

A STUDY ON ORAL HEALTH KNOWLEDGE, ATTITUDE AND PRACTICE AMONG POPULATION OF SISWANI JAHADA VDC IN BIRATNAGAR CITY, NEPAL - A QUESTIONNAIRE SURVEY
Mamta Dali^{1*}, Rajbanshi Laleet²

¹*Department of Pedodontics and Preventive Dentistry, BPKIHS, CODS, Dharan, Nepal*

²*Department of Anesthesia and Critical care, Nobel Medical College and Teaching Hospital, Biratnagar, Nepal*

ABSTRACT

The study is aimed to evaluate oral hygiene practice, knowledge and attitude among population of Siswani Jahada VDC in Biratnagar city, Nepal. This is a cross sectional study which included 1280 population selected by random sampling method. The consent for the participation was obtained verbally. A pre-tested close-ended questionnaire was used for the study. The result of this study show that 98.35% had habit of cleaning their teeth while very few numbers 1.6% were not cleaning teeth. It was seen that 62.3% brushed their teeth using toothbrush and tooth paste. 94.9% brushed only once a day, 33% brush twice a day while 25 1.9% brushes more than twice per day. Of 62.96% who used the brush, 41.7% participants change their brush in every 1-3 months, 33.1% change every six months and 25% change only after it worn out. Surprisingly, 70.76% of the respondents were aware of using fluoridated toothpaste and only 29.2% were not using it. 31.5% of the participants reported that they had suffered from some form of dental problem and 17.1% consulted the trained dentist and pain was the main factor for them to visit the dentist. 48.2% participants feel that dental caries is the most common dental disease, major factor being irregular brushing followed by consuming more sweets. Results of this study prove that oral hygiene habits, oral health awareness and knowledge level among population of siswani jahada VDC is satisfactory and need to be improved.

Key words: Attitude, knowledge, oral hygiene, practice

INTRODUCTION

Oral health is considered as fundamental to general health and well-being. While the eyes may be the window to the soul, our mouth is a window to our body's health.[1] A healthy mouth enables an individual to speak, eat and socialize without experiencing any active disease, discomfort or embarrassment.[2] Oral health knowledge is considered to be an essential prerequisite for health related behavior.[3] The American Dental Association recommends that, to avoid oral diseases, individual should brush and floss at least once a day and visit a dentist regularly.[4]

Dental flossing and tooth brushing are the most commonly performed oral self-care behaviour.[5]

Hart JT in Lancet, 1971 stated that "inverse care law" is prevalent in dentistry – "The availability of good medical care tends to vary inversely with the need for it in the population served", which means deprived communities that suffer the most and so have the most need, receive the fewest resources.[6] Health promotions in developing country like Nepal, where the geo-socio-political and economic factors offer meager and inadequate health care resources to its rapidly growing population, make this an uphill task. Moreover, the low literacy rates (39.6 %) further weakens the effort.[7] Dental hygiene is poor in Nepal with inadequate and improper brushing of teeth, no washing of mouth after intake of sweets, wide-spread substance abuse and addiction, hyper-acidity, increased consumption of refined sugar and sweetened foods.

**Correspondence*

Dr. Mamta Dali,

Department of Pedodontics and Preventive Dentistry, BPKIHS, CODS, Dharan, Nepal.

E Mail: mamtadali@hotmail.com

Use of toothbrush in underdeveloped areas is grossly limited and Neem twigs are traditionally utilized for dental cleaning.[8] Regular brushing of teeth after principal meals is not practiced universally.[9]

The comprehensive oral health assessment gives in sight to the oral health issues and distinct dental needs. With our sincere desire to collect data on oral health knowledge, attitude and practice, this study was targeted to people of Siswani Jahada VDC in Biratnagar city who are deprived of even private dental practitioners. General knowledge and attitude in relation to periodontal disease was assessed. As for the practices, the use of various oral hygiene methods such as tooth brush, dental floss and toothpowders were included.

MATERIALS AND METHODS

This cross-sectional community based study was conducted on 1280 people of Siswani Jahada VDC located in Biratnagar city, Nepal during March 2013. Systematic random sampling method was selected for qualitative data collection. Patients (age ranging 18 to 60 years) who attended dental camps organized by the Faculty of Dental Science, Nobel medical college and teaching hospital were included in this study. A pre-tested dental health questionnaire from various researches was adopted in this study and distributed to all subjects. This includes general information (Personal data like name, age, address, and occupation), medical history, dental history, etc. Patients were also questioned about knowledge on oral health practices that included brushing activity (such as frequency, duration and brushing aids), use of fluoridated toothpaste or tooth powder, common dental problems and its causes etc by using close ended questionnaire.

Data analysis

The data was analyzed using the SPSS version 10.0 software. The individual scores were summed up to yield a total score and given in subtitles for each questions. Frequency distribution, number and percentage were calculated and were tabulated.

RESULTS

Various questions were asked regarding the oral hygiene practices, such as how teeth are cleaned, what

material is used to clean the teeth, etc. The results indicated that majority of the population 1259 (98.35%) had habit of cleaning their teeth while very few numbers 21(1.6%) were not cleaning teeth. **Table 1** It was seen that 785 (62.3%) brushed their teeth using toothbrush and tooth paste and only 1 (0.07%) brushed without toothpaste. 188 (14.93 %) participants are using tooth powder and brush to clean their teeth . 29 (2.3%) population used fingers instead of brush with toothpaste whereas 24 (1.9%) populations used finger with toothpowder to clean their teeth. Only 1 (0.07%) used just fingers without toothpaste or powder and rest 231(18.3%) use dattiwani (neem twigs) for cleaning teeth. **Table 2** Among the population (1259) who brushed their teeth, 1195 (94.9%) stated that they brush only once a day, 39 (3%) brush twice a day while 25 (1.9%) brushes more than twice per day. Of the 1205 (62.96%) who used the brush, 500 (41.7%) participants change their brush in every 1-3 months, 400 (33.1%) change every six months and 302 (25%) change only after it worn out. **Table 3** When questioned about the role of fluoride and use of fluoridated toothpaste, surprisingly, 726 (70.76%) of the respondent were aware about it and using fluoridated toothpaste and only 300 (29.2%) respondent were not using it and unaware of its role to dental tissues. **Table 4.** 403 (31.5%) of the participants reported that they had suffered from some form of dental problem and 877 (68.5%) had not experienced any dental problems. **Table 5 and 6.** The 403 candidates who had a dental problem, only 69 (17.1%) consulted the trained dentist and pain was the main factor for 286 (70.9%) to visit the dentist. **Table 7 and 8.** With regard to the common dental problems, 415 (48.2%) participants feel that dental caries is the most common dental disease followed by bad breathing (10.2%), gums disease(9.3%), malaligned teeth(2.3%), stained teeth(1.7%) and mouth ulcers(1.6%). Remaining 226 (26.2%) doesn't know exactly the answer. **Table 9** Participants's opinion on the major factors that cause dental problems revealed that, 86(21.3%) were aware that eating sweets and chocolates can cause dental problems. 132 (32.7%) told that not brushing regularly can be one factor and, 12 (1%) said not rinsing the mouth can cause dental problems. 44 (10.9%) participants were aware that tobacco products can cause oral problems. 210 (33.9%) were not aware of the major factors that cause dental problems. **Table 10**

Table 1: Shows Habit of cleaning teeth

Habit of cleaning teeth	No. of participants	Percentage of participants
a. Yes	1259	98.35%
b. No	21	1.64%
TOTAL:	1280	100%

Table 2: Shows Instrument used to brush teeth

Instrument used to brush teeth	No. of participants	Percentage of participants
a. Toothbrush and Tooth paste	785	62.35%
b. Toothbrush only	1	0.079%
c. Tooth brush and Tooth powder	188	14.93%
d. Fingers and Toothpaste	29	2.30%
e. Fingers and Tooth powder	24	1.90%
f. Fingers only	1	0.07%
g. Datiwan (neem twigs)	231	18.35%
TOTAL	1259	100%

Table 3: Shows Frequency of brushing

Frequency of brushing	No. of participants	Percentage of participants
a. Once	1195	94.9%
b. Twice	39	3.0%
c. More	25	1.9%
TOTAL	1259	100%

Table 4: Shows Frequency of changing brush

Frequency of changing brush	No. of participants	Percentage of participants
a. After every 1-3 months	500	41.7%
b. After every 3-6 months	400	33.1%
c. When it wears out	302	25%
TOTAL	1205	100%

Table 5 and 6: Shows Use of fluoridated or non fluoridated toothpaste and any mouth problems yet

Use of fluoridated or non fluoridated toothpaste	No. of students	Percentage of students
a. yes, fluorinated toothpaste	726	70.76%
b. No, non fluorinated toothpaste	300	29.2%
TOTAL	1026	100%

Any mouth problems yet	No. of participants	Percentage of participants
a. Yes	403	31.5%
b. No	877	68.5%
TOTAL	1280	100%

Table 7: Shows Name of the mouth problem

Name of the mouth problems	No. of participants	Percentage of participants
a. Tooth pain	286	70.9%
b. Bleeding gums	49	12.1%
c. Swollen gums	35	8.6%
d. Bad mouth breathing	12	2.9%
e. Others	21	5.2%
TOTAL	403	100%

Table 8: Shows No of participants consulted

Who was consulted?	No. of participants	Percentage of participants
a. Medical practitioner	80	19.8%
b. Trained dentist	69	17.1%
c. Pharmacist	32	7.9%
D. Friends	12	2.9%
e. None	210	52.1%
TOTAL	403	100%

Table 9: Shows Common dental problem

Common dental problems	No. of participants	Percentage of participants
a. Tooth decay	415	48.2%
b. Gum disease	80	9.3%
c. Bad breath	88	10.23%
d. Crooked teeth	20	2.3%
e. mouth ulcers	14	1.6%
f. Stained teeth	15	1.7%
g. Don't know	226	26.28%
h. Others	2	0.23%
TOTAL	860	100%

Table 10: Shows Common cause for dental problems

Common cause for dental problems	No. of	Percentage of participants
a. Eating sweets	86	21.3%
b. Consuming tobacco	44	10.9%
c. Irregular brushing	132	32.7%
d. Not rising	12	1%
e. Don't know	210	33.99%
TOTAL	403	100%

Discussion

The analysis of knowledge, attitude and practice towards oral hygiene of the population, have submitted satisfactory results. Though the participants have knowledge regarding the effects of oral health on general health and the problems associated with poor dental hygiene; their attitude towards dental service utilization is not very positive. In the present study, majority of the population 98.35% were brushing their teeth regularly and only 1.6% don't brush their teeth which is higher than the study done in North Jordan by Al Omiri *et al* [9] and Nepal National Oral Health Pathfinder 2004 for adolescents [10]. It is very encouraging and satisfactory to know that majority of the participants were using tooth brush and toothpaste which could be attributed to the media such as television, radio, newspaper etc. whereas very few number still used finger, toothpowder and dattiwan as brushing aids. This is in agreement with previous studies.[11,12] In previous study, a positive association between the frequency of miswak and the lower need for periodontal treatment was shown.[13,14] Dattiwan is a stem or root of the plant which becomes brushlike after treatment and is suitable for oral hygiene[13]. This study found that a higher percentage (94%) of study population brushes their teeth once a day and only 3% brushes twice a day.

The result can be compared with a study by Zhu *et al*[15] where it was 44.4% and with another study of Chinese population where only 22% brushed at twice a day, 62% brushed once a day and 16% never brushed or brushed less frequently.[16] This could be attributed to lack of oral health education and/or cost of such aids. Among the target population, 41.7% respondents stated that they change their toothbrush once in 3 months, 33.1% change their brush in every 6 months while 25% changed their toothbrush when the bristles fray up. Surprisingly, 70.76% of the respondents answered that they use fluoridated toothpaste and 29.2% uses nonfluoridated toothpaste in this study.

The finding that only 33.5% experienced dental disease and 68.5% of population did not have any dental problems yet, could be due to unaware of dental problems, poor attitude to dental service, or prevalence of fear of the dental service, as they are more likely to visit dentist for episodic or emergency dental care. Majority of the population responded that the leading problem being tooth ache (70.9%) followed by tooth decay (48.2%). Study by Al-Omiri *et al*[9] has also proved in their study that pain is the main driving factor for the visit to the dentist. Very low percentage (17%) has consulted trained dentist for dental problems and major portion didn't visit anywhere. This could be

due to poor availability, poor accessibility or lack of awareness again towards dental education.

Though 32.7% respondents were aware that irregular brushing followed by consuming sweets and chocolates (21.3%) cause dental caries, majority of the population (33.9%) were not aware of the factors that cause dental problems. Very few had idea regarding chewing tobacco (10.9%) can cause dental problems. Awareness on tobacco and its consequences need to be stressed more. Based upon these findings, the establishment of a community-based oral health education program is recommended.

CONCLUSION

Results of this study prove that oral hygiene habits, oral health awareness and knowledge level among targeted population is satisfactory and need to be improved. The participants had conducive oral health behavior, sufficient knowledge, positive attitude and practice regarding oral health. The information given to the populations and the role the media played in raising awareness will help them to change their attitude and practice.

Why this paper is important to paediatric dentists?

- Monitoring of dental health should take place before the age of five which can be accomplished by dental camps in school and pediatric dentist role.
- Pediatric dentist can organize Educational programs that involves direct contact with children, parents, other caretakers.
- An oral health programe aimed at increasing preventive measures and dental health education needs to be initiated among school childrens at early age only possible with the help of pediatric dentist.

REFERENCES

1. <http://www.wm.edu/offices/hr/benefits/commonhealth/oralhealth/index.php>. Accessed on 09.01.2010
2. 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.
3. Stalla Y, Kwan L. Health-promoting schools: an opportunity for oral health promotion, 2005; 85: 677.

4. Hayward RA, Meetz HK, Shipiro MF *et al.* Utilisation of dental services 1986 patterns and trend. *J Public Health Dent* 1989;49:147-52.
5. Gilbert GH, Duncan RP, Gandall LH, Heft HW. Attitudinal and behavioural characteristics of older Floridians with tooth loss. *Community Dent Oral Epidemiol* 1993;21: 384-9.
6. Hart JT. The inverse care law. *Lancet* 1971; 1:405-12
7. Total Literacy Rate. Census of Nepal 2001.
8. Mistry KM. Factors related to the promotion of oral health in developing countries. *J Indian Dent Assoc.* 1992; 63:59-63.
9. Al- Omiri MK, Board J, Al-Wahadni AM, Saeed KN. Oral health attitudes, knowledge and behavior among school children in North Jordan. *Journal of Dental Education* 2005; 70 (2): 179- 187.
10. Yee R, Mishra R. Nepal National Oral Health Pathfinder Survey 2004. Kathmandu, Nepal.
11. Ronis DL, Lang WP, Farghaly MM. Tooth brushing, flossing, and preventive dental visits by Detroit area residents in relation to demographic and socioeconomic factors. *J Public Health Dent* 1993;53(3):138-45.
12. Lang WP, Ronis DL, Farghaly MM. Preventive behaviour as correlates of periodontal health status. *J Public Health Dent* 1995;55:10-7.
13. 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.
14. Eid MA, Al Shammery AR, Selim HA. The relationship between chewing stick (Miswak) and periodontal health. II. Relationship to plaque, gingivitis, pocket depth and attachment loss. *Quintessen Int* 1990;21:1019-22.
15. Zhu L, Petersen PE, Wang HY, Bian JY, Zhang BX. Oral health knowledge, attitudes and behaviour of adults in China. *Int Dent J* 2005; 55:231-41.
16. 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.

Source of Support: NIL

Conflict of Interest: None