



TO ASSESS THE KNOWLEDGE ATTITUDE AND PRACTICE OF SMOKLESS TOBACCO AMONG THE MINES WORKERS, DOLOMITE MINES, BILASPUR CHHATTISGARH

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ABSTRACT

Background: Tobacco use remains a serious and persistent national problem and one of the fastest growing detrimental health habits in Chhattisgarh. Overall about 1/3rd of cancers in India pertain to tobacco related sites, the World Health Organization (WHO) predicts that tobacco death in India may exceed 1.5 million annually by 2020. Suggesting a continuing need to monitor and communicate health risks from smokeless tobacco use. An additional challenge to the public health community is the prevention of new smokeless tobacco users and cessation of current users. **Objective:** 1. To assess the knowledge, Attitude and Practice (KAP) of smokeless tobacco among the mine workers. 2. To assess the factors responsible for smokeless tobacco use. **Method:** A cross sectional community base study was conducted in dolomite mine workers. Total 320 participants between 20 to 60 years of age were face to face interviewed and assessed for Knowledge, Attitude and Practice (KAP) of smokeless tobacco use. 132 (41.2%) participants were found using smokeless tobacco. Data collecting tools in this study was semi structured questionnaire **Result:** in this study prevalence of smokeless tobacco use among mine workers was (41.2%) consumption was highest in the less educated workers. Education emerges as a relatively strong predictor to change the tobacco habits. Gutkha (59%) is the most common method of smokeless tobacco use, 33.3% of participants initiated smokeless tobacco before 15 years of age. Friends, Peer pressure and Advertisements are emerging as important influencing factors among smokeless tobacco users. **Conclusion:** High prevalence of smokeless tobacco use and in view of carcinogenesis potential and associated health hazard of smokeless tobacco appeared to be major health problem as addiction, need to intervene.

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INTRODUCTION

Smokeless Tobacco (ST) is tobacco that is not burned. It is also known as chewing tobacco, spit or spitting tobacco. Epidemiological studies of Smokeless Tobacco use and cancer continue to show that Smokeless Tobacco use increases oral cancer risk and possibly the risk of other Head & Neck cancers.^[1-3] A total of 28 carcinogens have been identified in Smokeless Tobacco and associated with high risk of oral cancers particularly carcinoma of Buccal Mucosa.^[1] Tobacco specific nitrosamines (TSNAs) are an important class of carcinogens in tobacco products, widely considered to be among the most important carcinogens.^[4-9] The first nation wise survey of 'National Sample Survey Organization' when applied to the 1996 population showed that 8, 00,000 persons in India died due to their tobacco habits^[10]

A 2003 multicentre study from southern India found that chewers of betel quid with tobacco had a nine fold excess risk of oral cancer compared to never chewers.^[3] 90% of

Smokeless Tobacco users live in south-east Asia. Approximately 250 million adults consume Smokeless Tobacco in south-east region.^[11-13] Global comparison shows that India has high incidence rate of cancer of oral cavity and pharynx. About half of the cases among men and one fifth cases among women pertain to sites mainly attributable to tobacco use. Overall about 1/3rd of cancers in India pertain to tobacco related sites.^[14] The World Health Organization (WHO) predicts that the tobacco related deaths in India may exceed 1.5 million annually by 2020; nationally representative and reliable prevalence data on tobacco consumption are scarce. Smokeless Tobacco is addictive due to the exposure with nicotine intake.^[15] Concern over health from Smokeless Tobacco use has prompted interest in areas where Smokeless Tobacco use is common, suggesting a continuing need to monitor health risks associated with Smokeless Tobacco use.

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Objective 1.To assess the Knowledge, Attitude and Practice (KAP) regarding smokeless tobacco use among the dolomite mine workers of Hirri Mines, Bilaspur, Chhattisgarh.

2. To assess the factors responsible for smokeless tobacco use among the dolomite mine workers of Hirri Mines, Bilaspur, Chhattisgarh.

MATERIAL AND METHOD

Cross Sectional Community based study was conducted between June to September 2015.The study population including 320 mine workers working in dolomite mines Hirri Mines (Bhilai Steel Plant) district Bilaspur, Chhattisgarh. Study covers 320 mine workers (2%) workers were absent during the period, data collection was done with the use of semi structured questionnaire. After taking informed consent the questionnaire was administered by interviewing mine workers from 20 to 60 years of age. After collection of data the statistical analysis was done with the help of cdc epi-info software.

RESULTS

Table 1. Shows the general characteristic of study population, it was observed that the total number of participants were 320, males 301(94%) & females 19 (6%) prevalence of smokeless tobacco is more in females i.e. 42.11% than in males i.e. 41.20% but this difference is not significant. Most of the participants belong to the age group of 36 - 60 year, 234 (73.1%), and 86 (26.9%) were below 35 years of age. Smokeless tobacco prevalence is significantly higher in age group of 36 - 60 year. Maximum numbers of participants were educated up to 12th Standard, 251(78.3%). Only 69 (21.5%) participants were having graduation / post graduation degree. There is significant association between educational status of participants and use of smokeless tobacco. 120 (47.81%) participants educated up to 12th, uses smokeless tobacco while 12 (17.39%) participants educated graduate and above uses smokeless tobacco. Out of 320 participants 132 (41.2%) were current smokeless tobacco users. It shows that approx every second participant in the study population was smokeless tobacco user.

Table 1 Characteristics of study population

Study Variable	Total n = 320 Number %	Non- ST Users	ST Users	chi square value p value
Sex				
Male	301 (94%)	177 (58.80%)	124 (41.20%)	0.0061
Female	19 (5.9%)	11 (57.89)	08 (42.11)	> 0.05
Age				
20-35 years	86(26.9%)	71 (82.56%)	15 (17.44%)	27.50
36-60 years	234(73.1%)	117 (50%)	117(50%)	< 0.001
Education				
Up to 12 th	251(78.43%)	131 (52.19%)	120(47.81%)	20.66
Graduate and above	69(21.56%)	57 (82.61%)	12 (17.39%)	< 0.001

Table 2 Shows the practice of smokeless tobacco use (Total n=132). According to form of smokeless tobacco use, Gutkha 78 (59.0%) was most common method of smokeless tobacco use followed by Khaini 46 (34.8%) and Gudakhu 25 (18.9%). About 34 (25.7%) mine workers were found using dual (more than one) smokeless tobacco products, 44 (33.3%) participants initiated smokeless tobacco use before 15 years of age , 70 (53%) were in 16-25 years & 18 (13.6%) after 25 years of age. Among factors influencing smokeless tobacco use 108 (81.8%) were influenced by friends and peer pressure, 102 (77.27%) participants feels that smokeless tobacco increase

their work performance, advertisements 25 (18.9%), family members 16 (10.6%), to relieve tension / stress 14 (10.6%), for curiosity 06 (4.5%) and to relieve toothache 05 (3.7%). 83 (62.8%) were attempted to quit but not succeeded.

Table 2 Practice among Smokeless Tobacco Users

Study Variables in Smokeless tobacco users	Total n = 132 Number %
Form of Smokeless tobacco use*	
Gutkha	78 (59.0%)
Khaini	46 (34.8%)
Gudakhu	25 (18.9%)
Dual Use	34 (25.7%)
Age of initiation of Smokeless tobacco	
<15 years of age	44 (33.3%)
16-25 years of age	70 (53.0%)
>25 years of age	18 (13.6%)
Factor Influencing Smokeless tobacco use*	
Friends And Peer Pressure	108 (81.8%)
Feel that Smokeless Tobacco increase their work performance	102 (77.27%)
Advertisements	25 (18.9%)
Family Members	16 (12.1%)
Relieve Tension /Stress	14 (10.6%)
For Curiosity	06 (4.5%)
Relieve Toothache	05 (3.7%)
Attempted to quit	
Number of current smokeless tobacco users who attempted to quit	83 (62.8%)
•Participants with dual smokeless tobacco use were included in both the groups	
•Many Smokeless Tobacco users were influenced by more than one factor	

Table 3 Knowledge (Awareness) among study participants

Study Variable	Total n = 320 Number %
•Awareness regarding health hazards	
•Awareness regarding tobacco associated cancers	234 (73.12%)
•Awareness regarding fatalities of tobacco related cancers	201 (62.81%)
	132 (41.25%)

Table 3. Shows the knowledge (awareness) and attitude among smokeless tobacco users, most of the participants 234 (73.12%) have knowledge regarding health hazards of smokeless tobacco use and 201 (62.81%) were aware of tobacco associated cancers. 132 (41.25%) workers were aware of detrimental effects of tobacco related cancers. Despite their knowledge about health consequences smokeless tobacco use is so high among mine workers. 83 (62.8%) were attempted to quit but not succeeded because of nicotine found in tobacco is highly addictive. Over time 11 people becomes addictive or dependent on nicotine.

Table 4 Attitude among Smokeless Tobacco Users (n=320)

S No	Attitude of participants	No. (%)
1.	feel that Smokeless Tobacco going to kill them	132 (41.25%)
2	feel that Smokeless Tobacco inversely affect their family life	82 (25.62%)
3	feel that Smokeless Tobacco inversely affect their social life	60 (18.75%)
4	feel that Smokeless Tobacco inversely affect their financial life	110 (34.37%)

Table 4 In our study 132 (41.25%) participants feel that smokeless tobacco is dangerous to their life. While 82 (25.62%) participants feel that smokeless tobacco inversely affected their family life (frequent fight with wife and other relatives and bad comments from Children) . 60(18.75%) participants in this study feels that smokeless tobacco has

negative effect in their social life (bad comments from seniors, colleagues, friends, sometimes avoids social gathering as well). According to 110 (34.37%) participants Smokeless tobacco use brought financial burden to them.

Table 5 Association between knowledge and education status

S No	Knowledge	Education status		Chi square value P value
		Up to 12 th	Graduate and above	
1	Good knowledge	81	51	163.59
2	Poor knowledge	170	18	< 0.001

Table 5 We found that knowledge regarding health hazards from smokeless tobacco is good in more literate people (graduate and above) i.e. 73% than less literate people (upto 12th class) 32.27%. And this association is significant with p value < 0.001.

Table 6 Association between attitude and education status

S No	attitude	Education status		Chi square value P value
		Up to 12 th	Graduate and above	
1	Positive attitude	90	42	13.97
2	Negative attitude	161	27	< 0.001

Table 6 We also found that there is significant association between positive attitude and education (p value < .001) status of participants. 60.87% participants who are educated graduate and above have positive attitude while 47.87% participants educated up to 12th are having positive attitude.

DISCUSSION

Amongst various addictions tobacco was the most popular and highest recorded addiction. D.V. Bala *et al* ^[16] (2006-2009) study observed overall current prevalence of tobacco in different forms was 47.6% in the total population in Gujarat. In another study India ranks second globally ^[17] having nearly 275 million tobacco users. Gupta P.C. *et al* ^[18] in 2003 observed in south Asia over 1/3rd of tobacco consumed regionally is smokeless. D.N. Sinha *et al* ^[11, 19] also reported high prevalence of tobacco use. Madan *et al* ^[20] in year 2006 found that the prevalence of tobacco use was 41%. Which is almost similar to that observed in our study i.e. 42.11% among mine workers. Surekha Kishor *et al* ^[21] in year 2013 found that the gutkha is commonest form of tobacco used by 88.6%. In our study we also observed that Gutkha 78 (59.0%) was the most common method of smokeless tobacco use followed by Khaini 46 (34.8%) and Gudakhu 25 (18.9%). Dr Poonam Khattar *et al* ^[22] in year 2011 found that the mean age of initiation of tobacco consumption was 12.2 ± 1.34 years, nearly 55% of the children initiated tobacco before the age of 13 years. R.Narain *et al* ^[23] in 2011 observed that nearly 70% boys and 80% girls less than 15 years initiated the habit of tobacco before the age of 11 years. In our study 44 (33.3%) participants initiated smokeless tobacco use before 15 years of age, similar to results found by various studies. There is an urgent need to intervene and protect this vulnerable group from falling prey to this addiction. Dr. Poonam Khattar *et al* ^[22] in year 2011 found 38% of children reported that tobacco was first introduced to them by their friends. Nearly 23% of children were influenced by advertisements of tobacco by various mass media. Naresh R Makhwana *et al* ^[24] in year 2007 observed that main inducing factor for addiction was found to be friends 61.6%. In our study friends and peer pressure was observed 108 (81.8%) as main influencing factor 102 (77.27%) participants felt that smokeless tobacco increase

their work performance, others influencing factor were advertisements 25 (18.9%), & family members 16 (10.6%). Many smokeless tobacco users were influenced by more than one factor. Friends, family & advertisements are emerging as important influencing factors in our study similar to various other researches. L Andes *et al* ^[25] in their study found that among adults, only 10.2% of those at the highest educational level used smokeless tobacco as compared to 42.3% of those with no formal education. Our study also has similar findings. Nathan John Grills *et al* ^[26] found in their study done in Uttarakhand that 70% of current users wished to quit and of those who did not want to quit 87% of tobacco users were aware that tobacco was harmful to health and awareness was highest amongst males (89.7% versus 77% in females, the young (85% in those 18-34 year old versus 51% in > 68 year olds), and educated (93.9% if higher education versus 75.4% if primary educated only). In our study 62.8% of smokeless tobacco users want to quit and we also found that education is significantly associated with good knowledge.

CONCLUSION

High Prevalence of Smokeless tobacco use and in view of carcinogenesis potential and associated health hazards of smokeless tobacco appeared to be major health problem as an addiction, need to intervene.

Recommendation

Various anti-tobacco community educations through involvement of media, health infrastructure, educational institutes and community volunteers –multi sectorial approach for tobacco control are suggested.

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