© Kamla-Raj 2011
J Sociology Soc Anth, 2(2): 89-95 (2011)
DOI: 10.31901/24566764.2012/02.02.03

Risk Factors Associated with *Gutkha* Addiction: An Empirical Study in Cuttack City of Odisha

Sangita Sushree Nayak

P.G. Department of Sociology, Ravenshaw University, Cuttack 753003, Odisha, India
E-mail: sangita_socio@sify.com

KEYWORDS Smokeless Tobacco. Nicotine. Quality of Life. Leukoplakia. Erythroplakia

ABSTRACT The use of smokeless tobacco in the form of *gutkha* is highly prevalent nowa-days. The young mass is the main consumer. It is being considered as a socially acceptable habit. The use of *gutkha* starts during the young age, mainly due to the influence of friends. Tobacco, the prime ingredient of *gutkha* is responsible for oral cancer. The high rate of use of *gutkha* in recent times is a serious health threat and a matter of great concern for the health planners and social activists. Thus, it needs preventive measures to protect the society. The objectives are (i) to study the causative factors, (ii) risk-factors and (iii) the overall problems associated with *gutkha* addiction. The study adopted exploratory-cum-descriptive research design. 300 cases were studied with the help of self-prepared interview schedule. This study included all groups irrespective of age, sex, educational qualification and profession. The data have been analyzed through SPSS software. From the study, 30.70 percent *gutkha* users belonging to the age group of 26-35 years, 92.70 percent were male followed by female addicts. 80.30 percent of addicts maintained nuclear families which helps them to continue this habit without any restriction from family side. Out of 300 respondents, 64.70 percent always keep a dip of *gutkha* inside the mouth and 52 percent people swallow the tobacco juice. 37 percent respondents are suffering from various pre-cancerous lesions. Consciousness among the respondents regarding its use is very low. Mainly the young mass uses it due to the influence of friends. The laws framed to stop its consumption need to be implemented positively to save the society.

INTRODUCTION

In recent times, alcohol and other intoxicating drugs have posed a great threat to humanity owing to wide range of use by people especially by the young mass affecting their health and the future of a society as well. Intake of alcohol and various other intoxicating drugs leads to addiction. The high consumption of psychotropic drugs has slow and strong addictive potential which is of recent origin. It has, therefore, affected the human body and mind within a very short span of time, in hardly about twenty years, evoking a global socio-medical problem threatening the population of several countries. Out of the lot, one of the harmful drugs is tobacco, containing nicotine in it which is a highly addictive slow poisonous substance.

"British explorer Walter Raleigh popularized tobacco in the western land and from where this might have been spread in a wide range. The origin of the tobacco species is reported to be around 8000 years old. Tobacco was first discovered in the New World in the early part of the 15th century by Christopher Columbus. The Portuguese introduced the plant in India four centuries ago as early as 17th century probably. India is the second most populous country. Hindus are the majority group and Hinduism traditionally advocates abstinence from all sorts of intoxicants. But now India is the third largest producer and consumer of tobacco in the world" (Chadda and Sengupta 2002).

Nowadays, adults are the victims of tobacco addiction. Adolescence is the crucial period in human life while the first initiation of substance use is undertaken due to several internal factors. In the modern era, tobacco in both the forms like smoking and smokeless, is becoming popular because of its easy availability and affordable price. Tobacco chewing is a habit found in the Indian subcontinent and it is consumed in several forms and affects all age groups and has become a major public, social and health problem.

Comparatively the consumption of smokeless tobacco is more appreciated and accepted. *Gutkha* obtained from tobacco is of recent origin.

Gutkha is a manufactured smokeless tobacco product (MSTP) (Chadda and Sengupta 2002). *Gutkha* is a popular mouth-freshener as well as a stress-diverting and pleasure-producing poi-

Corresponding Address:
Sangita Sushree Nayak.
C/O - N. B. Mohanty.
At- Friends Colony
Bajrakbati Road, Po-Buxi Bazar,
Distt. - Cuttack, Odisha, India.
Mobile: 9439618039
E-mail: sangita_socio@sify.com

sonous product which victimizes the people irrespective of caste, class, creed, place, age ,gender, social status, education and profession. *Gutkha* is a powdery, granular white substance with areca nut, lime, spices, cardamom, catechu, coloring agents having pleasing flavoring odors, containing tobacco, packed in attractive colored pouches which probably vary from brand to brand. Addiction to tobacco at an early stage is due to several reasons like peer-pressure, ignorance, alienation, curiosity, changing social structure, urbanization and unemployment etc. Aggressive advertising and marketing of *gutkha* in small, attractive sachets since the early 1980s has greatly enhanced the sales of these products (Joseph et al. 2010). 40% of the tobacco consumed in India is in smokeless form (Mukherjee and Hadaye 2006).

Tobacco which is the most harmful ingredient present in *gutkha* contains more than 4000 chemicals in it like nicotine which is always a risk-factor for oral cancer. Another risk- factor associated with addiction is economic condition of the addict which affects him in some way or other. The risk-factors of the addiction influence the quality of life of the addict. A good environment is conducive to better health which in turn can reduce healthcare costs. Thus environmental health is very miserable in case of an addict which signifies his quality of life including physical, social, economic, behavioral and relational aspect of him.

Addiction to drugs leads to health hazard and economic problems. Good health is termed as the foundation of one's happiness and promoter of life. Factually, good health and long life are the most prized goals of mankind to establish the popular idyll 'Health is wealth'. Health is a state of complete physical, mental and social well-being (WHO 2003). It has also been considered as a national asset upon which the economically viable society can be built up. Therefore, good health is a basic need of a human being.

Regarding *gutkha* addiction, there is an increased possibility of toxic effects. Chewing tobacco is an adherent factor for health hazards and in many cases leads to oral cancer. Tobacco also creates precancerous lesions like leukoplakia, erythroplakia and oral sub mucous fibrosis. Leukoplakia is a chronic white mucosal macule which cannot be scraped off. It is visible as white patches on the mucous membranes of the oral cavity including tongue. Erythroplakia is a chronic red mucosal macule in the oral cavity including tongue. Oral Sub Mucous Fibrosis (OSMF) is characterized by stiffness of the oral mucosa resulting in inability to open mouth. The initial symptoms of OSMF are burning sensation of the oral mucosa followed by over secretion of saliva or dryness of mouth.

Objectives of the Study

The present study is mainly focused on risk-factors of the *gutkha* users. Therefore, the objectives of the study are as follows:

1. To study the socio-economic profile of the *gutkha* addicts.
2. To study the causative factors associated with *gutkha* addiction.
3. To study the risk-factors associated with *gutkha* addiction.
4. To assess the overall problem dimension.

METHODOLOGY

In the state of Odisha no authentic study has been carried on the use of *gutkha* and the risk-factors associated with its use under any of the universities of Odisha. Thus ,this present study attempts to study the use and effects of *gutkha* among different age groups and the health conditions and quality of life of its users. This study adopts exploratory-cum-descriptive research design with an intention to explore what are the reasons behind the use of *gutkha* and the risk-factors associated with it.

Cuttack city is the universe of the present study. The former capital of Odisha, the millennium city, Cuttack is the oldest city of Odisha is popularly known as Silver City in the country. It is a living island on a delta formed by two beautiful rivers, namely the Mahanadi and the Kathjori. As a matter of fact, the present study primarily covers almost all the places of Cuttack city including slums, offices, hospitals, railway station and other public places.

It was too difficult indeed to find the sample respondents for the present study. If found, it was difficult to make them respondents. Some of them felt shy and some behaved over-enthusiastically with a girl researcher. Simple random sampling has been adopted to select the requisite sample. First of all different groups have been formed from which data have been

collected irrespective of sex, age ,educational qualification, profession so as to cover the different categories in the study. Snow-ball sampling has been adopted to get more appropriate respondents for this study. Before conducting a detailed study, 15 cases were selected for the pilot study or pre- study just to confirm the reliability and accessibility of the schedule in the field. In this connection, 15 cases were studied at Medical Road of Cuttack city.

The interview schedule consisted of 99 questions and one table out of which 88 questions were in a closed form and 11 questions were open-ended. 88 questions were in close-ended form and provided pre-determined answers to the respondents and in case of open-ended questions free-expression of respondents have been collected to make the study more genuine and authentic.

A self-prepared schedule was used in the field and data was collected personally without using any enumerators. In this manner, 300 cases were studied in Cuttack city of Odisha and 16 respondents have been taken as case studies from ENT Dept. of Acharya Harihar Regional Cancer Centre, Cuttack.

The data collected from the field were edited to exclude the unreliable and biased opinion and tabulated suitably for drawing statistical inferences. The data were presented with the help of tables and graphs. Consistent with all the objective of the study, different techniques were used for the analysis of data. The data analysis is undertaken mostly with the help of several managerial and statistical devices. Comparative and analytical methods were adopted .Various statistical tools like Coefficient Variation, t-test, correlation coefficient, multiple regression analysis and Analysis of Variance (ANOVA) were adopted. SPSS software has been used for the data analysis.

RESULTS

As regards the socio-economic status of the respondents, it has been found that more males are using *gutkha* in comparison to females.

1. Socio-economic Profile of Respondents

The aspect of socio-economic profile of the respondents like age, sex, religion, personal background and education, occupation, income, family type and family size play vital role in relation to *gutkha* addiction.

The data given in Table 1 reveals that majority (30.70 percent) of the respondents belonged to the age group of 26-35 years followed by those in the age group of 25 years (29.70 percent), followed by the respondents in the 36-45 years age group (27 percent), followed by respondents in the 46-55 age group (10.30percent) and above 56 years were the barest least (2.30 percent). Regarding the religion of the respondents, maximum respondents belonged to Hindu community (96.70 percent) followed by Muslims (2.30 percent) and Christians were the least represented community (1 percent), nearly similar to the religious composition of the population of the state, Odisha. As regards the sex of the respondents, most of the respondents (92.70 percent) were male followed by female respondents (7.30 percent). Regarding the family set up, majority of the respondents (80.30 percent) maintained nuclear families and only 19.70 percent belonged to the joint family system. The analysis reveals that living in a nuclear family encourages the respondents to continue this habit because of less restriction from the family side. Regarding the family size, respondents had families mostly of 4-6 members (75.70 percent), followed by respondents having family with 2-3 members (15.30 percent), 7-10 members (7.30 percent) and respondents having more than 10 members (1.70 percent). In relation to the marital status of the respondents, more than half of the respondents (53.70 percent) were married which is followed by unmarried respondents (46.30 percent). As regards the educational qualification, majority of the respondents were under matriculate (29 percent). The respondents who had education up to graduation represent 24 percent, followed by the respondents who were intermediate (22.70 percent), followed by those who were matriculate (11.70 percent) and then those who were illiterate (8.70 percent) whereas only 4 percent were technically qualified. Regarding the occupation, more respondents were businessmen (27.70 percent), the respondents who were daily wage-earners represent 17.70 percent, 17.30 percent were unemployed, respondents who were students were 13.30 percent, respondents who were industrial workers were 13 percent and respondents who

Table 1: Socio-economic profile of the respondents

S. No.	Characteristics	Respondents N=300	Percentage
1	*Age (in years)*		
	Up to 25	89	29.70
	26-35	92	30.70
	36-45	81	27.00
	46-55	31	10.30
	Above 56	7	2.30
2	*Religion*		
	Hindu	290	96.70
	Muslim	7	2.30
	Christian	3	1.00
3	*Sex*		
	Male	278	92.70
	Female	22	7.30
4	*Family Type*		
	Nuclear	241	80.30
	Joint	59	19.70
5	*Family Size*		
	2-3 members	46	15.30
	4-6 members	227	75.70
	7-10 members	22	7.30
	More than 10 members	5	1.70
6	*Marital Status*		
	Married	161	53.70
	Unmarried	139	46.30
7	*Education*		
	Illiterate	26	8.60
	Up to under matric	87	29.00
	Up to matric	35	11.70
	Intermediate	68	22.70
	Graduate	72	24.00
	Others	12	4.00
8	*Occupation*		
	Govt. servant	33	11.00
	Industrial worker	39	13.00
	Businessman	83	27.70
	Daily wage-earner	53	17.70
	Student	40	13.30
	Unemployed	35	11.70
	Others	17	5.60
9	*Family Income (In Rs.)*		
	Less than 5000	81	27.00
	5001-10000	55	18.30
	10001-15000	43	14.30
	15001-20000	36	12.00
	20001-25000	51	17.00
	Above 25000	34	11.40

were government employees were 11 percent. Regarding the monthly family income, 27 percent had income less than 5000 rupees, followed by those with a monthly income of Rs. 5001-Rs10000 (18.30 percent). This was followed by those with a monthly income of Rs. 20001-Rs 25000 (17.00 percent), those with a income of within Rs 10001-Rs 15000 was 14.30 percent and respondents having family income between Rs 15001- Rs 20000 followed by income above Rs 25000.00 per month was 11.30 percent.

From the above discussion it is found that majorityof the *gutkha* users were males, maximum were Hindus and most of them practised nuclear family system.

2. Correlation between Different Socio-economic Aspects of *Gutkha* Users

It is evident from Table 2 that there is a degree of correlation existing between income and education. The correlation coefficient (r) value is 0.70 which is between income and education .The correlation coefficient (r) between income with family type and family size shows good relation and the calculated 'r' value is more significant both at 5% and 1% level of significance. Another moderate relationship exists between family size and income. It is also seen that age and occupation are least concerned with family type and family size as the correlation found to be lowest among all the categories considered above.

3. First Source of Using *Gutkha*

Table 3 depicts the first time use of *gutkha* by the respondents of the study. Most of the respondents used *gutkha* under the influence of friends and those who radically started using during their teenage account for 60 percent.

Table 2: Correlation between different socio-economic aspects of *gutkha* users

S. No.	Category	Age	Education	Occupation	Income	Family type	Family size
1	Age	1.00					
2	Education	-0.15	1.00				
3	Occupation	-0.25	-0.13	1.00			
4	Income	-0.10	0.70**	-0.19	1.00		
5	Family type	0.02	0.15	-0.05	0.28**	1.00	
6	Family size	-0.10	0.06	0.02	0.24*	0.46**	1.00

1. *- Significant at 5% level, **_ Significant at 1% level.
2. r at 5% level of significance = 0.195.
3. 1% level of significance = 0.254 for degree of freedom (df) =298 where N =300.

Family habit responsible for those using *gutkha* is only 6 percent and some of the respondents use g*utkha* to fight depression, to avoid loneliness or as a fashion of modern era which has been included in others category and is 34 percent. It enunciates that influence of friends is the prime cause of *gutkha* consumption.

Table 3: First source of using of *gutkha*

S. No.	*Category*	*No. of respondents*	*Percentage*
1	Influence of friends	180	60.00
2	Family habit	18	6.00
3	Others (To avoid lonliness. To control depression, as a fashion)	102	34.00
4	Total	300	100

4. Always Keeping Dip of *Gutkha* in Mouth

Generally the smokeless tobacco-users keep dip of tobacco inside the mouth to get better satisfaction and to consume it for a long period of time. But the addicts never think about its harmful effects which mainly cause oral cancer.

Table 4 shows that the respondents who use *gutkha* are always prone to harmful effects to health. Most of the respondents (64.70 percent) always keep dip of *gutkha* inside the mouth which is followed by 35.30 percent who do not always keep dip of *gutkha* in the mouth.

Table 4: Always keeping dip of *gutkha* in mouth

S .No	*Category*	*No. of respondents*	*Percentage*
1	Yes	194	64.70
2	No	106	35.30
	Total	300	100.00

5. Swallowing Tobacco Juices

Smokeless tobacco produces juices which most of the addicts swallow. The tobacco juice is always responsible for oral cancer but the addict is not conscious about this.

Table 5 shows that most of the respondents (49.30 percent) sometimes swallow the tobacco juice. There were respondents who never swallow the tobacco juice (48 percent). Some respondents always swallow the tobacco juice (2.70 percent). The tobacco juice is always responsible for health risks like oral cancer.

Table 5: Swallowing tobacco juice

S. No.	*Category*	*No. of respondents*	*Percentage*
1	Never	144	48.00
2	Sometimes	148	49.30
3	Always	8	2.70
	Total	300	100.00

6. Suffering from Pre-cancerous Lesions

Tobacco is always responsible for oral cancer. Due to tobacco consumption, sometimes addicts suffer from various pre-cancerous lesions including oral cancer. Leukoplakia is a white patch inside the mouth, erythroplakia is the condition in which there are black or red patches and oral sub-mucous fibrosis is the condition where the addict is unable to open the mouth.

As per the results of Table 6 in regards to health conditions, most of the respondents were suffering from health hazards. Most of the respondents (20.70 percent) were suffering from leukoplakia. Respondents (8.00 percent) were suffering from erythroplakia, respondents were also suffering from non-healing ulcer (5.30 percent) followed by OSMF (3.00 percent). 63 percent respondents were not suffering from any type of health hazards revealed through surface observation and as told during field work.

Table 6: Sufferings from pre-cancerous conditions

S. No	*Category*	*No. of respondents*	*Percentage*
1	Leukoplakia	62	20.70
2	Erythroplakia	24	8.00
3	Oral SMF	9	3.00
4	Non- healing ulcer	16	5.30
5	Nothing	189	63.00
6	Total	300	100.00

7. Daily Expenditure on *Gutkha*

It is seen from Table 7 that without thinking about the health condition, people spend money on tobacco. The respondents who use *gutkha*, spend daily Rs. 11-20 (51.70 percent) followed by Rs. 1-10 (38.00 percent). Respondents spend Rs. 21-30 (8.70 percent) and only 1.60 percent respondents spend more than 30 rupees per day.

DISCUSSION

Findings from the above study envisage that more males than females use *gutkha*. A study

Table 7: Daily expenditure on *gutkha*

S. No.	*Category*	*No. of respondents*	*Percentage*
1	Rs. 1-10	114	38.00
2	Rs.11-20	155	51.70
3	Rs. 21-30	26	8.70
4	More than 30 Rupees.	5	1.60
	Total	300	100.00

conducted by Ahmed et al. (2006) in Patna, Bihar with a sample size of 292 supports the above. Another study conducted by Sahoo and Jayant (2010) in Ranchi with the sample size of 500 also supports the above findings. The males are generally under stress due to their jobs and other problems use *gutkha* more than the females to find relief from the stress.

The aspect of socio-economic profile of respondents like age, education, occupation, income, family type and family size play vital role in *gutkha* addiction. The respondents consume *gutkha* just to avoid loneliness or as a fashion. The influence of friends is the prime cause of this addiction which is followed by a way to find relief from the stress of problems or tensions in day-to-day life. This finding is supported by a study by Chadda and Sengupta (2002) .Because of its addictive power, it lessens their problems and they feel better and forget their problems temporarily.

All the respondents accept that such addiction evokes both financial and health problems. The health problems mainly include pre-cancerous lesions. Due to their ignorance they do not paid any heed to it and resume this habit without any hesitation. Most of the respondents keep dip of *gutkha* in the mouth which is mainly responsible for oral cancer. Respondents also swallow the tobacco juices regularly instead of spitting it. All these factors are responsible for causing oral cancer. This finding is supported by a study by Babu et al. (1996). Another study conducted by Nair et al. (2004) supports the above findings. Besides this, respondents also spend a lot of money on *gutkha* without analyzing and foreseeing the consequences of its use. Thus this habit is always associated with risks. Although all the respondents have not taken adequate steps to quit *gutkha* addiction, some of them have tried their best to quit this habit. After taking steps to quit *gutkha*, some of the respondents were successful in giving up this habit but some of them got re-addicted and failed to quit.

The threat of drug abuse is a serious socio-medical problem and at the same time it needs strong steps to curb its use.

CONCLUSION

Drug abuse in general and *gutkha* use in particular represent a complex phenomenon, which has various social, cultural, biological, geographical, historical and economic aspects. The disintegration of the old joint family system, absence of parental love and care in modern middle and lower middle class families where both parents are working, decline of old religious and moral values have led to a rise in the number of addicts who take drugs to escape the harsh realities of life. Drug use, misuse or abuse is also primarily due to the nature of the drug abused, the personality of the individual and the addict's immediate environment. The processes of industrialization, urbanization and migration have led to loosening of the traditional methods of social control rendering an individual vulnerable to the stresses and strains of modern life. The fast changing social milieu, among other factors, is mainly contributing to the proliferation of drug abuse, both of traditional and of new psychoactive substances.

The use of *gutkha* is growing day by day and teenagers are the main consumers. The reason of high prevalence of *gutkha* in the present study is the influence and prerogatives of friends and to find relief from loneliness or problems temporarily. Tobacco containing nicotine in it is responsible for making one an addict.

The present study shows that more number of users are males and people belonging to nuclear families. Most of the respondents suffer from pre-cancerous conditions because of ignorance and low emphasis is being paid to it. The quality of life of an addict is deteriorating day by day and the risk of financial and health problems are increasing gradually. The present study also recommends a possibility of controlling the addiction by imposing ban on this product by the government agencies.

It can be concluded that consumption of tobacco products are the world's leading preventable cause of death, responsible for about 5 million deaths annually mostly in poor countries and poor population. The toll will be doubled in 20 years unless available and effective interventions are urgently and widely adopted. Addiction is a complex brain disease. It is charac-

terized by compulsive, at times uncontrollable drug craving, seeking, and use that persist even in the face of extremely negative consequences. Drug seeking becomes compulsive, in large part as a result of the effects of prolonged drug use on brain functioning and, thus, on behavior. For many people, drug addiction becomes chronic, with relapses possible even after long periods of abstinence. Thus, it is high time to save the individual in particular and the society in general for a healthy and a wealthy society. Active awareness and alarming warning among the people is inevitable to save the situation and society as a whole.

RECOMMENDATIONS

Now it is high time to think seriously to save the society so as to protect human resources most precisely. The suggestions include:

1. Proper education.
2. Effective legislation.
3. Regulation.
4. Enforcement.
5. Support for cessation.
6. Community mobilization.

This social problem needs special attention of the society, Non-Governmental Organizations (NGOs) and government agencies.

ACKNOWLEDGEMENTS

I thank my supervisors Dr. (Mrs.) Tanuja Mohapatra for helping me at various stages of preparation of this paper. My thanks are nonetheless due to the anonymous referee for having given this paper its present shape.

REFERENCES

Ahmed Mohammed Sami, Ali AS, Chaubey K K 2006. Epidemiological and etiological study of oral sub mucous fibrosis among *gutkha*-chewers of Patna, Bihar. *Journal of Indian Society of Predodontics and Preventive Dentistry*, 24: 84-89.

Babu Soma, Bhat Ramesh, Putcha Venkatramana, Kumar Uday, Sesikaran Boibdala, Visweswara Kakarapati et al. 1996. A comparative clinico- pathological study of oral sub mucous fibrosis in habitual chewers of *pan masala* and betel quid. *Clinical Toxicology,* 34: 317-322.

Chadda RK, Sengupta SN 2002. Tobacco use by Indian adolscents. *Tobacco Induced Diseases*, 1: 111-119.

Joseph Nitin, Ngaraj K, Sashidharan Kotian M 2010. Arecanut and Tobacco use among school children in a village in South India – A cross sectional study. *Australian Medical Journal,* 3: 299-303.

Mukherjee R, Hadaye RS 2006. *Gutkha* consumption and its determinants among secondary school male students. *Indian Journal of Community Medicine*, 31: 177.

Nair Urmila, Bartsch Helmut, Nair Jagadeesan 2004. Alert for an epidemic of oral cancer due to use of the betel quid substitutes *gutkha* and *pan masala:* A review of agents and causative mechanisms. *Mutagenesis*, 19: 251-262.

Sahoo Sadichha, Jayant Christoday Raj 2010. Prevalence of tobacco use among youth adult males in India- A community based epidemiological study. *The American Journal of Drug and Alcohol Abuse,* 36: 73-77.

World Health Report 2003. *Neglected Global Epidemics. Three Growing Threats*. Geneva: WHO.