ORIGINAL RESEARCH PAPER

Dentistry

ORAL HYGIENE PRACTICES IN PATIENTS VISITING DENTAL TEACHING HOSPITAL: A QUESTIONNAIRE BASED STUDY

KEY WORDS: Brushing Practices, Nepal, Oral Hygiene

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ABSTRACT

Background: Importance of oral health in general well being of individuals is well understood. One of the biggest risk factor for any oral disease is poor oral hygiene. The study was conducted to assess the oral hygiene practices and oral health status of patients visiting outpatient department of dental teaching hospital.
Methods: This descriptive, cross-sectional study was conducted on 75 participants with the help of a questionnaire and oral examination by a trained dentist.
Results: 71 (94.67%) participants used brushing to maintain oral hygiene. On an average, the participants enrolled in this study changed their brush every 4.24 months. 60% of the participants had untreated dental caries.
Conclusions: The oral hygiene awareness was poor in the study population. Oral health information program could prove pivotal in upliftment of oral hygiene status.

INTRODUCTION:

Oral health is fundamental in allowing an individual to communicate, chew and socialize without discomfort or embarrassment.[1,2] A compromised oral health leads to several problems including pain, difficulty in chewing, self-esteem and can impose major issues on people's well-being. Moreover, one must compromise school activities or work hours increasing the burden of the oral disease.[3,4]

In Nepal, overall status of oral hygiene is poor due to increased consumption of sugar and sweetened foods, poor brushing technique and inadequate mouth rinsing. Toothbrush use is scarce in less developed areas of the country.[2,5] One of the major hinderance for poor oral hygiene status in Nepalese population could be the cost of dental services.[6,7]

The objective of this study was to assess the oral hygiene practices of the patients visiting the outpatient department of Dental Teaching Hospital, Maharajgunj Medical Campus. The study was done in accordance with Helsinki Declaration.

MATERIALS AND METHODS:

This cross-sectional descriptive study was carried out in the Dental Teaching Hospital, Maharajgunj Medical Campus, Kathmandu, Nepal. A questionnaire was used to collect information from 75 patients visiting the dental outpatient department. The author obtained the verbal consent from the participants before filling the questionnaire. The questions were asked by the author in Nepali. The answers obtained were entered in the questionnaire. Along with the information collected on oral hygiene practices, oral cavity was inspected to record decayed, missing or filled teeth. The intraoral examination was done by a trained dentist. The other information collected during the study were demographic data like age, gender and ethnicity. Information on oral hygiene behavior included use of toothbrushes, frequency of brushing, frequency of changing toothbrush, type of toothpaste and rinsing habits. Presence of stains and calculus was entered using Sign Grading System. The data was then entered in MS Excel for descriptive analysis.

RESULTS:

In total, 75 patients participated in this study. Out of 75 patients, 38 (50.67%) were males and 37 (48.33%) were females. The age of the patients ranged from 20 to 77 years. The mean age of the study population was 40.19 years.

Seventy-one participants used brush to maintain oral hygiene. 4 participants did not use toothbrush (Table 1). The range for changing the brushes was from 1 month to 18 months. On an average, the participants enrolled in this study changed their brush at an interval of 4.24 months. Out of total 71 participants, 44 (61.97%) brushed once a day whereas 27 (30.03%) brushed twice a day. In males 27 (75%) brushed once a day whereas 9 (25%) brushed twice. Among females, 17 (48.57%) brushed once a day, whereas 18 (51.43%) brushed twice.

When asked about rinsing, 35 participants (17 male, 18 female) confirmed that they did not rinse their mouth. Remaining 40 participants (21 male, 19 female) said that they rinsed their mouth once in a day to aid in cleaning their oral cavity.

On evaluating decayed teeth, it was noticed that 45 (60%) of participants had decayed teeth. Number of decayed teeth ranged from 1 to 22 in one individual. Most of the participants (18) had 2 decayed teeth followed by one decayed tooth present in 14 individuals. On examination it was noticed that 55 participants did not have any missing teeth. Only 5 participants had one missing tooth, ten had 2 missing teeth, two participants had 3 missing teeth and three participants had 4 missing teeth. Out of 75 participants, 69 did not have any restored tooth. Two participants had 1 filled tooth each, two had 2 filled teeth, one of them had 3 filled teeth and one had 6 filled teeth.

On evaluation, stains were not present in 11 male participants and 9 female participants. However, 23 male and 24 female participants had "+" grade of stains. Four male and four female participants had "++" grade of stains. None of the participants had "+++" grade of stains. Similarly, there was no calculus present in 15 male and 18 female participants. However, 8 male and 8 female participants had "+" grade of calculus. Ten male and nine female participants had "++" grade of calculus. Grade "+++" calculus was present in 5 male and 2 female participants.

DISCUSSION:

In this study, 94.67 % of the participants were brushing their teeth on a regular basis and remaining 5.33% of participants did not brush. These findings are similar to the findings of Dali and Laleet.[2] In their study conducted in a district of Nepal, 98.35% of participants brushed where as 1.6% did not brush their teeth. In our study, out of 71 participants who brushed, 61.97% of participants brushed once in a day and remaining

30.03% brushed twice a day. Our findings are comparable to the other studies.[9,10] In the study done by Zhu et al.[9] 44.4 % of the participants brushed twice a day and, in the study, done by Peterson and Esheng,[10] 22% followed the same pattern. These findings contrast with the study done by Al Khateeb et al.[11] who found that only 3% of their study population brushed twice a day. A study done by Thapa et al. in 2016[7] showed that prevalence of cleaning teeth twice a day was in 9.9% of the participants.

When participants were asked about frequency of changing their toothbrush, the average time to change toothbrush was 4.24 months. In the study done by Dali and Laleet[2] in Eastern part of Nepal, 41.7% of participants changed their brush every three months and 33.1% changed every 6 months.

To compare stains and calculus, Sign Grading System was used. Signs such as +, ++ and +++ are routinely used to classify stains/calculus into mild, moderate and severe. Agrawal in 2011 conducted a randomized clinical study to assess the reliability of this grading system. The author concluded that this grading system was simple and reliable index for evaluation of stains and calculus and recommended its use.[8]

Behaviors like brushing habits, rinsing and dental care visits can contribute towards oral health. One of the targets of oral health promotion program can be regulation of these adjustable risk factors.[12]

The limitations of this study would be small sample size and lack of use of the radiographs in detecting caries. Without radiographs, inter proximal caries may remain undetected therefore reducing the overall prevalence of dental caries. Socioeconomic condition of the participants was not considered which can also influence the oral health.

CONCLUSION

The patients who visited the dental hospital had lack of awareness on oral hygiene methods and brushing techniques. The sensitization on dental caries and periodontal health to the public is the need of the time. The dental hospital can take the initiation to start a concept on public teaching for 15 minutes can be game changing.

Table 1: Oral Hygiene Measures

	Male	Female
Brushing (Yes)	36	35
Brushing (No)	2	2
Once in a day	27	18
Twice in a day	9	18
No Rinsing	17	18
Rinsing once	21	19

REFERENCES:

1) The World Oral Health Report 2003.Continuous improvement in the oral health in the 21st century- the approach of the WHO Global Oral Health Programme.
2) Dali M, Laleet R. A study on oral health knowledge, attitude and practice among population of Siswani Jahada VDC in Biratnagar city, Nepal – A questionnaire survey. Asian Pac J Health Sci 2014; 1(2):51-56.
3) Halwai HK, Bhat PK, Shekhar M, Yadav B. Oral health status and treatment needs among 12 and 15 year oldgovernment and private school children in Rupandehi District (Bhairahawa) Nepal. Journal of Universal College of Medical Sciences 2014;2:15-19.
4) Addy M, Dummer PM, HunterML, Kingdon A, Shaw WC. The effect of toothbrushing frequency, toothbrushing hand, sex and social class on the incidence of plaque, gingivitis and pocketing in adolescents: A longitudinal cohort study. Community Dent Health 199; 7:237-47.
5) Mistry KM. Factors related to the promotion of oral health in developing countries. J IndianDent Assoc. 1992; 63:59-63.
6) Yee R, Mishra P. Nepal National Oral Pathfinder Survey 2004. J Nepal Dent Assoc. 2005;7(1):64–8.
7) Thapa P, Aryal KK, Mehata S, Vaidya A, Jha BK, Dhimal M, Pradhan S, Dhakal P, Pandit A, Pandey AR, Bista B, Pokhrel AU, Karki KB. Oral hygiene practices and their socio-demographic correlates among Nepalese adult: evidence from non communicable diseases risk factors STEPS survey Nepal 2013. BMC Oral Health. 2016 Sep 29;16(1):105.
8) Agrawal AA. A randomized clinical study to assess the reliability and reproducibility of "Sign Grading System". Indian J Dent Res 2011;22:285-90.
9) Zhu L, Petersen PE, Wang HY, Bian JY, Zhang BX. O r a l health knowledge, attitudes and behaviour of adults in China. Int Dent J 2005; 55:231-41.
10) Peterson PE, Esheng Z. Dental caries and oral health behavior situation in children and school children in Wuham, People Republic of China. Int Dent J 1998; 48: 210-216.
11) Al Khateeb TL, O'Mullan DM, Whelton H. Periodontal treatment needs among Saudi Arabian adults and their relationship to the use of Miswak. Community Dent Health 1991; 8:323- 8.
12) Kaher P, Harvey IS, Tisone CA, Khanna D. Prevalence of dental caries, patterns of oral hygiene behaviors, and daily habits in rural central India: A cross-sectional study. J Indian Assoc Public Health Dent 2016; 14:389-96.