

Socioeconomic Status and Smokeless Tobacco Consumption in Fishermen Community of a Coastal Area of Karachi

Shahzeb Patoli¹, Nusrat Jabeen², Rai Tariq Masood³, Atif Iqbal Butt⁴

Abstract

Objective: The aim of this study was to assess the frequency of Gutka consumption and its relationship with socioeconomic status among fisherman community of Coastal area of Karachi.

Methods: Socioeconomic status and information about Gutka habit was collected from 408 fisherman of Ibrahim Hyderi, a coastal area of Karachi from 15th July 2014 to 21st July 2014. The Kuppaswamy scale was used to measure socioeconomic status (SES). A subject was considered to be belonging to higher socioeconomic status if the family head's education and the number of earning members were higher and the number of children and dependents was less since childhood in his or her household. Single investigator carried out structured face-to-face interview. Convenient sampling technique was used.

Results: Out of 408 subjects, 326 regularly consumed Gutka, the common reasons for the habit were the co-workers' influence and to keep awake at work. The prevalence of the Gutka chewing habit was much lesser (25%) among the people belonging to higher social class when compared to the minimal or no improvement group (75%). A majority of those free from the habit (73.7%) were belonging to the group, which showed improved educational attainment. Among those with good social status, the percentage of workers with high frequency of Gutka chewing and those with a longer duration of the Gutka chewing habit was low when compared to the lower social class group.

Conclusion: This study based on data collected by questionnaire and analyzed on SPSS version 17. It is recommended that intervention in the form of primary and secondary smokeless tobacco use, prevention with association and careful planning including restricted resources available to be implemented efficiently.

Keywords: Smokeless tobacco, oral health, socioeconomic status.

IRB: Approved by Ethical Review Committee of Rawal Institute of Health Sciences.

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Introduction

The use of tobacco products claims 5-6 million deaths every year, and is becoming the major cause of death and effecting the quality of life^{1,2}.

The use of smokeless tobacco (SLT) is an integral part of the socio-cultural milieu of the world particularly in South and Southeast Asia³.

The burden of diseases related to tobacco use is mainly due to the fact that consumption of these products in low income countries is on increase. The quality of tobacco products consumed by third world masses is also compromised leading to consideration of social inequality associated with tobacco related diseases. It is crucial to consider indicators of socioeconomic status instantaneously if we have to understand their cumulative impact and thereby provide more accurate explanation of social inequalities in use of tobacco products⁴⁻⁶.

^{1,3} Department of Community Dentistry,
Rawal Institute of Health Sciences, Islamabad

² Department of Oral Biology,
Rawal Institute of Health Sciences, Islamabad

⁴ Department of Community Dentistry, Oral Surgery,
Ziauddin University hospital, Karachi.

Correspondence: Dr Shahzeb Patoli
Assistant Professor, Community Dentistry
Rawal Institute of Health Sciences, Islamabad.
House No 308 St 14 phase V Bahria Town, Islamabad.
Phone: 0092 332 3045279
Email: drshahzeb@hotmail.co.uk

A study in Pakistan shows that one third of users developed the malignancy before 40 years of age and they had started SLT at a younger age followed by a longer duration of use^{7,8}.

Socio-cultural factors identified as predisposing factors for SLT use in the youth include peer pressures, the easy availability and accessibility of the products, family use and the misconceptions regarding its medicinal value^{9,10}. These products are easier to hide in schools unlike smoking and thus escape notice¹¹. SLT has an additive effect in starting smoking, alcohol and marijuana use¹².

However, there are very few studies that have considered the role of social status as a potential determinant of health-related behaviors. Studies by Karvonen et al.¹³ and Lindström et al.¹⁴ showed that health damaging behaviors like smoking were more frequent among downwardly mobile and less frequent among upwardly mobile population.

In South Asia use of smokeless tobacco is an alarming situation as it is unrefined, low grade tobacco which is of great concern to Public Health Professionals. As this form of tobacco can be used by various new techniques which is attracting new consumers and customers at good pace¹⁵. In poor and marginalized segment of Pakistani society the consumption of SLT has increased in both rural and urban areas for last few decades¹⁶.

At present stage, use of tobacco is the most preventable reason of death globally¹⁷ it is estimated that figure of 10 million yearly deaths would be cross by 2030^{18,19} in developing world around 70% of population will be effected by tobacco related deaths²⁰.

Other elements which are used in preparing tobacco produce a more carcinogenic product for humans. One-third of all cancers in South Asia are diagnosed with a tobacco-related cancers²¹.

The emerging 'epidemic' of oral submucous fibrosis²² has been attributed to chewing of areca nut and its mixtures. There is also evidence that smokeless tobacco is a risk factor for hypertension

and dyslipidemias. Chewing of tobacco by pregnant mothers has been found to cause an increased incidence of stillbirths and low birth weight deliveries²¹.

It has been estimated that around 100 million users in Pakistan and India using SLT²³. A study conducted in Pakistan showed that 21% of men and 12% of women uses betel quid while in India around 35-40% of population consumes tobacco in smokeless form²¹. Another study showed about 20-40% users use SLT in Pakistan^{24,25}. Furthermore it is reported that the number of users are increasing among vulnerable population such as women, children, teenagers and also in South Asian immigrants wherever they settled^{21,25}.

As the prevalence of the smokeless tobacco consumption is more than ¼ of the population in Pakistan and Karachi being the most affected city of Pakistan²⁶. There is no previous analysis available to measure the consumption of smokeless tobacco in the coastal area of fisherman community Karachi. Therefore the objective of this study was to assess the frequency of gutka consumption in Karachi fisherman community.

Subject and Methods

This study was carried out in a sample of workers in the harbor situated in Ibrahim Hyderi Korangi Creek Costal area of Karachi between 15th July 2014 to 21st July 2014. Permission for the project was taken from the relevant association Pakistan Fisher Folk Forum, and the management of fishing harbor. Participants were informed about aims and objectives of the study and verbal consent was obtained before the interview. Ethical approval for the study was obtained from the review committee Rawal Institute of Health Sciences Islamabad. The inclusion criteria were fishermen of age between 18 - 60 years consented for the study.

The sample size calculated through Raosoft software, which was minimum 377 (Confidence interval 95%, Margin of error 5%, Population size 20000 and response distribution of 50). However, our sample size comprises of 408 fishermen. Dura-

tion of consumption, frequency of Gutka chewing and reason for Gutka chewing were recorded. Median split method was used to dichotomize the population for habit frequency and habit duration.

Educational status was also considered and was classified as primary (Nursery till class 5th), middle (class 6th till Matriculation) and higher (Inter mediate and above) education level. House members, number of children's, number of dependent and number of earning members were also recoded.

A subject was considered to be belonging to higher social class if the family head's educational attainment and the number of earning members increased and the number of children and dependents decreased since childhood in his or her household.

The Kuppuswamy scale²⁷ was used to measure socioeconomic status (SES). Chi-square test was used to compare frequencies, and all statistical analysis was performed using the SPSS version 17.0 software.

Results

Of the 408 subjects, 326 (80%) regularly consumed Gutka. Most of the workers were male 344 (84.3%). Half of the workers (64.0%) had studied only up to primary school or middle school level, and all belonged to the lower socioeconomic status (Table 1). The kappa coefficient was calculated to be 0.96 of the 326 workers who consumed tobacco, half (n=163) consumed it <4 times a day and the other half (n=163) consumed it ≥ 4 times day. Among those with the tobacco habit, the majority of them (59.82%) reported duration of ≥5 years. The remaining (40.18%) reported duration of <5 years. The effect of social status on the prevalence of the habit was assessed. Of the 408 workers surveyed, the prevalence of the tobacco habit was much lesser (25%) among those belonging to higher social class as compared to those who had minimal or no improvement (75%). Furthermore, a majority of those free from the habit (73.7%) belonged to the group, which had seen improved educational attainment when compared to those who showed less improvement (26.3%) (Table 2).

Table 1. Showing demographic variables among participants

Variable	n (%)
Gender	
Female	64 (15.7)
Male	344 (84.3)
Education	
Primary	128 (31.4)
Middle	136 (33.3)
Higher	144 (35.3)
Habit Frequency	
< 4 times a day	163 (50.0)
> 4 times a day	163 (50.0)
Habit Duration	
< 5 years	131 (40.18)
> 5 years times a day	195 (59.82)
Reason for Habit	
Nil	280 (68.6)
Co-workers	48 (11.8)
Mouth Smell	8 (2.0)
Stay awake	64 (15.7)
Tension	8 (2.0)

Table 2. Distribution of Socioeconomic Indicators in Participants

Variable	Habit prevalence n (%)		p-value
	Absent	Present	
Education Improvement			
Less	40 (26.3)	128 (50.0)	0.019
More	112 (73.7)	128 (50.0)	
Number of Children			
More	72 (47.4)	112 (43.8)	0.723
Less	80 (52.6)	144 (56.3)	
Number of Dependents			
More	88 (57.9)	128 (50.0)	0.44
Less	64 (42.1)	128 (50.0)	
Numbers of Earning Members			
Less	80 (52.6)	112 (43.8)	0.385
More	72 (47.4)	144 (56.3)	
Social Status			
Minimal	136 (89.5)	192 (75.0)	0.075
Good	16 (10.5)	64(25.0)	

P < 0.05: SIGNIFICANT

Among those with the tobacco habit (n=326), 64 workers were considered as belonging to higher social class. Among those with good social status, the percentage of workers with high frequency of Gutka consumption was 12.7% when compared to

the lower social class group where the percentage of workers with high frequency of the habit was 87.3%. These differences were statistically significant ($p=0.021$).

Discussion

We found socioeconomic status to be important determinant of Gutka consumption. People belonging to higher socioeconomic status had lower levels of Gutka consumption as compared to those belonging to lower social class.

Research determining the relationship of social class and Gutka consumption is very important. Individual's socioeconomic status has been shown to have a powerful effect on Gutka consumption habit²⁸⁻³¹. But in some areas, the overall effects of social status on tobacco use status are modest^{32,33}. We found that people with comparatively better socioeconomic status, had lower prevalence of the habit, consumed smokeless tobacco less frequently and had shorter duration of the habit, which was in agreement with previous studies^{13,14}.

Our method, in addition to assessing the educational attainment of the family head, also assessed the number of children, earning and nonearning members to determine the family SES. Occupation was not considered as the study population consisted of a homogenous community of workers employed in the fish processing industry. This method of assessing the socioeconomic life course status may be a more feasible in giving a true picture of the SES in disadvantaged populations than the conventional methods. Convenience sampling technique was used and finding cannot be generalized. Interviewer bias can affect result of study.

The habit of chewing smokeless tobacco is very common in our population. Cheaper prices, cultural acceptance and easy availability have made it popular even in school going children³⁴.

S. Rozi et al. 2007 has reported the frequent use of smokeless tobacco among high school boys in Karachi³⁵. In this study it have been observed direct relation of socioeconomic status as well as smokeless tobacco use is more common in males of lower socioeconomic class (Table 2). Whereas

the study published in 1982 from a population in Karachi reported that 21% of the people used betel quid paan²⁴. According to recent study 52.4% of population in Karachi used smokeless tobacco and majority of them started using it before the age of 15 years³⁶. Various studies in Pakistan and in India have shown that the use of smokeless tobacco is inversely related with the level of education^{37,38}.

It is recommended that Government should discourage the use of tobacco product as a whole and take an initiative step toward primary awareness program. Marketing of smoking tobacco products should be limited and information of hazardous effect on health should be communicated to consumers. Department of health (Town Health Officers) should create Local Joint Committee in collaboration with local area NGO's and organizations for e.g. Pakistan Fisher Folk Forum (working in coastal area of Sindh for fisherman community).

Interventions of Local Joint Committee are to provide support service, discussion, verbal advice, negotiation and follow-up in stop smoking, smokeless tobacco and related products. Committee provides full support to the effected population by referring them to Dentist, General Practitioners and other Health Professionals.

There should be implementation of revised national policy on decreasing the cultivation and import of tobacco and related products. Furthermore new researches should be undertaken to evaluate potential adverse effect of the ingredients and health risk among pregnant woman who consume smokeless tobacco and what are the difference and similarity between smoke tobacco and smokeless tobacco in term of hazards. It is recommended that efforts should be made to increase the literacy rate in fisherman community. Dental health awareness program must be arranged for education of people regarding hazards of tobacco and its products.

Conclusion

The study revealed association of increase tobacco consumption with low socioeconomic condition of fisherman population. The results of this study also pointed to the need of a holistic approach consisting of efforts to provide information and educating people through dental community

awareness programs and counseling them about tobacco hazards and its products especially in fisherman community living near coastal areas.

Conflict of interest

The author has no conflict of interest and no funding/grant from any organization.

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