patil and Dr. Sandhyarani, B., 2018. "Comparison of Oral Health Status, Oral health Knowledge and Oral Hygiene Practices in Non-Sighted and Sighted Institutionalized Children of Sangli", *International Journal of Current Research*, 10, (03), 66588-66591.

INTRODUCTION

"The best & the most beautiful things in the world cannot be seen or even touched. They must be felt with the heart. - Hellen Keller."

Special and medically compromised children represent a unique population that challenges the dentist's skills and knowledge. WHO has defined handicapped person as "One who over an appreciable period is prevented by physical or mental conditions from full participation in the normal activities of their age groups including those of a social recreational, educational and vocational nature" (Nandini, 2003). Most of the handicapped individuals start their life with teeth and gums that are as strong and healthy as those of the normal people. However, their eating habits, medications, physical limitations, lack of cleaning habits and parents' attitude, all contribute to poor oral health of the handicapped (Kamatchi *et al*., 2002). Oral health is an important aspect of health for all children, but it is all the more important for children with special health needs.

Corresponding author: **Nikhil Zaparde,**
Post Graduate Student, Bharati Vidyapeeth Deemed University Dental College.

Visually impaired individuals are at a greater risk of developing oral diseases like periodontal disease and dental caries because of greater difficulty in attaining good oral hygiene (Shetty *et al*., 2010). They differ from normal patients as it is very difficult for a dentist to establish a positive relationship with visually impaired child as compared to normal child due to the physiological limitations of the former. Hence it requires proper training, understanding of various medical complications and handicapping conditions and adequate flexibility in the treatment modalities which have been decided by the dentist. Providing comprehensive dental care for the visually impaired is not only rewarding but is also a community service that health care providers are obligated to fulfill (Nandini, 2003). As there is no published data on oral health of Non sighted children in Western Maharashtra region, Our study was conducted to evaluate and compare the Oral health status, Oral hygiene practices and Oral health knowledge of blind and sighted institutionalized children of Sangli.

METHODOLOGY

Selection Criteria: Only those children who were completely blind were selected in the study group. (Children with partial eye-sight were excluded)

- Apparently Healthy children. (Subjects with any systemic diseases depending on history and clinical examination were excluded)
- Only Age and sex matched children were selected in the control group.
- Subjects with past Dental History since last six months were excluded from the study.
- Age group of children - 6 to 18 years.

Methodology

The study was carried out in the Department of Pediatric Dentistry. A total of 42 non-sighted subjects from the "National Association for the Blind, India" – Branch Sangli organization were selected as the study group. Also the control group was selected which consisted of 42 sighted, age and sex matched children from another institution of similar socio-economic status. First, the parents of these children were asked to report to the department and the study was explained to them in detail. Then, the consent was obtained from the parents as well as the institution. A single investigator was assisted by a trained person for recording the data throughout the study.Oral hygiene practices and Oral health knowledge were evaluated by asking the questionnaires to every child in their own language and those were filled by a single investigator. Then DMFT/def index was recorded for obtaining the caries score and OHI-S (Greene and Vermillion, 1964) index was used to determine the oral hygiene status in both groups.

Questionnaire

1. Frequency of tooth brushing?

A) Seldom / No brushing

B) Brushing once a day

C) Brushing twice a day.

2. How do you brush?

A) Tooth brush

B) Finger

C) Others

3. Time spent brushing teeth?

A) Less than 3 min

B) 3 min or more

4. Use of toothpaste?

A) None fluoridated

B) Fluoridated

C) Don't know.

5) Method of Brushing?

A) Horizontal

B) Vertical

C) circular

D) back and forth

E) no systematic methods

6) Reasons for brushing teeth?

A) clean bright teeth

B) prevention of caries

C) prevention of bleeding gums

D) all of the above

7) Number of times having seen a dentist?

A) Never

B) 1-2 times

C) 3 times or more

RESULTS

DMFT/def and OHI-S index

The DMFT Score and the OHI score of Blind group was more as compared to NonBlind group and the difference was statistically significant.

	Blinding	N	Mean	Std. Deviation	P value
DMFT	Sighted	42	5.12	3.187	0.04
	Blind	42	6.31	3.096	Significant
OHI	Sighted	42	0.9650	.59806	0.001
	Blind	42	1.5729	.79070	Significant

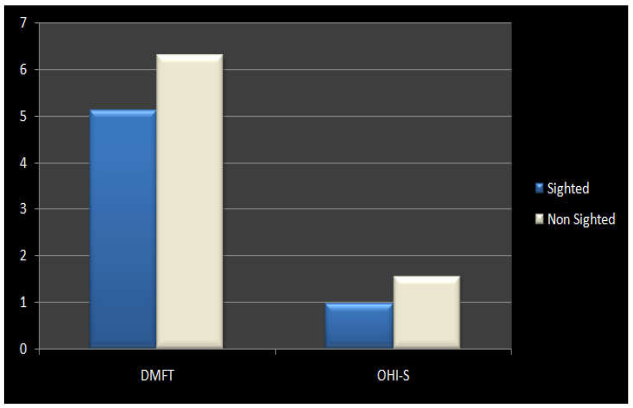

Fig 1. Comparison of DMFT score and OHI-S Score

Answers of the Questionnaire

Frequency of tooth brushing?

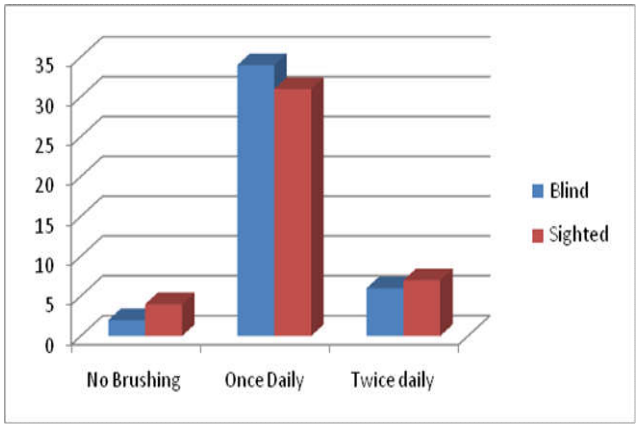

Fig 2. Comparison of frequency of brushing

There was no significant difference in the frequency of brushing amongst the subjects from both the group with majority of Subjects brushing the teeth only once daily.

How do you brush ?

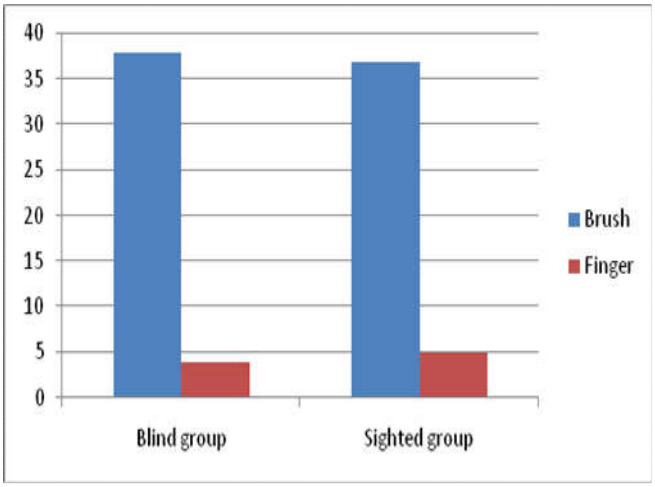

Fig 3. Comparison of tools used for brushing

Majority of children from both the groups used a tooth brush for brushing. The percentage being 90.48 and 88.10 amongst the blind and sighted group respectively. However the difference was not statistically significant.

Time spent brushing teeth?

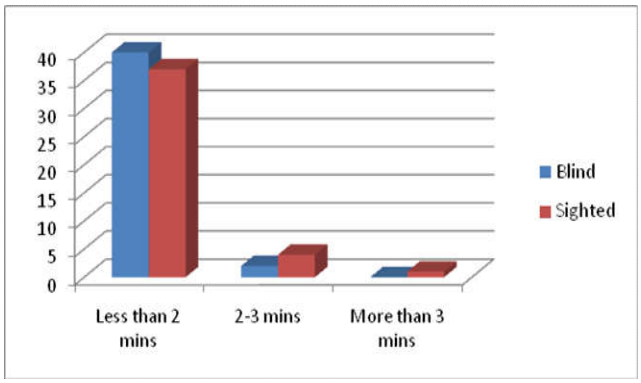

Fig 4. Comparison of duration of brushing

95.24% and 88.10% subjects from blind and sighted group respectively brushed their teeth for less than 2 mins. However there was no statistically significant difference among both the groups.

Method used for brushing teeth?

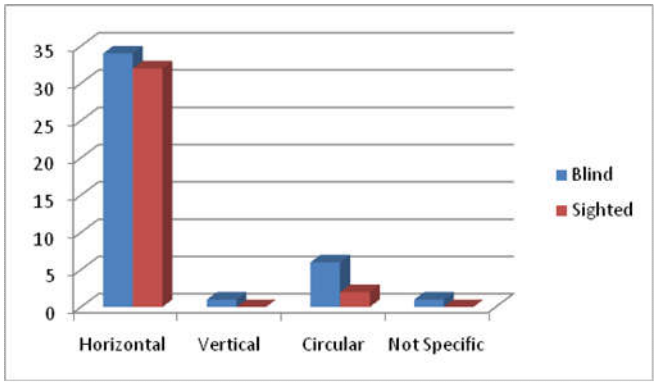

Fig. 5. Comparison of method of brushing

80.95% and 76.19% subjects from Blind and Sighted groups respectively used horizontal strokes for brushing teeth. Whereas only 14.29 % and 4.76% subjects from Blind and Sighted groups respectively used circular method of brushing teeth.

Reason for Brushing teeth?

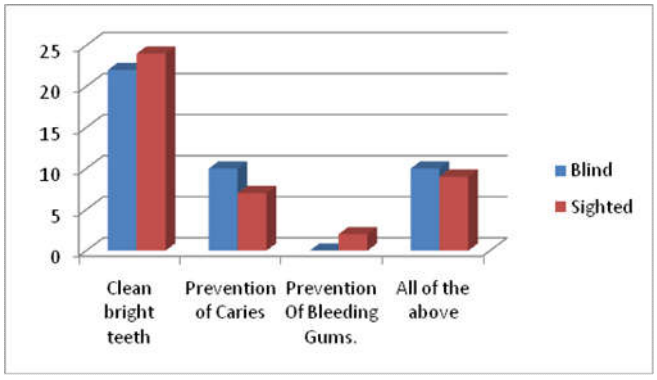

Fig. 6 .Comparison of purpose of brushing

52.38 % and 57.14 % of subjects from blind and sighted group respectively mentioned Clean bright teeth as the only objective of brushing teeth.

However, only 23.81 % and 21.43 % subjects from blind and sighted groups respectively knew all the objectives of brushing teeth.

Type of toothpaste used ?

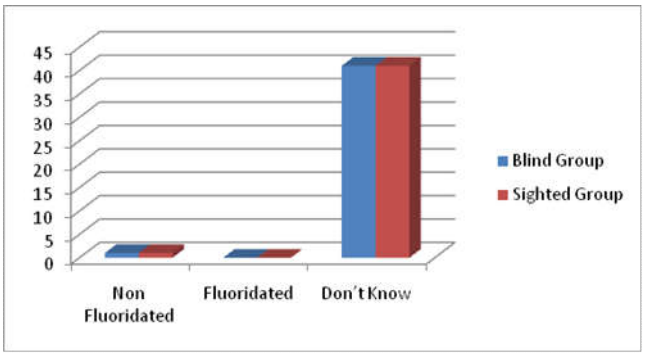

Fig. 7. Comparion of toothpaste used

Hence, There was No Statistically significant difference seen in the answers given by the students from both the group for the above mentioned questions.

However, Only one question received Significantly different answers (p </= 0.05) from both the groups which is as follows

Times Visited dental clinic?

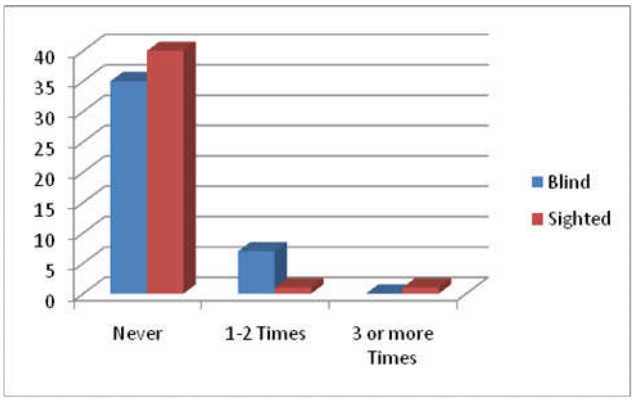

Fig. 8. Comparison of number of vists to a dentist

83.33 % and 95.24 % subjects from the blind group and sighted group respectively had never visited a dentist. However only 16.66 % and 4.76 % subjects from blind and sighted group had visited a dentist in the past.

All the answers given by the students of both the groups were suggestive of Poor Oral hygiene Practices and below average Oral health Knowledge.

DISCUSSION

According to our study,the blind group had high caries score and poor oral hygiene as compared to the sighted group and the difference was statistically significant. However there was no significant difference in Oral hygiene practices, and Oral Health Knowledge amongst both the group based on the questionnaire. This may be due to the limitation of the blind child to maintain proper oral hygiene due to inadequate removal of plaque, calculus and food debris from the tooth structure.

The results from our study were supporting the results of Shetty *et al* [3](2010), Tagelsir *et al* [4](2013) and Reddy *et al*. (2016) who studied the oral hygiene status and Dental caries occurrence amongst visually impaired children and concluded that visually impaired children had poor oral hygiene and high caries index. A study carried out by Chang and Shih found that students with visual impairments were less knowledgeable about their oral care.[6]whereas, in our study we have found that there was no significant difference between the Oral hygiene practices and Oral health knowledge between both the groups.Contradictory to this results, a study conducted by Prasanth *et al* concluded that the visually impaired population had better knowledge regarding Dental Healthcare and Majority of them knew the basic preventive aspects regarding oral health (Prashanth *et al*., 2011). The removal of plaque and debris from the teeth is askill that can be mastered only when an individual has the dexterity to manipulate the toothbrush and understand the objectives of this activities (Pinkham, 1975). Visually impaired cannot visualize the plaque on the teeth surfaces so even understanding the importance of oral hygiene is difficult for them, which results in the progression of dental caries as well as inflammatory disease of the periodontium (Mann *et al*., 1984). Also the maintenance of oral hygiene after the dental treatment is very difficult for them. Hence, they need regular dental visits, education and motivation regarding Proper oral hygiene measures and its impact on oral and general health (Ahmad *et al*., 2009). Unfortunately, Very less attention has been given by the Indian health authorities to improve the oral health of these Gods forgotten kids. Hence, Oral health care should be considered as important as general health care in order to achieve physiological andpsychological well-being of this children (Parkar *et al*., 2014).

Conclusion

Non-Sighted children are burdened with the heavy load of dental caries and periodontal problems as compared to sighted children in spite of having similar oral hygiene practices and oral health knowledge. These God's Forgotten children definitely deserve to be taken care of and we as health care professionals, it's our responsibility to provide these children with comprehensive oral health care to improve the oral health of these kids and hence improve the quality of life. After study, proper oral hygiene methods were instilled amongst the children and free dental treatment was completed for all the children. Our study focused on Oral hygiene practices, Knowledge and Oral health but lacks the insights into effective oral hygiene method for non-sighted kids. Hence, A more Large scale study should be conducted for determining the most effective oral hygiene method.

REFERENCES

Ahmad MS, Jindal MK, Khan S, Hashmi SH. 2009. Oral health knowledge, practice, oral hygiene status and dental caries prevalence among visually impaired students in residential institute of Aligarh. *Journal of Dentistry and Oral Hygiene.* Aug 31;1(2):022-6.

Chang CS, Shih Y. 2004. Knowledge of dental health and oral hygienepractices of taiwanese visually impaired and sighted students. *JVisual Impairment Blindness,* 98: 1-27.

Kamatchi JK, Joseph J, Krishnan AC. 2002. Oral hygiene and periodontal status in a group of institutionalized hearing impaired individuals in Pondicherry-A Descriptive study. *Journal of Indian Association of Public Health Dentistry*. Jan 1;2(1):12.

Mann J, Wolnerman JS, Lavie G, Carlin Y, Garfunkel AA. 1984. Periodontaltreatment needs and oral hygiene for institutionalized individuals withhandicapping conditions. *Spec Care Dentist,* 4:173-6.

Nandini NS. 2003. New insights into improving the oral health of visually impaired children. *J Indian Sot PedoPrev Dent December.* Dec 10;21(4).

Parkar SM, Patel N, Patel N, Zinzuwadia H. 2014. Dental health status of visually impaired individuals attending special school for blind in Ahmedabad city, India. *Indian Journal of Oral Sciences.* May 1;5(2):73.

Pinkham JR. 1975. Oral hygiene in children: relationship to age and brushing time. *The Journal of preventive dentistry.* 2(2):28.

Prashanth ST, Bhatnagar S, Das UM, Gopu H. 2011. Oral health knowledge, practice, oral hygiene status, and dental caries prevalence among visually impaired children in Bangalore. *Journal of Indian Society of Pedodontics and Preventive Dentistry.* Apr 1;29(2):102.

Reddy KV, Sharma A. 2011. Prevalence of oral health status in visually impaired children. *Journal of Indian Society of Pedodontics and Preventive Dentistry*. Jan 1;29(1):25.

Shetty V, Hegde A, Bhandary S, Rai K. 2010. Oral health status of the visually impaired children–a south Indian study. *Journal of Clinical Pediatric Dentistry*. Apr 1;34(3):213-6.

Tagelsir A, Khogli AE, Nurelhuda NM. 2013. Oral health of visually impaired schoolchildren in Khartoum State, Sudan. *BMC oral health.* Jul 17;13(1):33.

****