International Journal of Dental Medicine
2015; 1(3): 28-32
Published online July 1, 2015 (http://www.sciencepublishinggroup.com/j/ijdm)
doi: 10.11648/j.ijdm.20150103.12

Knowledge and Practice About Oral Hygiene by Tribal People (*Orao*) in Rangpur Region, Bangladesh

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To cite this article:

Mohammad Sayeed Ahmad, M. Abdullah Al-Mamun, Sharifa Begum, M. Shahidul Islam, M. Ahsan Habib, M. Mahafuzur Rahman. Knowledge and Practice About Oral Hygiene by Tribal People (*Orao*) in Rangpur Region, Bangladesh. *International Journal of Dental Medicine*. Vol. 1, No. 3, 2015, pp. 28-32. doi: 10.11648/j.ijdm.20150103.12

Abstract: Background: In spite of great improvements in the oral health status of populations across the world, oral diseases continue to be a major public health problem. Oral diseases make significant contributions to the global burden of disease, which is particularly high in the under privileged groups of both developed and developing countries. The underlying cultural beliefs and practices influence the conditions of the teeth and mouth, through diet, care-seeking behaviors, or use of home remedies. Objectives: To assess the knowledge and practice about oral health by tribal (*Orao*) people in Rangpur, Bangladesh. Materials and Methods: A cross-sectional study was conducted among 159 respondents living in tribal (*Orao*)) reached area of Rangpur District, Rangpur over the period of three months from July to December 2014. The samples were collected by purposive random sampling technique and were interviewed through a structured questionnaire followed by through checklist. Results: It is found that most (64.8%) respondents brushing should be done after meal; more than half (57.2%) respondents replied that sweet food or chocolate is harmful for teeth; 60.4% answered that upward and downward direction is the proper brushing technique; 61% responded tooth brush as the brushing device. It is found that most (76.7%) respondents brush their teeth regularly; more than half (59.1%) respondents brush their teeth once, and 35.8% respondents brush their teeth twice; most (78%) respondents brush their teeth at morning. Conclusion: Statistics on change in oral health-related behaviors across zoographic area and culture may provide a valuable tool in the planning, implementation, and evaluation of oral health promotion programs.

Keywords: Knowledge and Practice, Oral Hygiene, Tribal People (*Orao*), Rangpur, Bangladesh

1. Introduction

Bangladesh, one of the most densely-populated areas in the world, has about 160 million people in a land area of 55,598 square miles.[1] About 1% of the population consists of what are locally termed 'tribal groups' due to their distinct and unique languages, cultures, traditions, religions, and customs that are primarily based in Sino-Tibetan ancestry.[2] The majority of these tribal groups live primarily in the hilly areas of the southeastern region of the country, specifically Rangamati, Khagrachhari and Bandarban districts of the Chittagong Hill Tracts (CHT) and in the regions of Mymensingh, Sylhet, Rajshahi and Rangpur.[3] The *Orao* is one well known tribal group living in the northern area (Rangpur) of the country.

Despite remarkable world-wide progress in the field of diagnostics, curative and preventive health, there are people still living in isolation in natural and unpolluted surroundings far away from civilization with their traditional values, customs, beliefs and myth intact. They are commonly known as “tribals” and are considered to be the autochthonous people of the land.[4,5]

Over the years, displacement and acculturation of the tribal communities have brought about dramatic changes in their lifestyles and value systems.[6] The isolation from mainstream development activities, together with a high level of poverty

and difficult accessibility to the existing health facilities, made the tribal communities specifically vulnerable to various health problems.

Despite the wealth of studies on health and healthcare-seeking behavior among the Bengali population in Bangladesh, relatively few studies have focused specifically on the tribal groups in the country. Research on tribal health has predominantly focused on the prevalence of morbidity, profiles of illnesses, and health-provision coverage[7,8] rather than people's knowledge, practices, opinions of and attitudes towards health provision in the tribal areas.

Considering the sociocultural, political, economic and topographical uniqueness of the tribal groups in Bangladesh, their needs of healthcare, attitudes, and healthcare-seeking behaviors may differ from those of the Bengalis and, thus, challenge the present service-delivery system that has largely been based on the needs and priorities formulated by the plain land population.

Alike all health problems, dental and oral diseases are a product of economic, social, cultural, environmental and behavioral factors.[9-12] The tribal societies have remained socially and culturally alienated from mainstream.[13] A key public health challenge is to determine the health needs of indigenous populations using approaches that appropriately reflect their conditions and concerns while respecting their culture and identity.[14]

In spite of great improvements in the oral health status of populations across the world, oral diseases continue to be a major public health problem. Oral diseases make significant contributions to the global burden of disease, which is particularly high in the underprivileged groups of both developed and developing countries. The underlying cultural beliefs and practices influence the conditions of the teeth and mouth, through diet, care-seeking behaviors, or use of home remedies.

Statistics on change in oral health-related behaviors across zoographic area and culture may provide a valuable tool in the planning, implementation, and evaluation of oral health promotion programs. Just as important, from an oral health educational point of view is information regarding the socioeconomic and regional distribution of oral health related behaviors. However, till date there has been no report related to oral health among tribes. The present study deals with exploration of the oral health beliefs and behavior among the *Orao* tribe in Rangpur region, Bangladesh. The study aimed to explore the context, reasons, and choices in patterns knowledge and practicesof oral healthcare-seeking behavior for of the *Orao* population of Bangladesh.

2. Methodology

A cross-sectional study was conducted among 159 respondents living in tribal (*Orao*) reached area of Rangpur District, Rangpur over the period of three months from July to December 2014. The sample was collected by purposive random sampling technique. In order to collect the data a structured questionnaire and a checklist was prepared at the beginning of the study considering all objects and variables of the study. It was then pre-tested on in Rangpur. After making necessary alternations and corrections, a final questionnaire was developed. Data was collected on the basis of socio economic status, knowledge and practice about oral hygiene by the researchers by face to face interview separately among the patients. Data analysis was done using statistical Package for Social science or SPSS 19 for Windows and Microsoft Excel.

3. Results

Table I. *Socio-demographic status of the respondents (n=159).*

Characteristics	Frequency	Percent
Age_Group		
≤ 20 years	95	59.7
21-30 years	19	11.9
31-40 years	23	14.5
41-50 years	8	5.0
51-60 years	2	1.3
60-70 years	6	3.8
>70 years	6	3.8
Total	159	100.0
Sex		
Male	75	47.2
Female	84	52.8
Total	159	100.0
Religion		
Muslim	45	28.3
Hindhu	34	21.4
Buddist	9	5.7
Christian	63	39.6
Other	8	5.0
Total	159	100.0
Monthly Income (BDT)		
1000-5000	116	73.0
5000-8000	32	20.1
8000-12000	8	5.0
12000-15000	2	1.3
>15000	1	.6
Total	159	100.0
Family Member		
1-4	106	66.7
5-7	49	30.8
8-10	4	2.5
Total	159	100.0
Present Diseases		
Diabetes	26	16.4
CABG	25	15.7
Cancer	8	5.0
Rheumatic Fever	12	7.5
Liver Diseases	4	2.5
Lung Diseases	4	2.5
Kidney Diseases	2	1.3
High Blood Pressure	5	3.1
Nothing	73	45.9
Total	159	100.0

In our observations, most (59.7%) respondents were ≤20 years and only 12(7.6%) were in ≥60 years; and male and female were near about same (47.2% and 52.8% respectively). Maximum (39.6%) were Christian and 28.3% were muslim. Majority (73%) have low in come (BDT 1000-5000). Two third (66.7%) were from small sized (1-4 member) family. More half of the respondents were suffering from different diseases (table I).

In our study it is found that It is found that most (64.8%) respondents brushing should be done after meal; more than half (57.2%) respondents replied that sweet food or chocolate is harmful for teeth; 60.4% answered that upward and downward direction is the proper brushing technique; 61% responded tooth brush as the brushing device (table II). It is found that most (76.7%) respondents brush their teeth regularly; more than half (59.1%) respondents brush their teeth once, and 35.8% respondents brush their teeth twice; most (78%) respondents brush their teeth at morning (table IIIa & IIIb).

Table II. *Knowledge of oral hygiene practice of the respondents (n=159).*

Knowledge	Frequency	Percent
Should Brushing after Meal?		
Yes	103	64.8
No	56	35.2
Total	159	100.0
Is Sweet or Chocolate Food harmfulfor teeth ?		
Yes	91	57.2
No	68	42.8
Technique of Teeth Brushing?		
Upward and Downward	96	60.4
Forward & backward	63	39.6
Total	159	100.0
Brushing Device?		
Brush	97	61.0
Finger	41	25.8
Meswak	21	13.2
Total	159	100.0
CommonDental Diseases?		
Dental decay	65	40.9
Gum swelling	48	30.2
Angular chelitis	9	5.7
Gum loosing	3	1.9
Dental pain	10	6.3
Tooth sensitivity	13	8.2
Food impaction	8	5.0
Gum bleeding	3	1.9
Total	159	100.0
About Dental Care		
Regular Teeth brushing	96	60.4
Avoid of fast food	19	11.9
Avoid of Sweet food	4	2.5
Gargling after every meal	6	3.8
Daily gurgling with warm saline	8	5.0
Intake of food with vit-c	8	5.0
Nothing	18	11.3
Total	159	100.0

Table III (a). *Practice of oral hygiene by the respondents (n=159).*

Characteristics	Frequency	Percent
Regularity on Teeth Brushing?		
Yes	122	76.7
No	37	23.3
Total	159	100.0
Frequency of Teeth Brushing		
Once	94	59.1
Twice	57	35.8
Thrice	7	4.4
Four	1	.6
Total	159	100.0
Time of Teeth Brushing		
Morning	124	78.0
After Break Fast	25	15.7
at Bathing	5	3.1
After Lunch	5	3.1
Total	159	100.0
Duration of Teeth Brushing		
1-2 minute	59	37.1
2-3 minute	70	44.0
3-4 minute	8	5.0
4-5 minute	22	13.8
Total	159	100.0
Brushing Technique		
Vertical Stroke	69	43.4
Horizontal Stroke	90	56.6
Total	159	100.0
Inter Dental Cleaning		
Swing Thread	53	33.3
Needle/pin/etc.	22	13.8
Tooth Pick	84	52.8
Total	159	100.0

Contd… to table III (b)

Table III(b). *Practice of oral hygiene by the respondents (n=159).*

Characteristics	Frequency	Percent
Teeth Brushing Material		
Tooth brush & tooth powder	46	28.9
Tooth brush & tooth paste	73	45.9
Meswak	15	9.4
Tooth powder & finger	5	3.1
Tooth Paste & finger	6	3.8
Betel skin	5	3.1
Others	9	5.7
Total	159	100.0
Habit		
Tobacco chewing	47	29.6
Tobacco powder	15	9.4
Smoking	5	3.1
Betel leaf	24	15.1
Khainy	1	.6
Pipe	2	1.3
Tobacco leaf	2	1.3
Nothing	63	39.6
Total	159	100.0
Tobacco chewing	47	29.6
Freq uency ofhabit		
0	59	37.1
1	40	25.2
2	29	18.2
4	18	11.3
5	8	5.0
6	2	1.3
7	3	1.9
Total	159	100.0

4. Discussion

Cultural factors in health and disease have engaged the attention of medical scientists and sociologists. Every culture has its own customs which may have significant influence on health and oral health. In Bangladesh, indigenous populations, known as *Adivasi* or Tribes, are among the poorest and most marginalized groups. The *Orao* are also considered as the scheduled tribes and they tend to display high levels of resignation and lack the capacity to aspire; consequently their health perceptions often do not adequately correspond to their real health needs.

Maximum (39.6%) were Christian and 28.3% were muslim and rest were from others different religion. So, their oral hygiene practices are different in respect of religious rules. Hindu Brahmins and priests, especially in the region of Varanasi (Uttar Pradesh, India) clean their teeth using cherry wood for an hour, facing the rising sun. This may promote oral health if it is done appropriately. Orthodox Jains clean their teeth using fingers and without using the brush. This may have negative impact on their oral health. Muslims offer prayer in the form of *Salat*, five times in a day. During each *Salat*, as part of the ritual, they use miswak stick, tooth picks and do gum massaging. This may promote the oral health.[15]

In our study it is found that most (64.8%) respondents brushing should be done after meal. To date, the most dependable mode of plaque control is mechanical cleaning with tooth brush. Many surveys in different part of the world have found brushing to be the best way to maintain oral health.[16] In order to prevent oral health problems, the American Dental Association (ADA) recommends tooth brushing at least once a day.[17]

In our study it is found that 60.4% answered that upward and downward direction is the proper brushing technique; 61% responded tooth brush as the brushing device (table II), and most (76.7%) respondents brush their teeth regularly; more than half (59.1%) respondents brush their teeth once, and 35.8% respondents brush their teeth twice; most (78%) respondents brush their teeth at morning. The Bhils (a tribal population) of Rajasthan clean their teeth only with mouthful of water.[18] Another study has shown that most of the tribal population used indigenous methods of oral hygiene.[19] In the study .by Vivek et alit was found that a high proportion (91%) of the subjects reported that they clean their teeth every day. Among them, 43.9% used only indigenous tooth cleaning methods, charcoal was the most commonly used indigenous tooth cleaning method, followed by salt. This study findings correlate with this study. The salt and charcoal powders are coarse and they could abrade the enamel and damage to periodontal tissues.[20,21] More community based oral health education programs emphasizing the ill effects of the indigenous tooth cleaning materials and benefits of using toothpaste or toothpowder are required among these populations.

Thirty nine point six percent respondents have no any oral habit but 39% are habituated to tobacco and 15.1% are habituated to betel leaf. The habits of smoking and alcoholism, are culturally acceptable among some tribal population. Here, males and females have almost the equal frequency of these habits. This increases the risk of palatal malignancies.[22] Offering pan having betel leaf, slaked slime, areca nut, and catechu, which is a proven risk factor for periodontal diseases,[23]oral sub mucous fibrosis[24] and oral malignancies.[25]

5. Conclusion

Statistics on change in oral health-related behaviors across time may provide a valuable tool in the planning, implementation, and evaluation of oral health promotion programs. Just as important, from an oral health educational point of view is information regarding the socioeconomic and regional distribution of oral health related behaviors.

References

[1] Population Reference Bureau. 2010 World population data sheet.Washington, DC: Population Reference Bureau, 2010. 19 p. (http://www.prb.org/ pdf10/10wpds_eng.pdf, accessed on 10 June 2012).

[2] Chowdhury BH. Building lasting peace: issues of the implementation of the Chittagong Hill Tracts accord. Champaign, IL: Program in Arms Control, Disarmament, and International Security, University of Illinois at Urbana-Campaign, 2002. 33 p. (ACDIS occasional paper series). (http://www.acdis.uiuc.edu/ Research/OPs/Chowdhury/cover.html, accessed on 3 March 2006).

[3] Bangladesh: political map. Maps of the World. (http://www.mapsofworld.com/bangladesh/bangladesh-political-map.html, accessed on 10 June 2012).

[4] DD Narayan, GR Dhondibarao, KC Ghanshyam. Prevalence of Tobacco Consumption among the Adolescents of the Tribal Areas in Maharashtra. J Clin Diagnos Res 2011; 5(5):1060-3.

[5] Santosh KT. Oral health status of dentate Bhil adult tribe of southern Rajasthan, India. Int Dent J 2009;59:133-40

[6] Ahmed SM, Tomson G, Petzold M, Kabir ZN. Socioeconomic status overrides age and gender in determining health-seeking behaviour in rural Bangladesh. Bull World Health Organ 2005;83:109-17.

[7] Karim F, RafiM, Begum SA. Inequitable access to immunization and vitamin A capsule services: a case of ethnic minorities in three hill districts of Bangladesh. Public Health 2005;119:743-6.

[8] Chowdhury AMR, Bhuiya A, Mahmud S, Salam AKMA, Karim F. Immunization divide: who do get vaccinated in Bangladesh? J Health PopulNutr 2003;21:193-204.

[9] Barkat K, Roy NC, Rahman DMM. Unmet contraceptive need in Bangladesh: evidence from the 1993/94 and 1996/97 Demographic and Health Surveys. Asia Pac Popul J 1999;14:37-50.

[10] Bhasin V. Oral health behaviour among Bhils of Rajasthan. J. Soc. Sci 2004;8(1):1-

[11] Butani Y, Weintraub JA and Barker JC. Oral health-related cultural beliefs for four racial/ethnic groups: Assessment of the literature. BMC Oral Health 2008;8(26):1-13

[12] Petersen PE, Kwan S. Equity, social determinants and public health programmes – the case of oral health. Community Dentistry and Oral Epidemiology 2011;39(6): 481-7

[13] Richard GW. Emerging theories into the social determinants of health: implication for oral health promotion. Community Dent Oral Epidemiol 2002;30:241-7

[14] Eknath N. Rural Indian tribal communities: an emerging high-risk group for HIV/AIDs. BMC International Health and Human Rights 2005;51:1-7

[15] NakazonoTT, Davidson PL, Andersen RM. Oral heath beliefs in diverse populations Adv Dent Res 1997;11(2):235-44

[16] Sathe PV, Mali A. Social sciences. Textbook of communitydentistry. 2nd ed. Hyderabad; Paras Medical Publisher: 2001:pp 17-45.

[17] Prabhu SR. Oral diseases in the tropics. Oxford UniversityPress UK (November 1992).

[18] Pradhan S, Bhat. MK Assessment of periodontal status of rural Nepalese population using the community periodontal index. J Nepal Den Asso 2009; 10(2):97-104

[19] BhatPK et al. Preventive oral health knowledge, practices and behaviour of patients attending dental institutions in Bangalore. J. Int Oral Health 2010;2(2):17-26

[20] Pandey GD, Roy J. Tiwary RS. Socio-culturual aspects and health care in pando tribe of Madhya Pradesh. J. Hum. Ecol 2001;12(5):391-4

[21] Ravi Varma NA, Kamath VV. Preventive Dentistry in India. Its scope and Aims. JIDA 1990;61(7):170-4

[22] Chandra Shekar, Raja Babu. Cultural factors in Health and Oral health. Indian journal of dental advancements 2009;1(1):24-30

[23] Amarasena N, EkanayakaANI, Hearath L and HideoMiyazaki. Tobacco use and oral hygiene as risk indicatorsfor periodontitis. Community Dent Oral Epidemiol 2002;30:115-123.

[24] Murthi PR, Gupta PC, BhonsleRB. Effect on the incidenceof oral sub mucous fibrosis with special reference to therole of areca nut chewing. J Oral Pathol Med 1995; 24: 145-152.

[25] Auluck A, Hislop G, Poh C, Zhang L, Rosin MP. Areca nutand betel quid chewing among South Asian immigrantsto Western countries and its implications for oral cancerscreening. Rural and Remote Health 9 (online), 2009: 1118.Available from: http://www.rrh.org.au.