

# Assessment of Dental Neglect and It's Relation to Oral Health Among School Children Aged 4-12 Years in Sri Ganganagar City, Rajasthan, India

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## Abstract

**Background:** Dental neglect indicates that parents or guardians fail to give the necessary oral health requirements such that the child can take pleasure in function and free from disease, where reasonable means are accessible to parents or caretaker.

**Aim:** The aim of the study was to evaluate the dental negligence of parents towards their children aged 4-12 years in Sri Ganganagar city, Rajasthan and to correlate the oral health status of the children.

**Materials and Methods:** A cross-sectional study was done involving 1000 school going children and their parents. Questionnaire were distributed among the parents of the children which includes the details of parents and their children. WHO form was used to assess the oral health status of the children i.e. the dental caries and bleeding on probing as per the World Health Organization criteria, 2013 index. Statistical analysis was done by using SPSS software version 20.0.

**Results:** A significant higher dental negligence score was found among those parents who resided in the suburban area and whose educational qualification was higher secondary only and those who had visited the dentist only after the development of symptoms in their children.

**Conclusion:** Among the parents whose educational qualification was higher secondary only, those who resided in the suburban area and those who went to see dentist only after the development of symptoms in their children have shown poor health status.

**Keywords:** Dental neglect; dental caries; oral hygiene; parents

## Introduction

Dental neglect indicates that how known knowledge of oral health care are not fulfilled which fails to do the proper maintenance of oral cavity. For proper oral health care people need to be aware of the dental problem consequences. In spite of giving so much dental professionals and audio-visual dental care measures, only a small number of people take proper dental home care and they do not go for periodic dental checkup. Oral health is considered as the central importance for our general health and well-being. A healthy oral cavity allows an individual to communicate, have food and participate in social activities without having any disease, discomfort or difficulty. Having oral disease can be expensive in

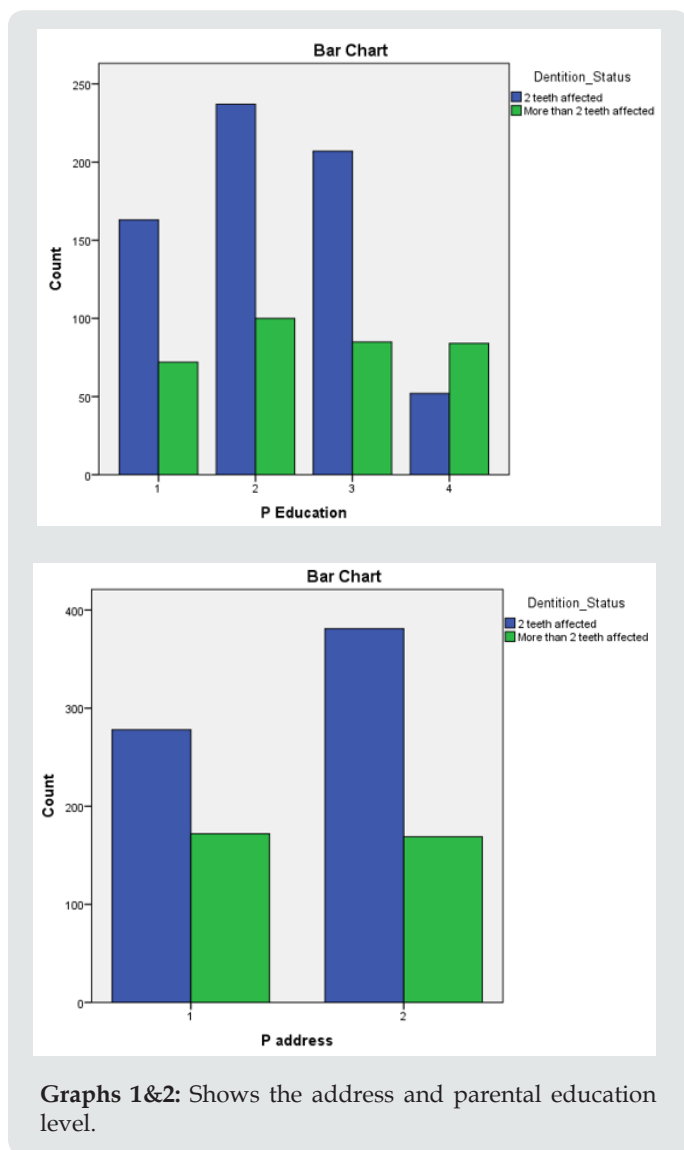
terms of money and also life style can be changed [1]. The World Health Organization has stated that neglect should be differentiated from conditions like poverty, where it shows dental neglect is present only where there are available resources. It was found that there is a great deal of severity of dental neglect worldwide [2].

## Materials and Methods

Ethical approval for the study were taken from the concerned authority of the institution. This ensured that participants involved in the study were randomly selected from the schools of Sri Ganganagar city. This study was conducted from January 2019

to August 2019. The age of the children were 4 to 12 years, and the questionnaire were given to the parents of the children to be answered. An informed consent was obtained from the parents earlier. The parents were asked to answer the questionnaire which had details of both parents and children. Consent form from parents were taken for the survey to be done. Oral examination of children was conducted by using disposable mouth mirror, straight probe and CPTIN probe in a natural day light. Oral status was recorded according to the WHO form, 2013. The collected data were tabulated and subjected to statistical analysis using SPSS software version 20.0, (SPSS Inc., Chicago Ill., USA) and levels of statistical significance were set at  $P < 0.05$ .

### Results



A total of 1000 pair of parents and children participated in the study, of which female and male parents were of 631 and 369, respectively. Table 1 illustrate the comparison of key background variables and dental service used in previous two years and Table 2 shows the p value for the oral status with respect to key background variables (Graphs 1&2). It is showed that with respect to dental

neglect scores, a significant higher dental neglect score was reported among the people who resided in the suburban location, parents whose educational qualification was higher secondary only, parents whose visit to the dentist were only after the development of symptom, parents those who used only school dental services and those who used dental service only once in previous two years.

**Table 1:** Comparison of key background variables with respect to given demographic status.

	N	Mean DNS score
<b>Education</b>		
Secondary	235	23.50%
Higher secondary	337	33.7%
Graduate	295	29.50%
Post graduate	136	13.60%
<b>Address</b>		
Urban	450	45%
Suburban	550	55%
<b>Parental visiting pattern to the dentist</b>		
Routine	415	41.50%
Symptom driven	585	58.50%
<b>Dental services used in previous two years</b>		
School dental service only.	346	34.60%
Private dentist only.	381	38.10%
Both types	173	17.30%
Neither types	100	10%
<b>Times of dental services used in previous two years</b>		
1	606	60.60%
2	315	31.50%
3	79	7.90%

**Table 2:**

P value	Carious Teeth	Gingival Bleeding
Address	0.013*	0.696
Education	0.000**	0.000**
Parental visiting pattern to the dentist	0.067	0.678
Dental services used in previous two years	0.016*	0.000**
Times of dental services used in previous two years	0.005*	0.043*

\*P value is statistically significant, \*\*P value is statistically highly significant.

### Discussion

Oral health occupies a very significant role for the wellbeing of individuals, and parents' behavior and way of thinking influence the oral health of their children [3]. Prevention is always better option than cure. People should be very thoughtful and particular to maintain oral health for the prevention of oral disease. Dental professionals and audio-visual media provide the essential dental care measures [4]. But the fact is that only few people take adequate regular home dental care and do not go for periodic/yearly dental

check to the dentist to keep their oral cavity healthy [5]. It has been seen that dental neglect is mostly related to the illiteracy amongst low socio-economic class and the prevalence of oral diseases are highest amongst them [6]. Child neglect is a very important subject in terms of prevalence and severity—it is the most common cause for a child to be made subject to a child protection plan in the UK - and there is indubitable evidence and facts that it is harmful and damaging to children [7-10]. There is very scarce literature regarding the estimate of child dental neglect worldwide [11]. Hence, in this study, in addition to recording the caries status, the gingival status i.e. bleeding on probing was also evaluated which interprets the degree of failure to seek dental treatment. Out of 1000 children maximum number of the participants were 7 years with 596 male and 404 females. Majority of the children were in 1st standard and from private school. The caretakers who responded to the questionnaire were mostly mothers of the children. Hence, it helped us to know the complete home and professional dental care the child receives as the child is mostly with the mother. The results of the present study showed that dental neglect was found more in parents who have done only higher secondary education which showed lesser levels of positive dental attitudes which is in contrary to the result of Gurunathan D et al. [12] where it was stated that parents who have done secondary education showed lesser levels of positive dental attitudes which is similar to studies done by Freeman et al. and Williams et al. [13,14]. In the present study, a significant difference was observed in the dental neglect scores among parents residing in the suburban areas in comparison with parents of urban areas. This is essentially due to not much awareness of oral health, availability, and usage of dental services [15]. The dental neglect among children is higher among parents' whose last dental visit was once or twice in previous 2 years, those who used only school dental services and were symptom driven which is similar to the findings in South Australia and Chennai [16]. The dental neglect is reflected in the poor oral health of these children with significantly higher caries prevalence and untreated carious lesions. This suggests that the knowledge of parents regarding oral health and utility of dental services is limited as the frequency of dental visits suggests the oral health awareness among parents [17].

## Conclusion

Inadequate dental care by parents can be observed as dental neglect in children and therefore is a sign of child neglect. Health care workers involved in the care of children are thus in a unique and a very important position to understand early symptoms of child abuse and neglect. We believe and accept that the occurrence of dental caries is an important sign to this diagnosis. From this study it is concluded that, the dental neglect among school going children aged 4-12 years regarding oral hygiene is still far from

satisfactory in certain respects in our population, but it is also seen that oral hygiene status can be improved after sessions of oral health education to the children and most importantly the parents.

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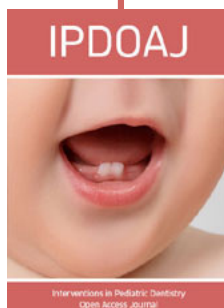
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