Original Article

Oral Health Knowledge Among Patients Attending Dental OPD of Bangladesh Medical College in Relation to Gender, Generation, Education and Economic Status

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Abstract

This report describes a questionnaire-based study on 309 adult patients attending the Dental Outpatients Department of Bangladesh Medical College and Hospital, Dhaka during December 2000 to March 2001. The aim of the study was to determine the oral health knowledge of the patients in relation to their age, gender, economic and educational status. Almost two third (63.1%) of the subjects correctly said that pan chewing was bad for teeth. Three fourth (78.3%) of the subjects gave correct answer on question of how to prevent teeth decay. When question was asked about cause of teeth decay, bleeding gum and action of fluoride on teeth, only 38.2%, 41.4% and 32.3% could give correct answer respectively. With a few exceptions, knowledge of oral health was comparatively poor among the older generation, females, less educated and less privileged group.

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Introduction: As there is no national oral health survey system, it is difficult to define the present oral health situation of Bangladesh. A review of the literature between 1978 to 1991 shows that the prevalence of dental caries in urban areas of Bangladesh has risen over the preceding two decades[1]. Evidence from several studies in Bangladesh shows a correlation between consumption of sugar and prevalence of dental caries [2, 3]. Surveys of periodontal disease suggest that prevalence of calculus is very common in Bangladesh [4]. Oral cancer accounts for about one third of all cancers in Bangladesh, as well as in India and Sri Lanka [5]. Lack of awareness of oral diseases, widespread use of tobacco, particularly in combination with pan chewing, among Bangladeshis may attribute to oral cancer as well as to periodontal diseases [6,7]. It may be assumed that the vast majority of people are unaware of the importance of oral health. Different studies show that knowledge on oral health and disease is extremely poor among Bangladeshis [8,9]. It is well reputed that oral health knowledge is strongly associated with oral health attitudes, behavour and health service utilization, [8,10,11]. Hardly any study has been done to determine knowledge on oral health in Bangladesh.

Many studies from all over the world have shown that age, gender, education and economic status have influence on knowledge of oral health [12-15]. This study has been undertaken to evaluate the oral health knowledge among Bangladeshi in relation to these four variables.

Materials and Methods

A questionnaire-based study was conducted on 309 patients attending the Dental Outpatients Department of Bangladesh Medical College and Hospital during November 2000 to March 2001. Patients aged 16 years and above, who purchased

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out patient tickets were selected by systematic random sampling method.

For the purpose of analysis generation was categorized into younger (≤ 30 years) and older (> 30 years); education into highly educated (≥ graduate) and less educated (< graduate); economic status into less privileged (monthly family income of ≤ Taka 8000) and privileged (≥ Taka 8000) and gender into male and female. To measure knowledge of oral health 5 questions were asked: effect of on pan chewing, causes of teeth decay, prevention of teeth decay, causes of bleeding gums and action of fluoride on teeth. Followings were taken as correct answers: pan chewing habit was bad for teeth and gums; fluoride prevents teeth decay and makes teeth stronger; teeth decay is caused by eating or drinking sugary substances and by not cleaning teeth properly; teeth decay can be prevented by visiting dentist regularly, cleaning teeth properly, avoiding sugary foods or drinks and brushing teeth with fluoridated toothpaste; causes of bleeding gums were due to lack of vitamin C and not cleaning teeth properly. The questionnaire was evaluated by a pilot study on 15 individuals attending students' Outdoor Department of Bangladesh Dental College.

After collection of data, they were edited by meticulous checking and re-checking. For convenience of data analysis answers of each question were coded beforehand. Analysis of data was done by SPSS PC version 10.

Results

A total of 309 patients (189; 61.2% male and 120; 38.8% female) were included in this study. Age of almost half (48.3%) of the respondents were 30 years or less. Fifty-six (18.1%) subjects were either illiterate or had non-formal education while 92 (29.7%) were graduates or above and the rest (161; 52.5%) had education below graduation. Monthly family income of 153(49.6%) subjects were ≤ 8000 taka (not shown in table).

Every one (100%) felt that teeth were needed for chewing and speaking. Only 17.2% were aware of aesthetic value of teeth. A good number (195; 63.1%) of the subjects opined that pan chewing was bad for teeth and gums. Table 1 shows that significantly higher proportion of males (p = 0.035), highly educated (p = 0.001), economically privileged (p = 0.044) and younger age group (p = 0.01) had comparatively better knowledge than their counterparts. A total of 118 (38.2%) subjects had correct knowledge on causes of teeth decay. Ninety-four (30.4%) and 24(7.8%) subjects mentioned that not cleaning teeth properly and consumption of sugar containing food were the causes of teeth decay respectively.

Table 1 Awareness of the effect of pain Chewing in relation of age, gender, education and economic status.

Variables	Correct Knowledge		Total		X^2	P
	No	%	No	%		
Age (Year) <30	105(94)	34.0	195	63.1	6.70	0.001
Age (Year) ≥ 30	90 (101)	29.1				
Gender Male	128 (119.3)	41.4			4.45	0.035
Gender Female	67 (75.7)	21.7				
Education <Graduation	115 (136.9)	25.9			32.06	0.001
Education >Graduation	80 (96.6)	21.0				
Economic Status <8000	88 (96.6)	28.5			4.0	0.044
Economic Status >8000	107 (98.4)	34.6				

Table 2 shows that significantly higher proportion of males (p=0.009), highly educated (p= 0.001) and economically privileged (p= 0.027) group had better knowledge on causes of teeth decay.

Correct knowledge on prevention of teeth decay was possessed by 242 (78.3%) subjects. More than half (185; 59.9 %) said that teeth decay could be prevented by proper cleaning of the teeth. Only 1.9% and 13.9% mentioned that brushing teeth with fluoridated toothpaste and avoiding sugary foods and drinks could prevent teeth decay respectively. Table 3 shows that significantly higher proportion of highly educated (p = 0.033)

Table 2 Knowledge on causes of teeth decay

Variables	Correct Knowledge		Total		X^2	P
	No	%	No	%		
Age (Year) <30	56 (56.9)	18.1	118	38.2	0.04	0.833
Age (Year) ≥ 30	62 (61.1)	20.1				
Gender Male	83 (72.2)	16.9			6.76	0.009
Gender Female	35 (45.8)	11.3				
Education <Graduation	66 (82.99)	21.4			32.06	.001
Education >Graduation	52 (35.1)	16.9				
Economic Status <8000	49 (48.4)	15.9			4.87	0.027
Economic Status >8000	69 (59.6)	22.3				

and economically privileged group (p = 0.01) had better knowledge on prevention of teeth decay whereas no significant difference was found among different age group (p = 0.457) and among gender (p = 0.090). When question was asked about causes of bleeding gums 41.4% subjects gave correct answers. Table 4 shows that no

Table 3 Knowledge about prevention of teeth decay.

Variables	Correct Knowledge		Total		X^2	P
	No	%	No	%		
Age (Year) <30	114 (116.7)	36.9	242	78.3	0.55	0.457
Age (Year) ≥ 30	128(125.3)	46.4				
Gender Male	145 (125.3)	49.82			0.87	0.090
Gender Female	88 (94.00)	28.5				
Education <Graduation	77 (169.9)	57.3			4.53	0.33
Education >Graduation	65 972.1)	21.0				
Economic Status <8000	129 (119.8)	41.7			6.41	0.001
Economic Status >8000	113 (122.2)	36.6				

significant difference was observed among gender (p=0.945) and generations (p = 0.186), whereas highly educated (p=0.006) and economically. Privileged group (p=0.002) possessed significantly better knowledge.

Correct knowledge of action of fluoride was observed in 100 (32.3%) subjects. Only 24.9% and 7.4% said that fluoride prevents teeth decay

Table 4 Knowledge of cause of bleeding gums

Variables	Correct Knowledge		Total		X^2	P
	No	%	No	%		
Age (Year) <30	56 (51.7)	18.1	128	41.4	1.74	0.1.89
Age (Year) ≥ 30	72 (66.3)	23.3				
Gender Male	78 (78.3)	25.2			945	0.005
Gender Female	50 (49.7)	16.2				
Education <Graduation	79 (89.9)	25.6			7.56	0.006
Education >Graduation	49(38.1)	15.6				
Economic Status <8000	50 963.4)	16.2			9.55	0.002
Economic Status >8000	78 964.6)	25.2				

and makes teeth strong respectively. One third (104; 33.7%) of the respondents never heard of fluoride while another third (34%) were not sure about its action on teeth. Significantly higher proportion of males (p=0.000), highly educated (p=0.001), economically privileged (p=0.001) and older age group had better knowledge (p<0.001) than their counter parts (table 5).

Table 5 Knowledge of action of fluoride on teeth

Variables	Correct Knowledge		Total		X^2	P
	No	%	No	%		
Age (Year) <30	54 (48.2)	17.5	100	32.4	1.97	0.160
Age (Year) ≥ 30	46 (51.8)	14.9				
Gender Male	76 (61.2)	24.6			18.1	0.000
Gender Female	24 (38.8)	7.8				
Education <Graduation	146 (70.2)	14.9			41.5	0.001
Education >Graduation	54 (29.8)	17.5				
Economic Status <8000	32 (49.5)	10.4			18.14	0.001
Economic Status >8000	68 (50.5)	22.0				

Discussion

Oral health services in Bangladesh are maintained at a low level. About 90% of people in rural areas have no access to oral health services [16]. Ignorance is an important factor in causation of oral diseases. Only 7.8% of our study subjects knew that sugar-containing food could cause teeth decay.

Poor knowledge of causes and prevention of teeth decay and periodontal disease is prevalent in home and abroad [8,17,18]. Knowledge on role of fluoride in preventing teeth decay was found extremely poor. Only 1.9% knew the role of fluoride in preventing teeth decay. Poor knowledge on fluoride was also found in several studies abroad [17-19]. In this study knowledge on question of pan chewing was good (63.1%). In UK Bedi and Gilthorpe in 1995 also found that Bangladeshi people possess good knowledge on pan chewing [20].

Our study findings reveled that in most cases males, younger generation, educated and economically well off people acquired better oral health knowledge. Similar to findings of this study, Kwan et al. in 1999 found that a younger generation of Chinese people residing in the UK had better oral health knowledge[11]. Different studies also showed that education and economic status had positive influence on oral health [16, 21].

We conclusion that female, less educated, economically less privileged and older people have comparatively poor oral health than their counter part. Most of the respondents are unware of the beneficial effect of sugar sin causation of caries. To achieve a desired community health, further improvement of oral health awareness is essential.

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