

Awareness on Dental Health Checkup among the Patient Attending at Selected Hospital in Dhaka City

MMKarim¹, SM Alif², MA Tarafder³, D Sharmin⁴, MH Khan⁵

Abstract

This descriptive type of cross sectional study was conducted among patients in selected hospitals of Dhaka city to assess awareness of dental health checkup during September to December 2011. The selection of patients was purposive and 150 patients were included in the study. The results revealed that there is a gulf of difference between the awareness and practice on oral hygiene. The mean age of the patients was 35.75±12.03 years. The study also revealed that 65.3% patients brush their teeth once daily and 52% brush only before their breakfast, 18.7% before breakfast and before going to bed. Among the patients 38% visited a dentist for more than one year for cleaning purpose, a very few (10%) visited before 6 months. Two-third majority of the patients (66%) know that consumption of sweet food can cause caries and the rest (34%) had no idea. There is statistically significant association between the age of the patients and the materials used for cleaning teeth, sex and habit of taking tobacco (P=0.000). Statistically significant association was also observed between occupation of patients and habit of taking tobacco and also between age of the patients and habit of chewing areca nut and lime (P = 0.000). So, it is necessary for everyone to have dental health checkup to look at the health of mouth, find existing problem and discuss a planned treatment with a dental surgeon. It will help to take further steps to minimize future problem of oral cavity.

Key words: Dental Caries, Awareness, Knowledge, Parents, Prevention

Introduction

Health is a universal human need for all cultural groups. General health cannot be attained or maintained without oral health. The mouth is regarded as the mirror of the body and the gateway to good health. Today, various types of oral health maintenance materials are used and countless numbers of dental health information programs are conducted in schools and other settings. However, these efforts will not succeed in influencing

1 Lecturer, Department Of Oral and Maxillo-facial Surgery, Marks Dental College, Mirpur, Dhaka

2 Senior Lecturer, Department of Public Health, Northern University Bangladesh, Dhaka

3 Professor, Department of Community Medicine, Zafalabad Ragib Babeya Medical College, Sylhet

4 Lecturer, Department Of Orthodontics, Marks Dental College, Mirpur, Dhaka

5 Associate Professor & Head, Department of Dentistry, Bangladesh Institute of Research and Rehabilitation in Diabetes, Endocrine and Metabolic disorders (BIRDEM); WHO Collaborating Centre and Ibrahim Medical College, Dhaka.

Correspondence to: Dr.Sheikh Mohammad Alif, BDS, MPH, Senior Lecturer, Department of Public Health, Northern University Bangladesh, Holding#13, Road#17, Banani C/A, Dhaka-1213, Tel :+(880-2) 8818131-3, 9892054, 9898521, Ext: 452, Fax :+(880-2) 8126157, Mobile: +880-01819-459149, E-mail: dr.alifreal@gmail.com, Website: www.nub.ac.bd

the behavior until people are not aware of the importance of oral health. So, attainment of good oral health is based upon the awareness of good dietary habits and oral hygiene practices. Individuals become aware of anything new by showing interest in knowing more about it and evaluating advantages and disadvantages to put that new idea or method in practice. Finally the individual accepts the idea as beneficial to him/her by practicing it in principle.¹⁻⁵ The people with kidney disease and those on dialysis are more likely to have periodontal disease and other oral health problems than the general population. Buildup of bacteria in the mouth can cause infection. Because people with kidney disease have weakened immune systems, they are more susceptible to infections. The inflammation caused by periodontal disease is a risk factor for cardiovascular disease. Regular visits to a dentist can cut risk of infection and periodontal disease.⁷ When brushing and flossing, proper technique is the key. Immediate risks include gingivitis, cavities, tooth decay, and other gum diseases which can eventually result in oral cancer. This "silent epidemic" can be avoided by regular treatment at home and by making dental visits twice a year. While practicing good oral hygiene is vital to health, there is only one option that personal oral hygiene maintenance can do. A normal person can easily overlook conditions that could greatly complicate or even end one's life.

47

Awareness on Dental Health Checkup...

MM Karim, SM Alif, MA Tarafder, D Sharmin, MH Khan

Thus, visiting a dentist for regular checkup is vital to a healthier smile.⁶ A dental checkup is where a dentist, a oral health therapist or a dental therapist looks at the teeth, gums, lips, tongue and saliva to observe if they are healthy. Dental checkup is important to look at the health of the mouth, find existing problem and discuss for planned treatment. Steps to help minimize further problems can also be explained. Good oral health is important for general health and wellbeing. Better oral health can lead to better general health.⁷

Materials & Methods

The study was conducted to assess awareness of dental health checkup among the patients attending in three selected hospitals in Dhaka city. The economic status and literacy level of these patients were the selection criteria. The hospitals selected were private and semi-government run in different locations of city. The sample size was 150 patients, selected purposively. A pre-tested questionnaire consisting of questions about socio-eco-demographic characteristics of patients, knowledge about dental care and food habit, maintenance of oral hygiene and knowledge about necessity of dental care seeking prior to visiting a dental surgeon was used for collection of data. The questionnaire was administered by the investigators themselves. Data were collected by interview technique. The patients were given clear explanations about the objectives of the study and verbal informed consent was taken from them. All the data were entered into the computer and analyzed by using SPSS 16.0 software program. The Chi-square test and multiple logistic regression analyses were made to measure the extent of association.

Results

The socio-eco-demographic characteristics of patients are shown in Table 1. The maximum 39.3% patients were in the age group of 30 to 39 years and the minimum 0.7% patients were in age group of more than 70 years with 46% female and 54% male. The highest 24.7% patients' family income was between 16 to 20 thousand BDT per month and the lowest 7.3% patients' family income was more than 40 thousand BDT. About 38% patients completed higher secondary or equivalent and 32% were graduates, 6.7% were master degree holders. Likewise, 6.7% completed primary whereas 14% completed SSC or equivalent.

48

MM Karim, SM Alif, MA Tarafder, D Sharmin, MH Khan

Table 1: Distribution of the patients according to socio-demographic characteristics (n=300)

Variables	Frequency	Percentage (%)
Age		
10-19	7	4.7
20-29	34	22.7
30-39	59	39.3
40-49	25	16.7
50-59	17	11.3
60-69	7	4.7
≥70	1	0.7
Sex		
Male	81	54
Female	69	46
Occupation		
Housewife	52	34.7
Hindu	7	5.8
Service holder	42	28
Business	23	15.3
Education level		
Illiterate	4	2.7
Primary	10	6.7
Secondary	21	14
Higher secondary	57	38
Bachelors	48	32
Masters	10	6.7
Monthly income		
10000-15000	26	17.3
16000-20000	37	24.7
21000-25000	22	14.7
26000-30000	30	20
31000-35000	11	7.3
36000-40000	13	8.7
>40000	11	7.3

The distribution of the patients according to oral health related knowledge, oral hygiene related behavior and tobacco related habits are shown in Table 2. Here the majority of the patients brush their teeth by using tooth paste (84.7%), 9.3% by tooth powder, only 2% by herbal products. More than half (65.3%) of the patients brush their teeth once daily. Moreover, maximum 38% of them visit to dentist more than 1 years for cleaning purpose, 28.7% visit after 1 year, 23.3% visit within 6 months to 1 year and very few only 10% visit before 6 months. 43% were current smoker and 45% always chewed betel leaf.

In addition, in Table 3 there is statistically significant association between age of the patients and the material used for cleaning teeth, also between sex of patients and habit of taking tobacco (P = 0.000), between occupation of patients and habit of taking tobacco, age of patients and habit of chewing areca nut (P = 0.000). Also there is statistically significant association between frequency of cleaning teeth and monthly income of patients (P = 0.050). Another statistically significant association was observed between age of patients and whether sweet food can cause dental caries (P = 0.023) and statistically highly significant association between monthly income of patients and whether sweet food can cause dental

Bangladesh Journal of Dental Research & Education

Vol. 02, No. 02, July 2012

caries was observed (P = 0.013).

Table 2: Distribution of the patients according to oral health related knowledge, oral hygiene related behavior, habit related factors (n=150)

Variables	Frequency	Percentage (%)
Materials use for cleaning		
Tooth paste	127	84.7
Tooth powder	14	9.3
Herbal Products	3	2
Habit of chewing areca nut and lime.		
Areca nut	45	30
Tobacco	43	28.7
Frequency of cleaning teeth		
Once daily	98	65.3%
Twice Daily	52	34.7%
Visit to dentist for cleaning teeth		
Before 6 months	15	10
Within 6 months to 1 year	35	23.3
After 1 year	43	28.7
Knowledge about sweet food can cause dental caries		
Yes	99	66
No	51	34

Table 3 : Distribution of the patients according to socio-demographic characteristics and its association with oral health related knowledge, oral hygiene related behavior, habit related factors (n=150)

Variables	P - value
age of the respondent and material use for cleaning	0.000
sex of the respondent and habit of taking tobacco	0.000
frequency of cleaning teeth and monthly income	0.050
Occupation of the respondent and habit of taking tobacco	0.000
age of the respondent and habit of taking areca nut lime	0.000
Age of the respondent and knowledge about sweet food can cause dental caries.	0.023
Knowledge about sweet food can cause dental caries and monthly income	0.013

Discussion

A structured questionnaire was used to collect data. We attempted to know to what extent improvements in dental health could be attributed to organized dental programs. The present study found a high percentage of patients visit the dentist after more than 1 year period and brush their teeth once in a day. It is tempting to present the data as a cause-effect relationship, whether increased resources have consequently led to an improved health situation. In a study in 2001 showed that among those aged 16-24 there has only been a 4% take regular dental check-up, with a similar level (6%) among 25-34 year olds. Furthermore, 15% of those aged between 35-44 and 24% of those aged over 45 years take up dental check up. The most marked change

in seeking dental check-up was among dentate adults aged 55-8. In the present study, most of the patients from three different hospitals were in between 30-39 years of age (39.3%), 22.7% in 20-29 years of age, 16.7% in 40-49 years of age, 11.3% in 50-59 years of age, 4.7% in 10-19 and 60-69 years of age, only a very few 0.7% in more than 70 years of age. In another study in U.K, 2008 showed that 16% visited a dentist for a check-up; 55%, more women than men, reported having a dental visit within the past 12 months.⁹ In a study in 2008 in India showed that, less than half (47.3%) of the study participants were aware of any one of the good practices for maintaining dental health, e.g., brushing teeth, periodic dental check-up, etc. 36.5% of the participants knew about practices that are bad for the teeth, such as eating too much of sweet, excess sugar, sweetened drinks.¹⁰

The present study showed that (23.3%) patients visited a dentist 6 months to 1 year for only purpose, 28.7% visited after 1 year, a very few only 10%, visited before 6 months. About 66% know that consuming of sweet food can cause caries and the rest 34% had no idea. The oral health complications reportedly associated with diabetes include tooth loss, gingivitis, periodontitis and oral soft-tissue pathologies because patients with diabetes are at an increased risk of developing oral diseases. It is generally accepted that diabetes increases the prevalence and severity of periodontitis.¹¹⁻²³ In 2010 in a study conducted in India showed that, 23.7% of the subjects were used to smoking, 3.3% subjects chewed tobacco and 8.6% subjects were used to taking alcohol.²⁴ The present study showed that, 28.7% take tobacco, 36% take spicy food and 30% take areca nut and lime. In a study in Tanzania, 2007 showed that, many people do brush their teeth at least once a day but lack the knowledge of proper tooth brushing. Tooth brushing at least once a day was reported by 92.1% of the children and 71.9% used toothpaste.²⁵ In this present study, most of the patients brush their teeth once daily (65.3%) and 34.7% twice daily. About 65% use tooth paste for cleaning teeth. In Jordan in 2002 a study was conducted which showed that 80% of the parents knew about the harmful effect of sugar and 79% thought that poor oral hygiene may induce dental caries.²⁶ The present study showed that most of the patients, 66% know that consumption of sweet food can cause caries and the rest 34% had no idea. Diabetes is one of the major cause of chronic kidney disease. If renal disease is caused by diabetes, one should know that those with diabetes are more prone to dental problems like gum disease and tooth decay. Because diabetes can affect dental health, it's important to let the dentist know that he/she is diabetic.

49

Awareness on Dental Health Checkup...

MM Karim, SM Alif, MA Tarafder, D Sharmin, MH Khan

27-28 Patients having known the risk factors for periodontal disease, such as smoking and diabetes, also may require more frequent maintenance visits at shorter intervals.²⁹ A study in India in 2008 showed that, of the participants, 27.9% were current tobacco users.³⁰ The present study showed that, 28.7% take tobacco among the patients.

Kidney patients are advised to tell their kidney doctor when a dental procedure is required. The doctor may recommend antibiotics be taken prior to the procedure to help guard against infection. Both gum disease and tooth decay are treatable and preventable; following the dentist's recommendations regarding brushing, flossing, exams twice a year and professional teeth cleaning can help teeth and gums stay healthy.³¹ If diabetes is not managed well, saliva may have high glucose levels. Bacteria can feed on the glucose and release more acids which can wear away at tooth enamel. Also, high levels of plaque in the mouth can lead to tartar buildup. Infections are a problem for diabetics. Diabetes slows down the healing process, and an infection from advanced tooth decay or gum disease can take a longer time to heal. Regular dental checkup and following the dentist's recommendations regarding hygiene can prevent an infection or stop one from getting worse.³² The associations and linkages between oral infections and serious systemic diseases such as diabetes have been reported thoroughly in the recent surgeon general's report, which concludes that oral health and general health are inseparable.³³

Conclusion

Good oral hygiene is important for maintaining one's overall health. The oral health complications reportedly associated with diabetes include tooth loss, gingivitis, periodontitis and oral soft-tissue pathologies. Because patients with diabetes are at an increased risk of developing oral diseases, reliable and up-to-date information regarding oral health behaviors and perceptions in diabetic populations is needed to develop effective prevention strategies that are useful for dental practitioners. Furthermore, in increasing the social acceptability concerning dental health as a part of the quality of life and in modifying social inequities in the dental services. Longitudinal studies will be necessary to evaluate the real achievements of dental programs in question by measuring their ability to secure the dental health of older adults and ultimately their general health. Both tooth decay and gum disease can be treated and are preventable if caught in its early stages. The preventable measures are like brushing twice a day, flossing once a day, visiting the dentist twice a year for checkup and playing a role model by the parents for

children by practicing good oral health care habits.

Within the limitations of the present study, it can be recommended that provision of dental care should focus on empowering the community through information, education and communication activities. This dual strategy will aid in not just controlling oral diseases by increasing preventive care but also change attitudes so as to increase acceptability of services leading to greater utilization of curative care. Incorporating primary as well as rehabilitative dental care services, through on-site programs (at grass root level) and domiciliary visits, steps should be taken to remove the barriers to equitable access to routine care for promoting oral health of the all age specially elderly in developing countries.

References:

- Al-Qatibi M, Angmar-Mansson B. Oral hygiene habits and oral health awareness among urban Saudi Arabians. Oral Health Prev Dent 2004;2:389-96.
- Mayer MP, de Paiva Buischi Y, de Oliveira LB, Gjermo O. Long-term effect of an oral hygiene training program on knowledge and reported behavior. Oral Health Prev Dent 2003;1:37-43.
- El-Qaderi SS, Taani DQ. Oral Health knowledge and dental health practices among school children in Jerash district Jordan. Int J Dent Hyg 2004;2:78-85.
- d'Almeida HB, Kagami N, Maki Y, Takaesu Y. Self-reported oral hygiene habits, health knowledge and sources of oral health information in a group of Japanese junior high school students. Bull Tokyo Dent Coll 1997;38:123-31.
- Golbaran JF, Pack AR. Knowledge, awareness and use of interdental cleaning aids by dental school patients in New Zealand. JNZ Soc Periodontol 1994;78:7-16.
- Available URL http://en.wikiversity.org/wiki/The_Importance_of_Dental_Care_and_Oral_Hygiene
- Richards ND, Cohen LK, eds. Social sciences and dentistry, a critical bibliography. The Hague: Federation Dentaire Internationale, 1971.
- N M Nuttall, G Bradnock, D White, J Morris & J Nunn: Adult dental health survey: Dental attendance in 1998 and implications for the future: British Dental Journal 190(2001) 177 - 182.
- N M Nuttall, G Bradnock, D White, J Morris & J Nunn: Adult dental health survey: Dental attendance in 1998 and implications for the future: British Dental Journal 190(2001) 177 - 182.
- Fariborz Bapat, Miira M Vehkalahti, A.Hamid Zafarmand, Heikki Tala: Impact of Infection Scheme on Adults' Dental Check-Ups in a Developing Oral Health Care System: Eur J Dent. 2008 January; 2: 3-10. PMID: PMC2633147

Bangladesh Journal of Dental Research & Education

Vol. 02, No. 02, July 2012

10. Patro BK, Ravi Kumar B, Goswami A, Mathur VP, Nongkynrih B. Prevalence of dental caries among adults and elderly in an urban resettlement colony of New Delhi. Indian J Dent Res [serial online] 2008 [cited 2012 Mar 15];19:95-8. Available from: <http://www.ijdr.in/text.asp?2008/19/2/95/40460>

11. Galili D, Findler M, Garfunkel AA. Oral and dental complications associated with diabetes and their treatment. Compendium 1994;15(4):496-509.

12. Emrich LJ, Shlossman M, Genco RJ. Periodontal disease in non-insulin-dependent diabetes mellitus. J Periodontol 1991;62(2): 123-31.

13. Albrecht M, Banoczy J, Tamas G Jr. Dental and oral symptoms of diabetes mellitus. Community Dent Oral Epidemiol 1988;16(6):378-80.

14. Bacic M, Ciglar I, Granic M, Plancak D, Sutalo J. Dental status in a group of adult diabetic patients. Community Dent Oral Epidemiol 1989;17(6):313-6.

15. Hugoson A, Thorstensson H, Falk H, Kuylenstierna J. Periodontal conditions in insulin-dependent diabetics. J Clin Periodontol 1989;16(4):215-23.

16. Oliver RC, Tervonen T. Periodontitis and tooth loss: comparing diabetics with the general population. JADA 1993;124(12):71-6.

17. Shlossman M, Knowler WC, Pettit DJ, Genco RJ. Type 2 diabetes mellitus and periodontal disease. JADA 1990;121(4): 532-6.

18. Moore PA, Weyant RJ, Mongelluzzo MB, et al. Type 1 diabetes mellitus and oral health: assessment of tooth loss and edentulism. J Public Health Dent 1998;58(2): 135-42.

19. Moore PA, Weyant RJ, Mongelluzzo MB, et al. Type 1 diabetes mellitus and oral health: assessment of periodontal disease. J Periodontol 1990;70(4):409-17.

20. Guggenheimer J, Moore PA, Rossie K, et al. Insulin-dependent diabetes mellitus and oral soft tissue pathologies. Part 1: prevalence and characteristics of non-candidal lesions. Oral Surg Oral Med Oral Pathol 2000;89(5):563-9.

21. Guggenheimer J, Moore PA, Rossie K, et al. Insulin-dependent diabetes mellitus and oral soft tissue pathologies. Part 2: prevalence and characteristics of Candida and candidal lesions. Oral Surg Oral Med Oral Pathol 2000;89(5): 570-6.

22. L6e H. Periodontal disease: The sixth complication of diabetes mellitus. Diabetes Care 1993;16(1):329-334.

23. Tervonen T, Oliver RC. Long-term control of diabetes mellitus and periodontitis. J Clin Periodontol 1993;20(6):431-5. Al-Ansari JM, Al-Jairan LY and Gillespie GM . Dietary habits of the primary to secondary school population and implications for oral health. J Allied Health, 2006; 35(2): 70-80.

24. Bansal V, Sogi GM, Veerasha KL. Assessment of oral health status and treatment needs of elders associated with elders' homes of Ambala division, Haryana, India. Indian J Dent Res 2010;21:244-7.

25. Haber J, Wattles J, Crowley M, Mandell R, Josphura K, Kent RL. Evidence for cigarette smoking as a major risk factor for periodontitis. J Periodontol 1993;64(1):16-23.

26. L. D. Rajab, P. E. Petersen, G. Bakaeein, M. A. Hamdan. Oral health behaviour of schoolchildren and parents in Jordan. 2002;12(3):168-176.

27. Harris MI. Summary. In: Diabetes in America. 2nd ed. Bethesda, Md.: National Diabetes Data Group; National Institute of Diabetes and Digestive and Kidney Diseases; National Institutes of Health; 1995. National Institutes of Health publication 95-1468.

28. White BA, Little SJ. Dental utilization and cost among diabetics in an HMO (abstract 171). J Dent Res 1998;77:653.

29. Mealey B. Diabetes and periodontal diseases. J Periodontol 1999;70(8):935-49.

30. Patro BK, Ravi Kumar B, Goswami A, Mathur VP, Nongkynrih B. Prevalence of dental caries among adults and elderly in an urban resettlement colony of New Delhi. Indian J Dent Res [serial online] 2008 [cited 2012 Mar 15];19:95-8. Available from: <http://www.ijdr.in/text.asp?2008/19/2/95/40460>

31. Dental Health For people with Kidney Disease . (cited : 21-02-12) Available from URL : <http://www.davita.com/kidney-disease/overview/symptoms-and-diagnosis/dental-health-for-people-with-kidney-disease/e/4731>

32. Wilson DE. Excessive insulin therapy: biochemical effects and clinical repercussions-current concepts of counter regulation in type 1 diabetes. Ann Intern Med 1983;98(2):219-27.

33. U.S. Department of Health and Human Services. Oral health in America: A report of the surgeon general. Rockville, Md.: National Institutes of Health, National Institute of Dental and Craniofacial Research; 2000.

51