



A pilot study on patterns of Tobacco, Alcohol, and other Associated habits between Naga and Muslim communities in Cachar district of Assam, India

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Abstract

Background: Worldwide tobacco consumption, alcohol and associated habits are considered major causes of morbidity and mortality. Following such trends in north-east India, this pilot study was conducted in two different rural communities in Cachar district, Assam. Material and methods: Primary data were collected from Naga (tribe) and Muslim (non-tribe) community (N=406). Method of data collection followed interview schedule. Measures of central tendency, and correlation tests were applied for statistical analysis. Results: Among Muslim males and females tobacco and related habits were 82.18% and 65.61% and in Naga males and females (74.36% and 52.78%). Correlations between tobacco smoking and alcohol consumption was significant ($p < 0.01$) in Naga community whereas, tobacco chewing and habit of pan, betel nut, etc. was significant ($p < 0.01$) in Muslim people. Both communities were having significant correlations among their habits and other variables. Discussion: Data shows that, majorities of Muslim people were having chewing tobacco, pan and betel nut etc., habits whereas Naga people were in favor of smoking and alcohol consumption along with tobacco chewing. Habit related health issues found in both communities. On health perspective, Naga people were much vulnerable compare to Muslims. Conclusion: These communities need more awareness and screening programs.

Keywords: Alcohol, Betel nut, Cancer, Social Work, Tobacco.

Introduction

Tobacco use is a major cause of preventable cause of death and disease worldwide has been known for decades¹. Tobacco consumption across the world has been identified as the single biggest cause of inequality in morbidity and mortality between rich and poor². Tobacco is the most easily accessible legally available addictive substance which contributes significantly to premature death and long term suffering, being a major risk factor for cardiovascular diseases, chronic obstructive pulmonary diseases, cancers, reproductive outcomes and oral diseases³.

In 2010, a survey data indicate that the country of India has some 275 million tobacco users. Bidis, a slim, hand rolled, unfiltered inexpensive locally produced product, are more commonly smoked than cigarettes in rural areas and among groups of lower socio-economic status⁴. Overall, 52% ($n = 36$ 000 per annum) of oral cancers in India are due to smokeless tobacco use⁵. Smoking is estimated to have caused one million deaths in India in 2010, with 70% occurring in middle-aged groups⁶.

In Assam raw, ripe, and fermented betel nuts are all chewed along with dried tobacco. Any of its compositions usually retained in the mouth for about 20 to 25 minutes^{7,8}. Barak Valley, a southern part of Assam, consists of three districts i.e., Cachar, Karimganj and Hailakandi. As per Cachar Census

report, the origin of the name of 'Cachar' it is believed to have been derived from the Sanskrit word 'Khachar' which means a broad region near mountain or water. It might also be possible that the Bengalis of Sylhet district gave this district its name as the work 'Kachar' in Sylhetee means a stretch of land at the foot of a mountain or on the bank of a river. It is not very easy to trace the origin of the name but it is more likely that "Hadamba" was a very old name of Cachar. The district was having 11, 74,128 of its total population and from that tribal population were counted as 17,569 which constitute 1.50% of its total population⁹. In Cachar district, majority of population speaks a language known as sylhetee (Bengali). The district is having different ethnic groups and Rongmei Naga is one of them. Due to different ethnicities, the dietary and lifestyle habits are quite different from rest of India.

This study was conducted in Meherpur Alitkar (a non-tribe Muslim community), and in Meherpur Naga punjee (tribal community of Naga). A major objective was to know the patterns of tobacco and other related habits between these communities and to see any habit related health issues.

Methodology

Primary data were collected by the trainee Social Workers, those who placed at Cachar Cancer Hospital and Research Centre, Meherpur, Silchar, by the Department of Social Work, Assam University, Silchar. Period of data collection was from

March to May in year 2014 and 2015. The Social Workers were sent to the respective communities for data collection. Trainees' were collected a total 406 respondent's data through interview schedule. 75 Naga and 331 Muslims were interacted during data collection period.

For secondary data, several journals, periodicals, and research reports were considered. Data were analyzed using Microsoft excel and Statistical Package for Social Scientists (SPSS) version 20. Data analysis phase involves measures of central tendency and correlation.

Results and Discussion

Results: Majority of tobacco and associated habits (Table-1) were found in Muslim males (82.18%) followed by Naga males (74.36%), Muslim females (65.65%), and Naga females (52.78%).

In broad group of habit (Table-2) shows that, smoking and alcohol consumption is comparatively high among Naga males and the percentage is respectively 33.33%, and 38.46%. Tobacco chewers were common in Muslim males and females (52.48% and 51.30%). Pan, betel nut, etc, chewers are common in all sexes between two communities and commonly found in Muslim males 74.26% followed by Muslim females 62.61%, Naga males 58.97%, and Naga females 52.78%. The average age of all habits in Muslim males were over age of 35 years followed by Naga males and in Naga females this average was over 40 years followed by Muslim females.

Table-3 shows that, 7.69% of Naga males were having all habits. 15.38% Naga males were having tobacco smoking, alcohol consumption, and pan, betel nut, etc, habits. 5.56% Naga females were having tobacco smoking and pan, betel nut, etc habits. Only pan, betel nut, etc, chewing habits were common in both communities. 7.69% Naga males were consuming Alcohol. Pan, betel nut, etc and tobacco chewing in Muslim males and females were 34.65% and 48.70% followed by Naga males and females. Majority of Naga females (47.22%) were not having any habits.

Correlation (Table-4) shows that, both communities are having correlations between sex and tobacco smoking, sex and alcohol consumption, tobacco chewing and pan, betel nut etc. Muslim community shows correlation between age and tobacco chewing, age and pan, betel nut etc, age and tobacco chewing, sex and pan, betel nut, etc, whereas in Naga communities shows correlations between age and alcohol consumption, tobacco smoking and alcohol consumption, tobacco smoking and tobacco chewing, and alcohol consumption and pan, betel nut etc.

Habit related health issues among users (Table-5) shows that, Naga females have more issues in comparison with Naga males (10.53% and 6.90%), whereas, in Muslim males and females it

was 4.82% and 5.96% respectively. Naga females (11.76%) reported family history of cancer followed by Muslim females (11.26%).

Discussion: The above study result shows that, tobacco chewing was common in both communities. In Muslim community the male and female tobacco chewing percentages are respectively 52.48% and 51.30% followed by Naga males 17.95% and Naga females 8.33%. Tobacco smoking found that in Muslim males 15.84%, in Naga males 33.33%, and in Naga females 11.11%. One national level survey was conducted in 1998-99 showed data of north-eastern states. The findings are given below –

Some regional patterns were observed for chewing tobacco. Chewing of tobacco was relatively more common in the Central, Eastern, Western (except Goa) and Northeastern states (except Meghalaya) compared to in the Northern and Southern states. National Family Health Survey-2 (1998-99) data shows, male and female percentages of tobacco chewing in Assam was 47.8% and 24.3%, Arunachal Pradesh 51.6% and 33.1%, Manipur 34.1% and 19.2%, Meghalaya 16.9% and 27.6%, Mizoram 60.2% and 60.7%, Nagaland 45.0% and 16.5%, Sikkim 39.5% and 18.6%, and in Tripura it was 10.8% and 5.2% respectively. Males and females tobacco smoking percentages in Assam was 31.5% and 2.6%, Arunachal Pradesh 25.6% and 5.6%, Manipur 35.0% and 12.0%, Meghalaya 55.2% and 6.7%, Mizoram 59.4% and 22.0%, Nagaland 38.0% and 2.4%, Sikkim 19.4% and 8.2%, and in Tripura state this was 48.5% and 9.7% respectively¹⁰.

Comparing the National survey data with this study, it has found that in Muslim community both males and females were tobacco chewers (Male=52.48% and Female=51.30%) which was relatively high percentages from all other north-eastern states except the state of Mizoram (Male=60.2% and Female=60.7%) followed by Naga communities (Male=17.95% and Female=8.33%). The average age of Muslim male tobacco chewers were 38 years and 35 years for female users. There is insignificant relationship ($p>0.05$) found between sex and tobacco chewers in both communities as because users were from both males and females.

The demographic and health survey reported the use of chewing tobacco common in India, Nepal, Bangladesh, Maldives, and Cambodia¹¹. Use of smokeless tobacco is a socially acceptable addiction especially in Eastern, Northern and North-eastern parts of the country¹². The present study also follow same trend and found both communities have a huge numbers of smokeless tobacco users (Use of pan, betel nut, etc with tobacco/zarda/ghutka) and showed a significant correlation between Muslim and Naga people ($p<0.01$ and $p<0.05$).

Smokeless tobacco is consumed predominantly in the form of pan, pan-masala or gutkha, and mishri¹³. Betel use was significantly associated with all-cause and cancer-related mortality in this south Asian cohort. Two studies in India reported

mixed results for chewing of betel quid or betel nut (without tobacco added) where one study reported no significant effect where other reported increased all-cause mortality in males and females^{14,15}.

Bidi is the most popular smoking product consumed in rural areas in comparison to cigarette smoking in the urban areas^{16,17}.

Sex and tobacco smoking in Muslim community shows a significant relation ($p < 0.01$) because all smokers were belongs from males followed by Naga community ($p < 0.05$) because of its users in both males and females. Habits of tobacco chewing and tobacco smoking shows a significant relation ($p < 0.05$) among Naga people.

Table-1
Age group, sex distribution, and habits between Muslim and Naga community

Age group	Muslim Community				Naga Community			
	All Males	Male Habits (%)	All Females	Female Habits (%)	All Males	Male Habits (%)	All Females	Female Habits (%)
10 - 14	0	0 (0.00)	1	0 (0.00)	0	0 (0.00)	1	0 (0.00)
15 - 19	10	5 (50.00)	27	9 (33.33)	4	3 (75.00)	1	0 (0.00)
20 - 24	13	10 (76.92)	35	25 (71.43)	8	7 (87.50)	3	1 (33.33)
25 - 29	14	11 (78.57)	42	23 (54.76)	5	4 (80.00)	4	2 (50.00)
30 - 34	17	16 (94.12)	29	22 (75.86)	3	2 (66.67)	6	3 (50.00)
35 - 39	8	7 (87.50)	23	16 (69.57)	5	3 (60.00)	4	3 (75.00)
40 - 44	13	11 (84.62)	19	17 (89.47)	4	4 (100.00)	6	3 (50.00)
45 - 49	8	6 (75.00)	18	13 (72.22)	4	3 (75.00)	3	3 (100.00)
50 - 54	3	3 (100.00)	12	9 (75.00)	4	2 (50.00)	0	0 (0.00)
55 - 59	6	6 (100.00)	8	5 (62.50)	1	1 (100.00)	3	1 (33.33)
60 - 64	5	4 (80.00)	12	10 (83.33)	0	0 (0.00)	1	1 (100.00)
65 - 69	2	2 (100.00)	4	2 (50.00)	0	0 (0.00)	2	1 (50.00)
70 and above	2	2 (100.00)	0	0 (0.00)	1	0 (0.00)	2	1 (50.00)
Grand Total	101	83 (82.18)	230	151 (65.65)	39	29 (74.36)	36	19 (52.78)

Table-2
Broad group of habits and sex distribution between communities

Habits	Muslim Males		Naga Males		Muslim Females		Naga Females	
	No's with %	Avg. age	No's with %	Avg. age	No's with %	Avg. age	No's with %	Avg. age
Smoking	16 (15.84%)	43	13 (33.33%)	35	0 (0.00%)	0	4 (11.11%)	58
Alcohol	5 (4.95%)	38	15 (38.46%)	30	0 (0.00%)	0	0 (0.00%)	0
Pan, betel nut, etc	75 (74.26%)	37	23 (58.97%)	33	144 (62.61%)	35	19 (52.78%)	42
Tobacco chewing	53 (52.48%)	38	7 (17.95%)	25	118 (51.30%)	35	3 (8.33%)	47

Avg. age = years

Several studies investigated the effects of betel use on the risk of death from all cancers or cancer of the oral cavity and other upper-digestive organs. There was increased mortality from cancer of the oral cavity, nasopharynx, liver and lung associated with betel nut chewing and smoking in China¹⁸.

In the National Family Health Survey-2 shows that, tobacco consumption was significantly more among the scheduled castes and scheduled tribe populations¹⁰. Smokeless tobacco use is also associated with the increasing risk of cancer. Smokeless tobacco is also highly addictive and causes cancer of the head and neck, oesophagus and pancreas, besides many oral diseases¹. Smoking increases the risk of oral cancer and alcohol further increases the risk^{19,20}. There is insignificant relationship ($p>0.05$) found in Muslim community about the use of smoking tobacco along with alcohol whereas this shows a significant relationship ($p<0.01$) among Naga people. So, as per literature, there will be a risk of developing health hazards among Naga people compare to Muslims.

Peoples of Naga community showed more health problems (Naga males=6.90%, and Naga females= 10.53%) followed by Muslims (Muslim males=4.82%, and Muslim females=5.96%). Lots of users were past experienced with any family history of cancer in both communities. The percentage of experiences in Naga males and females were (6.90% and 11.76%) followed by Muslim males and females (4.82% and 11.26%). So, this

discussion shows that, due to adaptation of different habits and life styles among Naga (tribe), the risk of any health related hazards or developing any tobacco related chronic disease or cancer is likely to be high in comparison to Muslims (non-tribes) in Cachar district of Assam.

Tobacco control measures continue to face many implementation and knowledge dissemination challenges, despite policy achievements since the passage of the Cigarettes and Other Tobacco Products Act (COTPA)²¹. While smoking may represent a more “westernized” phenomena, the history and cultural rooting of smokeless tobacco presents a different set of challenges in India’s tobacco control measures²². States have a critical role to play in implementing the various sections of the Act. This may be seen through differences in state resources for tobacco control as well as state-specific policies on taxation of tobacco products. Moreover, the penetration of tobacco industry marketing and promotion has been shown to vary considerably between Indian states¹².

This is a pilot study. A more comprehensive study needs to know about the knowledge, attitude, and practice of tobacco of both Naga and Muslim communities in Cachar district of Assam. But in this study, whatever data collected from the communities it shows there is a necessity of policy implementation from both state and national level.

Table-3
Specific group of habits among sexes of both communities

Habits	Muslim Community		Naga Community	
	Males (%)	Females (%)	Males (%)	Females (%)
Smoking + Alcohol consumption + Pan, betel nut, etc +chewing	0 (0.00)	0 (0.00)	3 (7.69)	0 (0.00)
Tobacco smoking + Alcohol consumption + Pan, betel nut, etc	0 (0.00)	0 (0.00)	6 (15.38)	0 (0.00)
Alcohol consumption + Pan, betel nut, etc + Tobacco chewing	1 (0.99)	0 (0.00)	1 (2.56)	0 (0.00)
Tobacco smoking + Pan, betel nut, etc	3 (2.97)	0 (0.00)	2 (5.13)	2 (5.56)
Pan, betel nut, etc	23 (22.77)	32 (13.91)	7 (17.95)	14 (38.89)
Alcohol consumption	0 (0.00)	0 (0.00)	3 (7.69)	0 (0.00)
Pan, betel nut, etc + Tobacco chewing	35 (34.65)	112 (48.70)	2 (5.13)	1 (2.78)
Tobacco smoking	1 (0.99)	0 (0.00)	2 (5.13)	0 (0.00)
Alcohol consumption + Pan, betel nut, etc	2 (1.98)	0 (0.00)	2 (5.13)	0 (0.00)
Tobacco chewing	5 (4.95)	6 (2.61)	1 (2.56)	0 (0.00)
Tobacco smoking + Pan, betel nut, etc + Tobacco chewing	11 (10.89)	0 (0.00)	0 (0.00)	2 (5.56)
Tobacco smoking + Alcohol consumption	1 (0.99)	0 (0.00)	0 (0.00)	0 (0.00)
Alcohol consumption + Tobacco chewing	1 (0.99)	0 (0.00)	0 (0.00)	0 (0.00)
No any types of habits	18 (17.82)	80 (34.78)	10 (25.64)	17 (47.22)

Table-4
Correlations of age, sex, and habits between two communities

Correlation	Muslim community	Naga community
	Significance	Significance
Age and tobacco smoking	.006**	.242
Age and alcohol consumption	.550	.038*
Age and pan, betel nut, etc	.001**	.945
Age and tobacco chewing	.004**	.241
Sex and tobacco smoking	.000**	.021*
Sex and alcohol consumption	.001**	.000**
Sex and pan, betel nut, etc	.039*	.595
Sex and tobacco chewing	.845	.227
Tobacco smoking and alcohol consumption	.112	.000**
Tobacco smoking and pan, betel nut, etc	.065	.002
Tobacco smoking and Tobacco chewing	.162	.027*
Alcohol consumption and tobacco chewing	.600	.092
Alcohol consumption and pan, betel nut, etc	.770	.037*
Tobacco chewing and pan, betel nut, etc	.000**	.020*

** Significant at p<0.01. * Significant at p<0.05

Table-5
Habit related health issues of among users of both communities

Community and Sex	Habit related health issues (No's with %)	Any family history of cancer (No's with %)
Naga Males	2 (6.90%)	2 (6.90%)
Muslim Males	4 (4.82%)	4 (4.82%)
Naga Females	2 (10.53%)	2 (11.76%)
Muslim Females	9 (5.96%)	17 (11.26%)

Conclusion

Thus, this pilot study concludes that tobacco, alcohol and its associated habits are predominantly associated with both communities from Cachar district of Assam. Tobacco smoking and alcohol consumption is comparatively high in Naga peoples whereas pan, betel nut, etc with tobacco chewing is high in Muslim people. Amongst users, habit related health problems and family history of cancer is found relatively high in Naga people compare to Muslims. From this scenario, it has felt a need of community awareness and some screening programs. This will be in precise way if there is involvement of government machineries, non-government organizations and other professional bodies. Further goal will be achieved if certain policy implementation takes its place on tobacco control

by state and national level. A more comprehensive study needs to draw a proper conclusion.

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