

Assessment Of Dental Negligence Among School Going Children in Varkala

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ABSTRACT

AIM:

Through this research we are trying to find out effect of dental negligence among school going children

METHODOLOGY:

A cross sectional clinical survey was conducted among school going children of age group 10-15 years of Queen of Angels Public School,Akathumuri Varkala.Descriptive statistics and Chi Square tests were used to analyze the collected data

RESULT:

The study was completed with 81 responses of which 28 (34.6 percentage) respondents were males and 53 (65.4 percentage) females.There is a strong relation between dental negligence and DMFS score.Children with highest DMFS score(11-20) require immediate treatment (100%).

CONCLUSION:

Dental neglect can be a sign of poor parental care.Social services and health education play an important role improving parents knowledge and attitude towards proper dental care.Higher dental negligence causes increased DMFS score.

KEY WORDS: Oral hygiene,dental negligence,treatment needs,health education

INTRODUCTION

Oral health is a fundamental part of general health[1].Dental health education is a central part of maintaining proper oral health.Social services and health education play a vital role in declining the rate of neglect and abuse by providing prompt treatment at the earliest[2].Even though school dental health programs are conducted people does not seem to show much interest towards proper dental homecare,preventive or routine treatment and their follow up[3].

Dental neglect can be a predictor of child neglect. Untreated dental disease may have a continuing impact on physical and mental well being of not only children but also on the later stages of adulthood[4]. Dentists along with other professionals play a vital role in early detection, investigation, diagnosis, treatment and prevention of dental neglect and thereby child neglect. Poor parental care can lead to untreated dental trauma, pain,poor growth ,poor oral hygiene, increased risk of dental caries ,associated infection and inflammation and impaired quality of life[5,6].

In a population where the prevalence of dental caries is high ,dental caries may not be a suitable indicator of dental neglect[5]. Therefore a detailed clinical examination of oral mucosal lesions and traumatic dental injuries(TDI) are necessary.Traumatic dental injuries (TDI) is a major health concern in population with highest prevalence rate among children[7,8,9].Time elapsed between the occurrence of traumatic dental injuries (TDI) and dental care plays a vital role.Traumatic dental injuries (TDI) varies from retarded pulp development sequel to root resorption, ankylosis,pulp canal obliteration to pulp necrosis[10,11].Clinical signs of pulp degeneration are slight crown discolouration during early stage to progressive crown discolouration, percussion response, periapical bone rarefaction in advanced stages[12,13].There are no sufficient studies conducted on dental negligence in school going children of Varkala.Through this research we are assessing the prevalence of school going children in Varkala.

MATERIALS AND METHODOLOGY

This is a cross sectional study conducted between October 2022 to November 2022.Ethical approval was obtained from the concerned authority. Participants were selected using convenience sampling.The age of the children were between 10-15 years.An informed consent was obtained from the parents.Oral examination of the children was conducted by using mouth mirror,straight probe and tongue depressors.Oral status was recorded according to the WHO form 2013.Collected data was analysed using SPSS software version 25.0

INCLUSION CRITERIA

The study was conducted among natives of Kerala state,India.The study was conducted among 81 students between age group 10 and 15 years old in Queen of Angels Public School,Akathumuri Varkala after having verbal consent.

EXCLUSION CRITERIA

Participants who did not consent to the survey were excluded from the survey.

METHODOLOGY

A cross sectional study will be conducted among school going children of age group 10-15 years of school in rural region of Varkala.

Inclusion criteria

- 1.School going children
- 2.No systemic diseases
- 3.No history of oral prophylaxis done in the last 1 month.
- 4.No history of medication

Study is planned to conduct from October to November 2022 .Dental neglect was assessed using WHO Oral Health Assessment Form for Children 2013 and Ellis and Davey's trauma classification.

ELLIS AND DAVEY'S CLASSIFICATION

CLASS I	Simple crown fracture with enamel involvement
CLASS II	Extended crown fracture with dentinal involvement ,without pulp exposition
CLASS III	Extended crown fracture with dentinal involvement ,with pulp exposition
CLASS IV	Non vital teeth, with or without loss of crown tissues
CLASS V	Traumatically avulsed teeth
CLASS VI	Crown fracture ,with or without loss of crown tissues
CLASS VII	Tooth luxation without crown or root fracture
CLASS VIII	Cervical crown fracture
CLASS IX	Traumatic injuries on primary dentition

STATISTICAL ANALYSIS

Collected data was analysed using SPSS software version 25.0.The data was analysed using descriptive statistics and association among the variables were done using Chi square test

RESULTS

The study was completed with 81 responses of which 34.6 percentage respondents were males and 65.4 percentage females as given in figure1

As given in figure 2, 81.5 percent of responses were recorded from the age group 10-12 years ,while 18.5 percent belonged to 13-15 years group.

Fig 1:Frequency distribution of gender

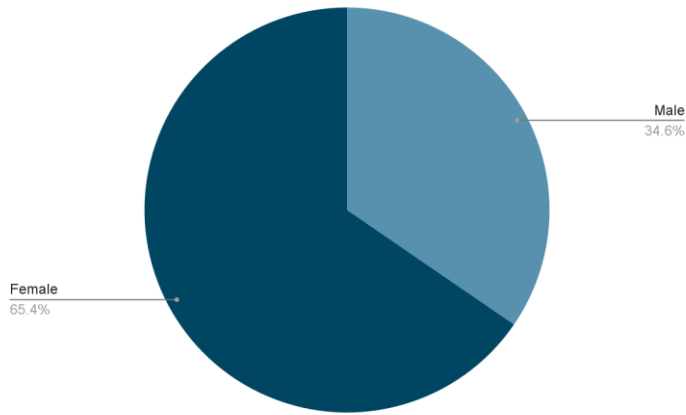


Fig 2:Frequency distribution of age

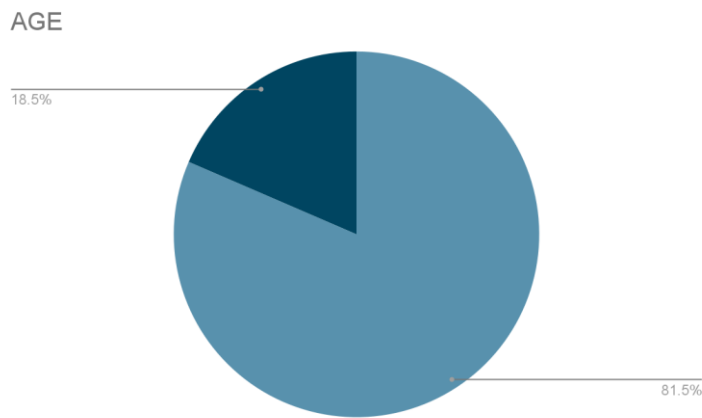


TABLE 1

DEMOGRAPHIC DATA	FREQUENCY		PERCENTAGE
CLASS	UPPER PRIMARY	66	81.5%
	HIGH SCHOOL	15	18.5%
DMFS	0-5	64	79.0%
	6-10	14	17.3%
	11-15	2	2.5%
	16-20	1	1.2%
GINGIVITIS	PRESENT	0	0%
	ABSENT	81	100%
FLUOROSIS	ABSENT	78	96.3%

	MILD	2	2.5%
	MODERATE	1	1.2%
EROSION	ABSENT	78	96.3%
	PRESENT	3	3.7%
TRAUMA	ABSENT	76	93.8%
	PRESENT	5	6.2%
ORAL MUCOSAL LESIONS	ABSENT	77	95.1%
	PRESENT	4	4.9%
TREATMENT NEEDS	NO CURATIVE TREATMENT	16	19.8%
	PREVENTIVE OR ROUTINE TREATMENT	33	40.7%
	PROMPT TREATMENT	11	13.6%
	IMMEDIATE TREATMENT	21	25.9%

Table 1 shows the majority of respondents are from upper primary(81.5%) and the remaining from high school (18.5%).Majority of the respondents had a DMFS score of the range 0-5 (79.0%), other respondents had a score of 6-10(17.3%), 11-15(2.5%), 16-20(1.2%).

Gingivitis was absent among the participants.In majority of the participants fluorosis was absent(96.3%),2.5% of the participants had mild fluorosis and the rest had moderate(1.2%).In majority of the participants erosion was absent (96.3%) and present among 3.7%.In majority of the population trauma was absent(93.8%) and present among 6.2%.In majority of the population oral mucosal lesions was absent (95.1%) and present among 4.9%.In majority of the participants require preventive or routine treatment (40.7%),immediate treatment for 25.9%,no curative treatment for 19.8%,prompt treatment for 13.6%.

TABLE 2

		Treatment needs				p value
		No curative Treatment	Preventive/ Routine Treatment	Prompt treatment	Immediate Treatment	
DMFS	0-5	25.0%	48.4%	15.6%	10.9%	p<0.001
	6-10	0.0%	14.3%	7.1%	78.6%	
	11-15	0.0%	0%	0%	100%	
	16-20	0.0%	0%	0%	100%	
Oral mucosal lesion	Absent	20.8%	42.9%	14.3%	22.1%	p=0.007
	Present	0.0	0.0%	0.0%	100.0%	
Trauma	Absent	21.1%	43.4%	14.5%	21.1%	p=0.002
	Present	0.0%	0.0%	0.0%	100.0%	

Table 2 shows the comparison between DMFS ,oral mucosal lesions and trauma between treatment needs.While comparing the DMFS with treatment needs children with highest DMFS score(11-20) require immediate treatment (100%) , DMFS score <5 require preventive or routine treatment (48.4%).

While comparing oral mucosal lesion with treatment needs the participants with oral mucosal lesions require immediate treatment(100.0%) whereas in absence of oral mucosal lesion require preventive or routine treatment (42.9%).While comparing trauma with treatment needs,participants with trauma requires immediate treatment(100.0%) whereas in the absence of trauma require preventive or routine treatment(43.4%).

DISCUSSION

From the analysis of the results yielded from our study we deciphered the following facts and information:

The study was completed with 81 responses of which 34.6 percentage respondents were males and 65.4 percentage females.While comparing the age, gender,class with DMFS ,gingivitis, fluorosis,erosion,trauma,oral mucosal lesions,treatment needs most of them shows no significant correlation.This is contradictory to the study conducted by Khan et al "Assessment of negligence of traumatic dental injuries among school going children".

While comparing the DMFS with treatment needs, children with highest DMFS score(11-20) require immediate treatment (100%) ,with DMFS score <5 require preventive or routine treatment (48.4%).This is in support with the study conducted by Mathur A, Mathur A, Aggarwal VP (2016) Dental Neglect Affecting Oral Health Status in India. *Int J Pediatr Res* 2:016. 10.23937/2469-5769/1510016.[14].

While comparing oral mucosal lesion with treatment needs the participants with oral mucosal lesions require immediate treatment(100.0%) whereas in absence of oral mucosal lesion require preventive or routine treatment (42.9%).

While comparing trauma with treatment needs,participants with trauma require immediate treatment(100.0%) whereas in the absence of trauma require preventive or routine treatment(43.4%).

LIMITATION

Limitations of the study were less sample size and duration.Future study can be conducted with more participants and longer duration of time to associate the relationship between age, gender,class with DMFS,gingivitis, fluorosis, erosion, trauma, oral mucosal lesions,treatment needs.

CONCLUSION

Dental neglect can be a sign of poor parental care.Social services and health education play an important role improving parents knowledge and attitude towards proper dental care.Higher dental negligence causes increased DMFS score.

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