A study on oral health status of 5 to 12 years old school going children in rural Bangladesh

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Abstract:

Oral health is essential to general health and quality of life. Proper care of oral health should be taken regularly. It is very important to monitor the oral health condition from early life. Therefore a cross sectional study was done among primary school children of Mathbaria, Pirojpur, Bangladesh to assess the oral health status of rural Bangladesh. The study showed that the oral hygiene of school children was poor with high dental caries prevalence indicating lack of accurate oral hygiene practices. Hence, awareness regarding oral hygiene habits should be generated among students and their guardians by conducting regular screening programmes in schools for early diagnosis and rapid treatment.

Keywords: *Oral health, children, oral hygiene, awareness, rural Bangladesh.*

(Bangladesh Dental Journal 2016; 32: 38-40)

Introduction:

Oral health is a state of being free from mouth and facial pain, oral and throat cancer, oral infection and sores, periodontal (gum) disease, tooth decay, tooth loss, and other diseases and disorders[1]. It assists a person to speak, eat and socialize without active disease, discomfort or embarrassment[2]. Oral health status is an essential part of our health, which has a direct impact on general health[3]. Poor oral health affects children nutrition, growth, and development as well as attendance at school[4]. More than 50 million school hours are lost annually because of oral health problems that affect children's performance at school and success in future life[5]. School age is a period of overall development[6]. During this period the child learns to become productive and constructive affiliates of the society[7]. If the right oral hygiene habits can be promoted during this period of life, practices will go a long way in keeping the good oral health of a child throughout the life[8]. Furthermore, if a disease can be prevented at an early stage, it will decrease the impact on the cost and methods of treatment[9]. In order to evaluate the scale of the preventive task for oral disease it is necessary to diagnose the magnitude and severity of the disease. Therefore the present study was conducted with the objective of knowing oral health status as well as the burden of oral diseases among primary school children of Mathbaria, Pirojpur, Bangladesh.

Materials and methods:

A cross sectional study was conducted in 3 rural primary schools of Mathbaria, Pirojpur, Bangladesh. Total numbers of 150 school children were taken from these schools for the study. Children were from 5 to 12 years of age. The children were examined in their respective schools by four professional dentists. All itra-oral examinations were done according to WHO.

Oral health survey methods using dental mirror, explorer and natural illumination after seating the children on a chair. Instruments were disinfected with an antiseptic solution after every uses. Modified WHO oral assessment form was used for evaluating the oral health condition of the students. The dental indices used for assessing for oral health status are as follows: OHIS – Oral hygiene index simplified, DMFT (Decalcifying, Missing, Filled Tooth) – Dental caries index in permanent dentition and deft index (decayed extracted filled tooth). Data was analyzed using descriptive and inferential statistics.

Results:

The result showed that 55% students had poor oral hygiene, 26% had fair oral hygiene and rest had good oral hygiene. The frequency of gingivitis among the students was 47% among which 38% had mild and only 0.3% had

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severe gingivitis. The mean DMFT score of the students was 0.91. The chief contribution was by decayed teeth. The mean for missing teeth was 0.1 and filled teeth were 0.2. The mean 'def' score was 0.65 in which the major part was by decayed tooth (0.56) and for extracted teeth it was 0.10.

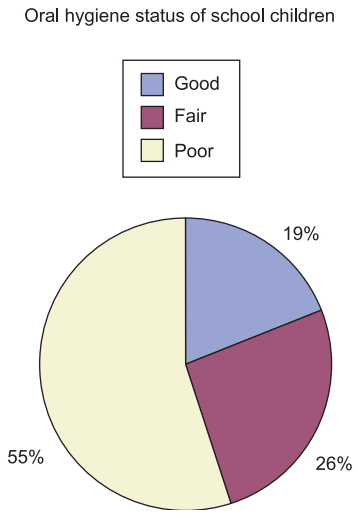

Fig.1: *Oral Hygiene Status of School Children*

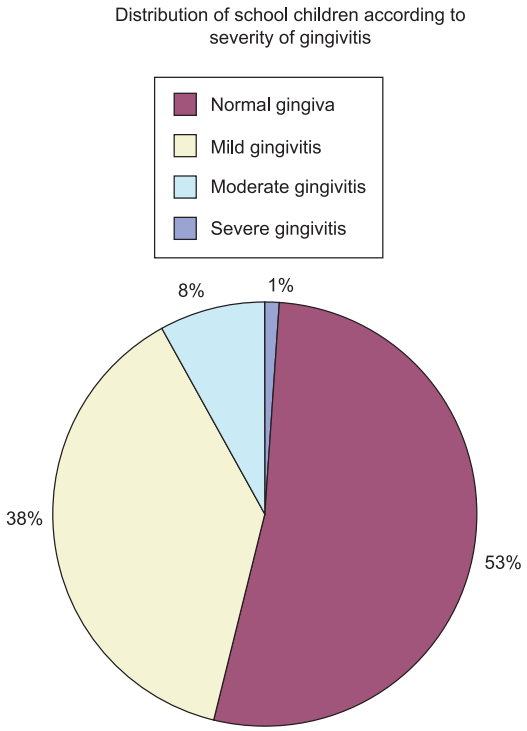

Fig.-2: *Distribution of School Children According to Severity of Gingivitis*

Table-I

Distribution of DMFT Scores of School Children

DMFT score for permanent dentition	Mean	SD
Decayed Teeth	0.89	0.89
Missing Teeth	0.10	0.53
Filled Teeth	0.20	1.80
DMFT score	0.91	0.91

Table-II

Distribution of def Scores of School Children

def score primary dentition	Mean	SD
Decayed Teeth	0.56	0.89
Extracted Teeth	0.10	0.50
Filled Teeth	0.00	0.00
def score	0.65	1.00

Discussions:

The study reveals that, maximum percentage (55%) of the children had poor oral hygiene, which indicates their lack of awareness of oral health and faulty oral habits. In this study high frequency of gingivitis was found which again reflects the ineffective maintenance of oral hygiene and pubertal changes in case of girls. According to world health organization, dental caries is still a major health problem as it affects 60-90% of school-aged children [10]. The present study reveals high prevalence of decayed teeth due to dental caries in both primary and permanent teeth, which might be due to high percentage of poor oral hygiene. In this study it was found that caries rate is high in permanent dentition than in primary dentition. The cause behind this could be due to the fact that permanent teeth are exposed to cariogenic diet from the time of eruption till the teeth are in situ [11].

Since, the primary school children do not know much about dental diseases and methods of their prevention, therefore a study on oral health assessment at an early age can help to improve preventive dental practices and attitudes, which could be beneficial and constructive for the future of these children. Oral health means more than healthy teeth and is fundamental to general health and well being, significantly impacting on quality of life [1]. So, good oral health along with sound general health can be achieved by educating the parents, students and teachers about dental health through school dental health program. Awareness and

consciousness of the parents, teacher and the students about oral health can give a commitment for better future to the whole nation.

Conclusions:

Information provided by the current study can be used as initial data. More wide-ranging epidemiological studies should be done at a district level to access and confirm various dental diseases and associated risk factors in this region. School dental health programmes should be arranged frequently in order to reach the goals of WHO and also because the children in this rural area do not have adequate access to qualified dental treatment.

Conflict of Interest:

None declared.

References:

1. WHO, Oral health, Fact sheet N 318, April 2012.
2. WHO, Information Series on School Health; Document Eleven.
3. Saurabh Sharma, P Parashar, A Srivastava, Rahul Bansal. Oral health status of 9 to 12 year old school going children in urban meerut. IJCH. 2013; 25(1): 61-65.
4. Olabisi AA, Udo UA, Ehimen UG, Bashiru BO, Gbenga OO, Adeniyi AO. Prevalence of dental caries and oral hygiene status of a screened population in Port Harcourt, Rivers State, Nigeria. J Int Soc Prev Community Dent. 2015 Jan-Feb; 5 (1): 59-63.
5. Gift HC, Reisine ST, Larach DC. The social impact of dental problems and visits. American Journal of Public Health. 1992; 82:1663-8.
6. Mamta H. Ramesh N. Journal of Dental Education. American Dental Education Association 2005; 69(3): 382-386.
7. Nayana, Umarani.J. Knowledge of children regarding oral hygiene: A school based descriptive study. JSIR 2014; 3(2): 134-138.
8. Allender S. Williams & Wilkins. Community Health Nursing Promoting and projecting the public Health. 6th ed. Lippincott Company, 2005; -630,652.
9. Meghna Singh, Ashish Saini, Charanjeet S Saimbi, Anoop K Bajpai. Prevalence of dental diseases in 5- to 14-year-old school children in rural areas of the Barabanki district, Uttar Pradesh, India. IJDR; 22 (3): 396-399.
10. Petersen PE, Bourgeois D, Ogawa H, Estupinan-Day S, Ndiaye C (2005). The global burden of oral diseases and risks to oral health. Bull World Health Organ 83: 661-669.
11. Mahesh Kumar P., Joseph T., Varma R. B., Jayanthi M. Oral health status of 5 years and 12 years school going children in Chennai city - An epidemiological study. J Indian Soc Pedod Prev Dent. 2005 Mar; 23(1): 17-22.