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Comparative Evaluation of Oral Health Status, Knowledge, Attitude and Practices Between Orphans and Non-Orphans of Durg City, Chhattisgarh, India

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ABSTRACT

Background: Parent's guidance is important in overall development of a child including their oral health, but there are some children who are deprived of their parents. These children are deprived of the care and guidance associated with parents as well. These orphans also show variation in their knowledge, attitude and practices of oral health than a child with parents.

Aim: To compare and evaluate the difference in oral health status, knowledge, attitude & practices between orphans and non- orphans children.

Material & Methods: This cross-sectional study was carried on 100 orphans and 100 non-orphans children, using a pretested questionnaire including 16 closed ended multiple choice questions about their oral health attitude, knowledge & practices and DMFT score was recorded.

Result: 70% of non-orphan considered it necessary to maintain oral hygiene while only 48% of orphans thought the same.70% non-orphans knew tobacco causes oral cancer while only 42% of orphans had knowledge about it. Mean DMFT in non-orphans was 1.194 ± 2.30 & in orphan it was 2.20 ± 1.27.

Conclusion: Oral hygiene status, knowledge, attitude & practice were not satisfactory in orphans as compared to non-orphans children.

Keywords: Oral Hygiene Status, Orphans, Non-Orphans, Knowledge, Practice.

INTRODUCTION

Parents are child's best teacher and parental guidance and care is important for a child's overall growth and development including their oral health development. With increase in the index of literacy and advances in social media, knowledge about general health along with oral health has reached to maximum parents.[1,2] Moreover due to increase in modern dietary habits of children there is gradual increase in occurrence of dental problems which in turn has made parents more alert and aware towards their child's oral health problems.[3] So, they take all possible preventive measures and do the required treatment for the betterment of their child's oral health. On the other hand, orphans are those, who have lost both of their parents or are abandoned by their parents. They are deprived of the parental care and guidance which a child with parents gets. Orphans are considered among

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socially excluded or socially marginalized population in which disease burden is high. According to a new study by an international children charity, it was found that 4% of India's child population of 20 million are orphans. They are considered as one of the high risk groups in India.[4] Although shelter, education, food has been provided to orphans but provision of oral health care facilities still remains questionable in orphan groups. Thus it is hypothesised that the orphans knowledge, attitude, practice & oral health status may differ from those children who are blessed with care and guidance of their parents.

MATERIALS AND METHOD

The present study was carried out on 100 orphans and 100 non orphan children. Permission and informed consent was taken from orphanage authorities and from the parents of the children who visited the OPD of the institute. The data was collected on a pretested questionnaire which included 16 closed ended, multiple choice questions. The pre-tested and validated questionnaire contained questions regarding the perceived oral health status, knowledge of oral health and attitude, oral health practiced, behaviour towards dental treatment and their dietary habits.

All the orphans and non-orphan children were explained about how to fill the questionnaire and the questions were read out in the local language by the examiner to enable the children to respond and understand in a better way. The non orphan children took help from their parents and the orphans took help from their caretaker. The children were informed to ask their doubts to the examiner and clarify it.

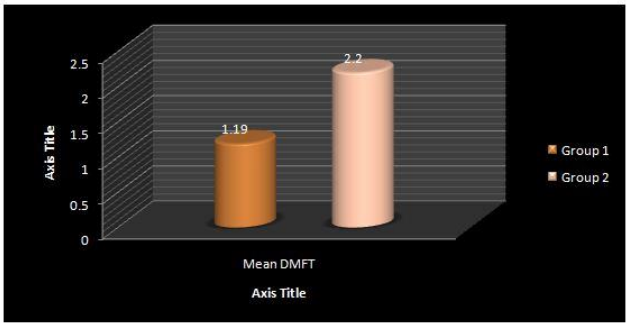
On completion of these questionnaires each child underwent oral examination and DMFT scores were recorded for each child by a single examiner to avoid bias in the study. The orphan children were asked to sit on a chair one by one after the completion of the questionnaire and with the help of sterilized diagnostic instruments (mouth mirror, probe, explorer) and a torch, the clinical examination was carried out .The non-orphan children who visited the OPD, were clinically examined on the dental chair with the help of sterilized diagnostic instruments. The data were recorded for each child in recorder columns present at the end of questionnaire.

The non orphans were grouped as Group - 1 and the orphans were grouped as Group – 2. The data thus obtained were compiled and arranged by entering into Microsoft- Xcel spread sheets. This arranged data was transferred in SPSS version 16.0 for statistical analysis.

Frequency distribution descriptive statistics were calculated. Chi Square test were used to assess the difference among 2 groups. Unpaired student t - test was used to compare the difference among the 2 groups. Confidence interval for the study was kept 95% overall and p-value ≤ 0.05 was considered to be statistically significant.

RESULTS

The difference in mean DMFT of the two groups is shown in Graph 1, where DMFT among group 2 was more than Group- 1.



Graph 1: Comparison of DMFT among the Groups

The questionnaire results were divided into three sections as Knowledge of oral health, Attitude and Oral health practices and Dietary habits. In questions regarding knowledge of oral health it was found that non orphans were more knowledgeable than orphans (Table 1).

Table 1: Responses to Questions According to the knowledge of orphans and non orphans.

Questions		Responses				Chi Square Value	P Value
Is it necessary to maintain your oral hygiene?	Group	Yes	No	Don't Know	Total	3.046	0.08
	1	70	30	0	100		
	2	48	52	0	100		
	Group	Yes	No	Don't Know	Total		
Is it necessary to brush your teeth after every meal	1	90	2	8	100	8.462	0.01*
	2	97	3	0	100		
	Group	Yes	No	Don't Know	Total		
Does regular tooth-brushing prevent all tooth problems	1	90	0	10	100	24.71	0.001*
	2	78	22	0	100		
	Group	Yes	No	Don't Know	Total		
Does tobacco use cause cancer	1	70	30	0	100	11.65	0.003*
	2	42	58	0	100		
	Group	Yes	No	Don't Know	Total		
Does regular dental visit maintains oral hygiene	1	80	9	11	100	4.57	0.102
	2	76	18	6	100		

Table 2: Responses to Questions According to the Attitude of Orphans and Non Orphans.

Questions	Response					Chi Square Value	P Value
	Group	Yes	No	Don't know	Total		
Are you satisfied with your teeth appearance	1	54	34	12	100	10.78	0.005*
	2	72	26	2	100		
What others feel about your oral health	Group	Good	Fair	Poor	Total	31.60	0.001*
	1	44	48	8	100		
	2	53	17	30	100		
	Group	Dentist	Pharmacist	Others	Total		
Whom do you consult	1	96	0	4	100	6.816	0.03*

for your tooth problems							
	2	86	3	11	100		
	Group	6 Monthly	1 Year	Never	Total		
How often you visit a dentist	1	28	22	50	100	8.101	0.044*
	2	25	36	39	100		

Table 3: Responses to Questions According to the practice and dietary habits of Orphans and Non Orphans.

Questions	Group	Finger & Toothbrush	Neem Stick	Others	Total		
How do you brush your teeth	1	88	8	4	100	5.67	0.05
	2	76	12	12	100		
	Group	Within 6 months	6-12 Months	Never	Total		
How often you change your toothbrush	1	74	22	4	100	5.07	0.07
	2	63	25	12	100		
	Group	Yes	No	Never	Total		
Do you rinse your mouth with water after every meal	1	40	50	10	100	8.435	0.01*
	2	58	39	3	100		
	Group	Once	More than Once	Occasionally	Total		
How many times you snack per day	1	30	20	50	100	73.15	0.001*
	2	16	78	6	100		
	Group	Yes	No	Occasionally	Total		
Do you often take sweets	1	98	0	2	100	5.005	0.08
	2	97	3	0	100		
	Group	Often	Occasionally	Never	Total		

How often do you have soft drinks	1	10	72	18	100	57.007	0.001*
	2	35	19	46	100		

DISCUSSION

The result of this study gives an idea about the knowledge, attitude, practice and oral health status of the orphans and the non orphans and who are at a greater risk and are in need of an upgrade in the field of oral health.

Knowledge of oral health practices

In the current study it was found that 70% of non orphan and 48% of orphan found it necessary to maintain their oral hygiene, 90% of non orphans found it is necessary to brush their teeth after every meal while 97 %of orphans thought the same. 90% of non orphans and 78% orphans respectively thought that regular tooth brushing can prevent all tooth problems. 80% of non orphans and 76% of orphans had knowledge that regular dental visit maintains oral hygiene. 70% of non orphan had knowledge that tobacco use can cause cancer whereas 58% of orphan lacked knowledge about it. These results show that in some questions the orphans responded well and in some questions they didn't have satisfactory knowledge as compared to the non orphans. This may be due to the reason that the orphan children were provided with education, so they have basic knowledge about oral health but the orphans lack deeper knowledge about it. These results were in agreement with Rinki Hans et al. in which 69% of orphan children found it is necessary to brush their teeth after every meal, 93% of orphan children found it necessary to maintain their oral hygiene, 51% orphan children believed that regular tooth brushing can prevent all tooth problem and 77% of orphans believed that with regular dental visit, oral hygiene can be maintained but according to the same study the result was in contradictory where 93% of orphan had knowledge that tobacco causes cancer.[5] The results were also contradictory to a study carried by Sushant et al. where they found only 26.6% of orphans had knowledge about maintaining oral hygiene.[6]

Attitude of orphans and non orphans towards oral health practices

Fifty four percent of non orphans were satisfied with their teeth appearance whereas 72% of orphans were satisfied. This difference may be due to the reason that the orphans do not have knowledge about a normal, healthy and good teeth appearance and an abnormal, unhealthy appearance. Forty four percent of non orphans were influenced about what others said about their oral health and 53% of orphans felt the same. The results were similar to the study done by Arun Kumar et al., where 50.5% of children were satisfied with their teeth appearance and 60% of children were being complimented by others for maintaining good oral health.[7]

In this study 96% of non orphans visited dentist (rather than a pharmacist or any other source) when they had a teeth problem whereas 86% of orphans visited dentist for teeth problems. The present study had similar results with that of Rinki Hans et al. where 67% of orphans visited a dentist for their teeth problems [5]. The present study showed that 28% of non orphans and 25% of orphans visited dentist within 6 months, 22% of non orphans and 36% of orphans visited dentist within 1 year and 50% of non orphan and 39% of orphan never visited a dentist. These results showed that both orphans and non orphans lack knowledge about benefits of regular dental visits or it may be due to the fear towards the dental treatment for which they hesitated to visit a dentist These results were similar to that of the study of Lonim Prasad Dixit et al., in which orphans had low visits to dental clinics. [8]

Oral health practices of orphans and non orphans

In the current study it was found that 88% of non orphans and 76% of orphans used toothbrush and toothpaste to brush their teeth. Seventy four percent of non orphans and 63% of orphans changed their brush within 6 months. Similar results were found in the study of Rinki Hans et al., where it was found that 82% of children used tooth brush and tooth paste for cleaning their teeth and 70% of the children had the habit of changing their tooth brush within 6 months.[5]

In our study, 50% of non orphans used other materials like dental floss and mouthwash to clean their teeth other than tooth brush but 76% of orphans did not use any material other than toothbrush to clean their teeth. This may be due to the reason that the orphans must not be having knowledge about the benefits of using dental floss, mouthwash etc or they may not be able to afford these items. This study results were similar to the study done by Mikhila Khedekar et al., where none of the orphans used materials other than toothbrush to clean their teeth.[9] Forty percent of non orphans rinsed their mouth after every meal while 58% of orphans did the same. These results were found similar to the results of Lonim Prasad Dixit et al., where 80% of orphans rinsed their mouth after every meal.[8]

Dietary habits

Fifty percent non orphans took snacks occasionally whereas 78% of orphans took snacks more than once per week. Both of the groups had higher intake of sweets. Seventy two percent of non orphan took soft drinks occasionally and 35% of orphans took it frequently. Snacks and soft drink intake were found to be less in case of the non orphans as compared to orphans, this may be because of the reason that the non orphans are under parental restriction which the orphans lacks. These results were similar to that of results of Yu Kubota et al., where 85% of orphans took soft drinks more than once per week.[10]

Dental caries status

The mean DMFT score were found to be more in case of orphans i.e. 2.220 (standard deviation = 1.25) as compared to non orphans 1.194 (standard deviation = 2.30). These results were in accordance with the result of study carried by Abhishek Sharma et al., where mean DMFT was 2.07± 2.14 among the orphans.[11]

CONCLUSION

The Oral hygiene status, knowledge, attitude & practice were not satisfactory in orphans and needs to be taken care of. The orphans had superficial knowledge about oral health but lacked deeper knowledge about it. Maximum orphans used tooth brush and paste to brush their teeth but many of them did not use any materials like mouthwash and dental floss. So, there is an apparent need for implementing oral health programmes in the orphanages to develop their knowledge thus affecting their attitude and practice towards dental health development.

CONFLICTS OF INTEREST

The authors declare they have no potential conflict of interests regarding this article.

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