

A study to assess the dental erosion and level of knowledge and its associated risk factors of dental erosion among school children at Govt higher sec school, Avadi

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ABSTRACT:

Dental diseases are the most prevalent chronic diseases worldwide and a costly burden to health care services. An estimated 5 billion people World Wide suffer from dental caries. The WHO (2013) occupational risks as one of the leading causes of morbidity and mortality. Descriptive research design was used with 100 samples who matched the inclusion criteria were selected by Simple random sampling technique. The quantitative approach was used. The sample size for this present study was 100 children from VI and VII standard who all are studying Government higher secondary school at Avadi. Demographical variables were collected by using self structured questionnaires. Out of 100 samples 30(30%) members had mild knowledge, 30(30%) members had moderate level of knowledge, 20(20%) members had severe level of knowledge and 20(20%) members had none level of knowledge. There is a poor understanding of the dental erosion by children and parents. More preventive interventions that are targeted at young children are required to promote a healthy lifestyle.

KEY WORDS: Dental erosion, risk factors of dental erosion, school children

INTRODUCTION:

Dental erosion has been defined as the irreversible loss of dental hard tissue from acids, without the involvement of bacteria. ^(1,4) The critical pH of dental enamel, made up of carbonated calcium hydroxyapatite, has been estimated as 5.5, and normally is kept in balance by saliva, which not only contains buffers to neutralize acids, but also contributes phosphate and calcium ions to aid in demineralization. ^(5,6) Dental diseases are the most prevalent chronic diseases worldwide and a costly burden to health care services. The treatment of dental diseases is expensive, according for between 5% and 10% of total health care expenditures in industrialized countries. In most developing low income countries, the prevalence rate of dental care is high and more than 90% of caries untreated. An estimated 5 billion people World Wide suffer from dental caries.

The public health problem associated with oral disease is a serious burden on countries around the globe. The World Health Organization (WHO) has a long tradition of epidemiological survey methodology and surveillance in oral health since 1971, when the first edition of WHO oral health surveys basic methods was published many countries around the world have used the procedure described in the manual to produce information on current levels of disease and trends over time, as well as changes in prevalence and severity resulting from community programmers for prevention of oral disease. ⁽⁷⁾ World health organization (WHO) 2016: The estimated that oral diseases affected at least 3.58 billion people worldwide, with caries of the permanent teeth being the more prevalent of all condition assessed. Globally, it is estimated that 2.4 billion people suffer from caries of permanent teeth and 486 million children suffer from caries of primary teeth. In most LMIC, with increasing urbanization and changes in living conditions, the

prevalence of oral diseases continues to increase notably due to inadequate exposure to fluoride and poor access to primary oral health care services.⁽⁸⁾

According to a systemic review of the literature (2018): Dental erosion in the primary dentition, this condition should be considered a disease just as dental carries. The prevalence in children ranges from 15.1% to 59.7%. The occurrence of dental erosion is associated with socioeconomic factors, age, eating habits and the practice of sports. Most studies show that more than 60% of erosion is limited to the enamel.⁽⁹⁾

THE INDIAN ASSOCIATION OF DENTIST (2015):⁽¹⁰⁾ the oral health is exclusively devoted to educating the people on the basics of teeth and their care. By improving public awareness, it aims to secure healthy teeth. Oral health educates you on how to prevent oral ailments and thus promote dental health. The importance of oral health and hygiene and emphasizes the importance of oral health in the general wellbeing and quality of life.

Oral health focuses on overall dental health issues and reflects IDAs desire to make the same as part of the national health policy and thus contribute to creating better awareness of oral healthcare amongst the masses. The public health dentistry professionals shared a common dream of enhancing the discipline of public health dentistry in India. They felt the need for providing a common exchange of views and information and development of meaningful and effective preventive programs for the community. India is developing country with multi religious, multi ethnic, multi linguistic communities where 70% of the population reside in rural areas but are being served by only 20% of the health care professionals. Also most of the health care facilities, including oral health are oriented towards curative aspects than prevention or health promotion.

OBJECTIVES:

- To assess the demographic variables among school children
- Distribution of the grade of erosion severity on maxillary permanent incisors among school children
- To assess the level of knowledge on dental erosion among school children
- Associate between the knowledge on dental erosion among school children with selected demographic variables among school children

MATERIALS AND METHODS:

The research approach adopted in the study was quantitative approach by using descriptive research design. After obtaining formal permission from the principal of Saveetha College of Nursing and school headmaster, the quantitative approach was used. The sample size for this present study was 100 children from VI and VII standard who all are studying Government higher secondary school at Avadi. Samples who met the inclusion criteria were selected by using simple random sampling technique. The demographic variables consist of age, gender, education, occupation, father income, and previous history of dental erosion; previously go for the dental clinic, brushing technique and time to spend to arrive the school. Self structured questionnaire and ICI checklist was used to assess the dental erosion of school children. The investigator students were instructed to the investigator conducted a awareness about the dental erosion and showing the flash cards about dental erosion and its risk factors. The tools were translated to Tamil language. Informed consent was obtained and data was collected from the sample. The data were analyzed by descriptive statistics.

RESULTS:

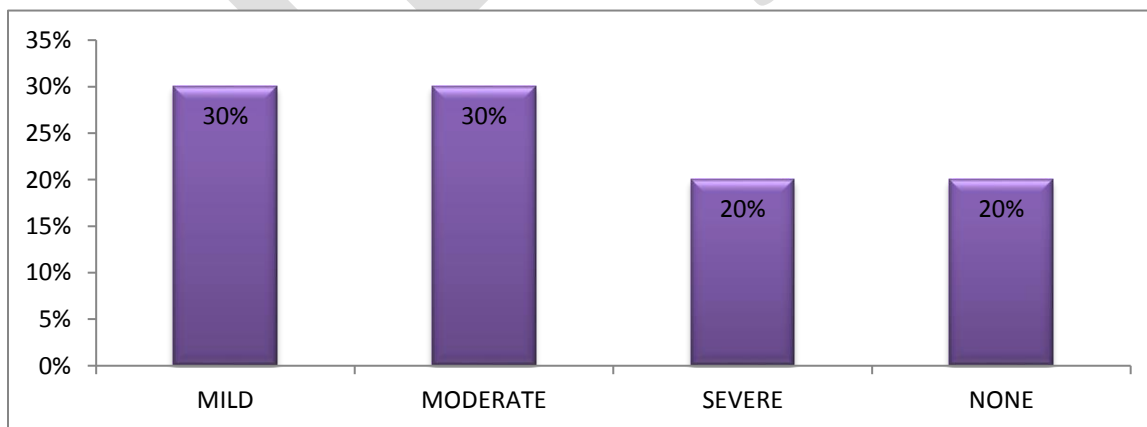
TABLE 1: Distribution of the grade of erosion severity on maxillary permanent incisors among school children

TOOTH FREQUENCY(GRADE OF SEVERITY)	CENTRAL INCISORS N (%)	LATERAL INCISORS N (%)
Normal enamel	30(30%)	35(35%)
Matt appearance of the enamel surface with no loss of contour	5(5%)	5(5%)
Loss of enamel only	20(20%)	15(15%)
Loss of enamel with exposure of dentine	20(20%)	15(15%)
Loss of enamel and dentine beyond dentine enamel junction	10(10%)	10(10%)
Loss of enamel and dentine with exposure of the pulp	15(15%)	20(20%)
Total	100	100

TABLE 2: Frequency and percentage distribution of level of knowledge on dental erosion among school children

S.NO	LEVEL OF KNOWLEDGE	FREQUENCY	PERCENTAGE
1.	Mild	30	30%
2.	Moderate	30	30%
3.	Severe	20	20%
4.	None	20	20%

FIGURE 1: Frequency and percentage distribution of level of knowledge on dental erosion among school children



DISCUSSION:

Distribution of the grade of dental erosion severity on maxillary permanent incisors among school children the table 2 shows that out of 100 children normal tooth enamel are of 30% comes under the central incisors and 35% comes under the lateral incisors, regarding matt appearance of the enamel surface with no loss of contour are 5 % comes under the central incisors and 5% comes under

the lateral incisors, loss of enamel only 20% comes under the central incisors and 15% comes under the lateral incisors, loss of enamel with exposure of dentine are 20% comes under the central incisors and 15% comes under the lateral incisors, loss of enamel and dentine beyond dentine enamel junction are 10% comes under the central incisors and 10% comes under the lateral incisors, loss of enamel and dentine with exposure of the pulp are 15% comes under the central incisors and 20% comes under the lateral incisors.

Al Malik (2001)⁽¹¹⁾ this might be attributed to the fact that these carbonate drinks have a high buffering capacity, which has a strong erosive potential on teeth. Talebi (2009)⁽¹²⁾ Matt appearance of the enamel was the most prevalent type of dental erosion (23.4% for central incisors and 7.9% for lateral incisors) and the surface area also affected. The prominence of erosion on the labial surface (18.3% for central incisors and 2.2% for lateral incisors). It could be due to the fact that children are exposed to more risk factor for longer duration.

Out of 100 samples 30(30%) members had mild knowledge, 30(30%) members had moderate level of knowledge, 20(20%) members had severe level of knowledge and 20(20%) members had none level of knowledge. The statistical values of mean and standard deviation 3.73 and 2.707.

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