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ORAL HYGIENE AWARENESS AND PRACTICES OF POPULATION OF TAKSINDU, SOLUKHUMBU

Dental Science

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ABSTRACT

Background: According to oral health facts (WHO), the most common oral diseases are dental decay and periodontal (gum) disease. Worldwide, 60-90% of school children have dental cavities. Similarly, severe periodontal (gum) disease, which may result in tooth loss, is found in 5-20% of middle-aged adults, and the rate varies across geographical regions. Nepal is developing country. Its variation in ethnic and geographical location also affect the education and economic status. The oral hygiene behavior and their awareness largely affect the oral health.
Objectives: the objective of this study is to assess the oral health status and awareness of people of Taksindu, solukhumbu and to compare the oral health status and awareness according to sociodemographic data.
Methodology: The study site is Taksindu, Solukhumbu, Nepal. . We examined and conduct survey in the region for 5 days. We surveyed the oral hygiene awareness according to questionnaire. Direct information were collected regarding brushing habit, use of gargle and interdental aids. From Individuals who brushed, other parameters like material used for brushing, frequency of brushing, and frequency of change of tooth brush were recorded.
Results: In total there were 1200 population and only 143 participated in the study.
There was significant difference in tooth brushing, frequency of tooth brushing and use of dentrifice with respect to occupation. There was also significant difference in frequency of tooth brushing and timing of brushing with respect to habit.
Conclusion: Oral hygiene awareness is not adequate in remote area. Tooth brushing is affected by habit, literacy of population, occupation. Rinsing habit after meal is unaffected by age group, habit, literacy, occupation and sex. Result of this study can be validated by more similar kind of study.

KEYWORDS

brushing technique, oral health, interdental aids.

Introduction

Oral disease qualifies as a major public health problem owing to its high prevalence and significant social impact. According to oral health facts (WHO), the most common oral diseases are dental decay and periodontal (gum) disease. Worldwide, 60-90% of school children have dental cavities. Similarly, severe periodontal (gum) disease, which may result in tooth loss, is found in 5-20% of middle-aged adults, and the rate varies across geographical regions. [1]

Loe H has done classical experimental gingivitis studies which showed that subjects who refrained from all oral hygiene during a 21-day period all developed clinical signs of gingival inflammation. However, he reported that the time to develop clinical gingivitis varied considerably. Some had gingivitis after 10 days, but the majority of the subjects required from 15 to 21 days[1].

In a 30-yearfollow-up study, subjects with surfaces that were more than 80% plaque-free,displayed better periodontal health than those with detectable plaque on more than 20% of surfaces[2].

Since,'prevention is better than cure', oral hygiene practices among population is the major preventive method in communityto accentuate their oral health.Once or twice daily brushing with a fluoridated dentifrice is very much a part of the daily oral-hygiene routine of people in western society and in many other developed countries of the world.

Again this practice depend upon the knowledge and attitude of the population. So our purpose was to evaluate the oral hygiene practice among the people of TaksinduVDC, solukhumbu. Another purpose was to correlate their oral hygiene practiceswith sex, occupation,habit and literacy.

Methodology:

We had conducted health camp along with cross sectional study in remote area of Taksindu, Solukhumbu in October 2015. We examined and conduct survey in the region for 5 days. We surveyed the oral hygiene awareness according to questionnaire. The questionnaire was taken from the author of article that was published in *Journal of Nepal Dental Association Vol. 13. No. 2. July-Dec. 2013.* We have added personal data extra which include education, occupation and habits owing its influence on oral hygiene practice. Informed consent was obtained from all the participants.Age group examined was from 10 years to 90 years.Direct information were collected regarding brushing habit, use of gargle and interdental aids. From Individuals who brushed, other parameterslike material used for brushing, frequency of brushing, and frequency of change of tooth brush were recorded. Among 6 investigator one was used for data collection and all had role in data entry and analysis.

The data were entered and analysed by SPSS software version 20.
Ethical approval was obtained from ethical review committee KMC, sinamangal.

Results:

In total there were 1200 population and only 143 participated in the study.

Among 143 participants, most of them were between 10 – 19 years . 54.5% were male and 45.5% were female. Most of them were farmer (58.7%) and student (26.6%) by occupation,followed by housewives(8.4%), others(4.2%) and trekkers (2.1%). Only 33.6 % were literate. Most of them were nonalcoholic and nonsmoker (76.2%).

72.7% of the participant use tooth brush to clean their teeth whereas rest do not brush). Among those who brushed their teeth, 50% brushed once, 43.2% twice and 6.8 % once within a week. 42.3% brush before meal, 25.9% after meal and 31.8% brush sometime before and sometime after irregularly. 99.03% were using toothpaste and only 0.96% use powder). 39.4% used to change brush at 3 month, 19.2% at 6 months and 41.3 % are not sure for the time to changing brush.

Use of tooth brush

Majority of population who did not brush were older individuals (71-90).Younger individual used toothbrush.

Among individual, who used tooth brush, 50% brushed once a day, 43.2% twice a day and 6.7% never brushed.

52% were male and remaining were female who brushed. Among male 70.5% use tooth brush and among female, 76.5% use tooth brush (table14).

71.42% farmers used toothbrush, student 76.3%, trekker 66.6%, house wife 66.6% and others (nurse, teacher, police,children) 100%.

79.1% literate people use tooth brush where as 70.2% illiterate use tooth brush.

Among alcoholic patient, 83.3% used to use toothbrush, among smoker patient 75% used toothbrush, among the participant who do not consume alcohol and do not smoke, only 72.4% used toothbrush.

Frequency of toothbrushing

Different age group shows varied frequency of tooth brushing pattern. Among 10-20 years age group, 18.1% brushed once, 54.5% brush twice and 21.2% never brush. Among 21-30 years group, 40.9% brush once, 36.3% brush twice and 18.1% never brush. Among 31-40 age group, 40.7%brush once, 37% brush twice and 18.5% never brush. Among 41-50 age group, 50%brush once, 15% brush twice and 20% never brush. Among 51-70 age group, 42.8%brush once, 17.8% brush twice and 39.2% never brush. Among 71-90 age group, 44.4%brush once and 55.5% never brush .

The frequency of tooth brushing varied with habits of the patient . Among alcoholic, 70.8% brush once, 8.3% brush twice and 16.6% never brush. Among smoker, 50% brush once, 25% brush twice and 25% never brush. Among nonsmoker and nonalcoholic, 28.4 % brush once, 38.5% brush twice and 27.5% never brush.

Among Literate individuals, 22.9% brush once, 50% brush twice and 20.8 % never brush. Among illiterate individuals, 43.6 % brush once, 22.3% brush twice and 29.7 % never brush.

Association between different variable and tooth brushing habit

Among farmer, 46.4% brush once, 21.4% brush twice and 28.5% never brush. Among student 15.7% brush once, 52.6% brush twice and 23.6% never brush .

Among male, 33.3% brush once, 33.3% brush twice and 29.4% never brush. Among female, 40.6 % brush once, 29.6% brush twice and 23.4% never brush .

Among individual who use tooth brush, 50% brush once, 43.2% brush twice and 6.7% brush once within 1 week.

70.5% male use toothbrush where as 76.5% female use tooth brush.
71.42% farmer, 66.6% trekker, 66.6% housewife, 76.3% student and 100% others use tooth brush.

79.1% literate and 70.2 % illiterate use tooth brush.
83.3% who drink alcohol, 75% smoker, 40% smoker and alcoholic, 72.4% who neither drink alcohol nor smokes use tooth brush.

Frequency of tooth brushing

Among age group10-20 years 18.1% brush once a day, 54.5% brush twice a day, 6% once in a week and 21.2 % never brush. Among age group 21-30 years, 40.9 % brush once a day, 36.3% brush twice a day,4.5 % brush once within a week and 18.1% never brush. Among 31-40 age group, 40.7% brush once a day, 37% brush twice a day, 3.7% brush once within a week and 18.5% never brush. Among 41-50 years group, 50% brush once a day, 15% brush twice a day,15% brush once within a week and 20 % never brush. Among 51-70 years age group, 42.8% brush once a day, 17.8% brush twice a day and 39.2% never brush. Among age group 71-90 years, 44.4% brush once a day and 55.5 % never brush.

Among individual who consume alcohol, 70.8% brush once a day, 8.3% twice a day, 4.1% once within a week and 16.6% never brush. Among smoker, 50 % brush once a day, 25% twice a day and 25% never brush. Among individual who smoke and consume alcohol, 40% brush once a day and 60% never brush.

Among individuals who do not consume alcohol and do not smoke, 28.4% brush once a day, 38.5% twice a day, 5.5% once within a week and 27.5% never brush.

Among literate, 22.9% brush once a day, 50% brush twice a day, 6.2% once within a week and 20.8% never brush. Among illiterate individuals, 43.6% brush once a day, 22.3 twice a day, 4.2% once a week and 29.7% never brush.

Among farmer, 46.4% brush once a day, 21.4% brush twice a day, 3.5% brush once a week and 28.5% never brush. Among trekker, 33.3% brush once a day, 33.3% twice a day and 33.3% never brush. Among housewife, equal portion brush once a day, twice a day and never brush. Among students 15.7% brush once a day, 52.6% twice a day, 7.8% once a week and 23.6% never brush.

Among male, 33.3%brush once a day, 33.3% brush twice a day, 3.8% brush once a week and 29.4% never brush. Among female, 40.6% brush once a day, 29.6% brush twice a day, 6.2% brush once a week and 23.4% never brush

P value							
	Tooth brushing	Frequency of tooth brushing	Timing of brushing	Use of dentrifice	Change of tooth brush	Rinsing habit after food	Interdental aids
Sex	0.521	0.671	0.627	0.458	0.545	0.053	0.271
Age group	0.521	0.159	0.064	0.051	0.292	0.117	0.441
Occupation	0.000	0.012	0.066	0.000	0.073	0.207	0.953
Education	0.445	0.006	0.100	0.210	0.073	0.074	0.478
Habit	0.618	0.014	0.040	0.617	0.125	0.968	0.959

Table 1

32.9% don't have habit of rinse their mouth after food intake, 11.9% used to rinse every day and rest rinse sometime. 97.9 % do not use any interdental aids .

Discussion:

Oral health is integral part of our health irrespective of gender, ethnic group and location. It is an established fact that healthy oral tissue is directly and indirectly related to general health.

Oral cleanliness is important for the preservation of oral health as it removes microbial plaque, preventing it from accumulating on teeth and gingivae[3].

Saliva flow has some limited potential in cleaning debris from interproximal spaces and occlusal pits, but it is less effective in removing and / or washing out plaque. Natural physiological forces that clean the oral cavity are inefficient at removing dental plaque. Tongue movement makes contact with the lingual aspects of the posterior teeth, and, to a lesser extent, can also clean their facial surfaces. The cheek covers the buccal aspects of the posterior maxillary teeth and can thereby help prevent the copious build-up of dental plaque on these surfaces[3].

Besides, esthetics, function and harmonious relation is also affected by periodontal disease and dental caries. It also add economic burden and low self esteem to the individual. The oral disease is preventable by proper oral hygiene maintenance. This is done by dental plaque removal by use of brush, dental floss and interdental aids. It is advisable to gargle after meal since sugary food has important role in dental caries. American dental association recommend to brush twice a day and dental floss or other interdental aids once a day[4].

In our study,72.7% patient used to brush and among them also only 43.2% brush twice a day. Similar study conducted on 310 school children conducted in bhaktapur shows only 34% student brush twice a day[5].

Similar study was done in Jyamrung Village Development Committee of Dhading District in central Nepal in 2013 among school children which shows 15.4% children brush twice a day[6].

In this study, there is significant difference in frequency of toothbrushing with respect to habits, literacy and occupation. majority of smoker and alcoholics brushed once where as majority of non smokerand non alcoholic brush twice a day.Majority of farmer brush once a day, student twice a day. Majority of literate brush twice a day where majority of illiterate brush once a day.

In populations that use toothbrushes, the interproximal surfaces of the molars and premolars are the predominant sites of residual plaque. Removal of plaque from these surfaces remains a valid objective because, in patients susceptible to periodontal disease, gingivitis and periodontitis are usually more pronounced in this interdental area than on oral or facial aspects[7].

Toothbrushing alone does not reach the interproximal areas of teeth, resulting in parts of the teeth that remain unclean.Dental caries also occurs more frequently in the interdental region than on oral or facial

smooth surfaces.[4]

This study shows that majority of population gargle sometime and donot use interdental aids. Use of interdental aid is not different in relation to sex, age, occupation, literacy and habit. Since literate people are not aware of use of interdental aids, oral hygiene awareness is not adequate.

Conclusion :

Oral hygiene awareness is not adequate in remote area. Tooth brushing is affected by habit, literacy of population, occupation. Rinsing habit after meal is unaffected by age group, habit, literacy, occupation and sex. Result of this study can be validated by more similar kind of study.

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