RESEARCH COMMUNICATION

Use of Smoke-less Tobacco Amongst the Staff of Tertiary Care Hospitals in the Largest City of Pakistan

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Abstract

Background: Use of smoke-less tobacco (SLT) is very common in South and South-East Asian countries. It is significantly associated with various types of cancers. The objectives of this study were to assess the proportion of hospital staff that use SLT, and to identify the factors associated with its use and their practices. Methods: In a cross-sectional study, 560 staff of two tertiary care hospitals were interviewed in the year 2009. Nurses, ward boys and technicians were counted as a paramedic staff while drivers, peons, security guards and housekeeping staff were labeled as non-paramedic staff. SLT use was considered as usage of any of the following: betel quid (paan) with or without tobacco, betel nuts with or without tobacco (gutkha) and snuff (naswar). Results: About half (48.6%) of the hospital staff were using at least one type of SLT. Factors found to be statistically significant with SLT were being a male (OR=2.5; 95% CI=1.8-3.7); having no/fewer years of education (OR=1.7; 95% CI=1.2-2.4) and working as non-paramedic staff (OR=2.6; 95% CI=1.8-3.8). Majority of SLT users were using it on regular basis, for > 5 years and keeping the tobacco products in the oral cavity for >30 minutes. About half of the users started due to peer pressure and had tried to quit this habit but failed. Conclusion: In this study, about half of the study participants were using SLT in different forms. We suggest educational and behavioral interventions for control of SLT usage.

Keywords: Smokeless tobacco - hospital staff - Pakistan

Asian Pacific J Cancer Prev, **13**, 2315-2317

Introduction

Smoke Less Tobacco (SLT) products are those intended to be sucked, chewed or inhaled by the user, rather than burned. The market for SLT continues to expand, through promotions aimed at smokers subject to smoking bans who are seeking an alternative means of access to addiction. SLT products tend to be less expensive than cigarettes, and are often flavored and sweetened to improve palatability. Different product types have differing disease profiles, depending on ingredients and manufacturing techniques, but all SLT products are potentially addictive, some delivering even higher doses of nicotine than cigarettes. In addition, chewing tobacco and snuff contain 28 carcinogens which are significantly associated with various types of cancers mainly including of oral cavity, upper gastro-intestinal track and of the head and neck (Critchley & Unal, 2003; Khawaja, et al, 2006).

With emphasis on the adverse effects of smoking tobacco, it has received comparatively little attention. Use of SLT is common in many parts of the world particularly in south and south-east Asian countries (Chandra & Cecily, 2004). The usage of SLT is prevalent in all strata and groups in our society and is very common and frequent in social and cultural events in these countries (Muwonge, et al, 2008; Sohoo & Nisar, 2009).

The hospital staffs can act as a role model for the patients and their families. Hence, they are expected to be more aware of the various adverse health effects than the general population regarding unhealthy habits including use of SLT. We therefore embarked this study to assess the proportion of hospital staff that use SLT and to identify the factors associated with its use. We also aimed to document the practices of study participants regarding the use of SLT.

Materials and Methods

This questionnaire-based cross-sectional study was conducted at two major tertiary care teaching hospitals

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of public sector in Karachi, the largest city and economic capital of Pakistan. After taking consent to participate in the study, 600 staff were interviewed from both hospitals from May to September 2009. Structured and pre-tested questionnaire was used for this study which takes about 10 to 12 minutes to complete.

Paramedical staff included nurses, ward boys and technicians while drivers, peons, security guards and housekeeping staff were labeled as non-paramedic staff. SLT use was considered as usage of any of the following: betel quid (paan) with or without tobacco, betel nuts with or without tobacco (gutkha) and snuff (naswar).

All the data was collected, edited and entered by medical students who were trained prior for this task. Statistical Package for Social Sciences (SPSS) version 17 was used to analyze the data. The final analysis was done on 560 study participants whose required information was complete. Proportions were calculated for all variables of interest. Cross-tabulation and chi-square was used to identify the factors related with the use of SLT. Moreover, logistic regression was applied to identify the associated factors with use of SLT. Results are reported in form of odds ratio and 95% confidence interval. Throughout the analysis a p-value of < 0.05 was considered statistically significant.

Results

Proportion of smokeless tobacco users is given in figure. Out of 560 of our study population, 272(48.57%) are users of the SLT at least in one form. Ghutka is most frequently used type of SLT. Distribution of factors associated with SLT is given in Table 1. Males were using SLT in significantly higher proportion compared to females (OR = 2.58, 95% CI: 1.81 - 3.69; p-value < 0.001). Those who were not or less educated were almost two times more likely to use SLT compared to those with higher education (OR = 1.72, 95% CI: 1.23 - 2.40; p-value 0.002). Similarly, non-paramedical staff was using SLT in higher proportion compared to paramedical staff (OR = 2.6, 95% CI: 1.8 – 3.8; p-value <0.001).

In Table 2, presents the practices of SLT users. Around 46.3% of users started that habit by peer pressure including friends and family and 97.1% of users using this regularly with 71.4% using for more than five years. Majority (66.2%) were keeping tobacco in mouth for more than 30 minutes. More than half of the users tried to quit this habit but unfortunately, they failed.

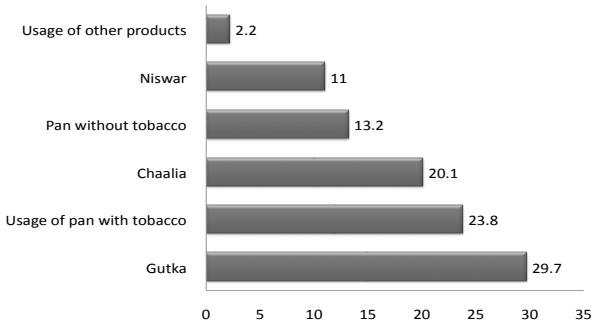

Figure 1. Types of Smokeless Tobacco Used among the Study Participants

Table 1. Distribution of Factors Associated with Smokeless Tobacco use among Study Participants

Variables	Total n (%)	SLT n (%) Users	Non-users	Odds Ratio (95% CI)	p-value
Gender					<0.001
Female	206 (36.8)	70 (25.7)	136 (47.2)	1	
Male	354 (63.2)	202 (74.3)	152 (52.8)	2.5(1.8-3.7)	
Age (years)					0.541
≥41	252 (45.0)	126 (46.3)	126 (43.8)	1	
18 - 40	308 (55.0)	146 (53.7)	162 (56.2)	0.9(0.7-1.3)	
Education (years)					0.002
≥6	314 (56.1)	134 (49.3)	180 (62.5)	1	
0 - 5	246 (43.9)	138 (50.7)	108 (37.5)	1.7(1.2-2.4)	
Designation					
Paramedical					<0.001
	178 (31.8)	58 (21.3)	120 (41.7)	1	
Non-paramedical					
	382 (68.2)	214 (78.7)	168 (58.3)	2.6(1.8-3.8)	

Table 2. Practices of Smokeless Tobacco Users (n = 272)

Variables	n (%)
Using for >5 years	194 (71.4)
Using regularly	264 (97.1)
Keeping in mouth for > 30 minutes	180 (66.2)
Ever tried to quit but failed	156 (57.4)
Started with peer pressure	126 (46.3)

Figure 1, depicts different types of smokeless used among the study participants. About 30% of the participants were in a habit of taking gutka. While, only 20% of the participants were taking chaalia.

Discussion

The study showed that the usage of SLT and areca nut are high among male staff and this is consistent with another study conducted in Karachi regarding SLT use. This higher proportion of SLT use among males was presumably because they have easier access to SLT and have social freedom for leisure activities and relaxation, as number of studies reported relation and leisure as a reason to use tobacco (Mazahir et al., 2006; Ali et al., 2009).

Sinha et al. (2007) and Dhanani et al. (2011) showed that the usage of SLT are much greater among teenagers which are younger than 15 years of age, which contradict our study on paramedic staff in which the senior members of the staff having high ratio of using these products. Also, the literacy has an association with the usage of SLT products as it is much higher among the staff having no or less education. Similar results of a study from India reported higher proportion of SLT use among less educated class (Greenberg & Glick , 2003). This probably signifies that the higher level of education greatly affects the intellectual approach of Pakistani people towards SLT consumption.

Among all the available preparations, Gutka was the most popular because it is inexpensive, easily available, and flavorsome, does not come with health warning. Moreover, Ghutka is sales in more attractive and colorful sachets. Pan with tobacco and betel nut ranked second

and third respectively as far as popularity is concerned. Majority of the users have been using it with a frequency of more than thrice a day for more than 10 - 20 years which puts them at high risk of developing adverse health effects, such as precancerous and cancerous lesions. In addition, well over half the users kept the SLT in their mouth for more than 30 minutes. A study conducted about oral mucosal lesions in SLT users showed that the longer the exposure, the more pronounced were the pathological changes of oral mucosa (Little et al., 2007).

Majority of the users underestimate the potency of the products and believe that as long as they do not swallow it they are protected from its harmful effects hence most of them spit it out. A study showed that 85% of oral lesions were located in the primary area of SLT placement, regardless of fact that it was spit or swallowed (Murti et al., 2006).

Majority of the users were introduced to these preparations by their friends or family. Very similar results regarding reasons for starting this practice were found in studies conducted by other researchers (Yap et al., 2008; Ali et al., 2009; Huang et al., 2009; Balagopal et al., 2012). It was encouraging to note that majority of them tried to quit this practice, but a very few were get succeeded. This indicating the addictive properties of these products and the users faced serious difficulties and signified the need for a proper treatment oriented support to help them do so (Ali et al., 2009; Gajalakshmi et al., 2012).

In conclusion, the study showed that a high proportion of paramedical staff of public sector hospitals consume SLT in different forms. Most popular preparation consumed is 'gutka' and their family or friends influenced approximately half of them. Most of them attempted to quit but were unsuccessful. We suggest that there is a need for socially and culturally acceptable educational and behavioral interventions for control of SLT usage.

It was brought to our notice that while doctors themselves are aware of adverse effects, even they could not guide the users about the proper methods to quit it. Such methods and ways should be cheap and easy to follow for general population. Proper centers should be set up where they guide people on how to quit the addiction and these modes should be marketed and publicized together with awareness programs. The advertisement of these products should be banned; there should be increased taxation of tobacco products hence to stop these practices as people are highly sensitive to price issues.

Visual representation of the consequent disease caused by the use of these products may be effective for getting the message across and motivating the people to quit. Warning signs should accompany sachets and advertisement of these items, as it is mandated for cigarettes.

The government should discourage the use of tobacco products as a whole rather than just focusing on cigarette smoking and should realize that as a first step it may not have to begin as separate high budget drive against SLT, rather adding the goal of SLT to existing drives against cigarette smoking may be enough. The sales of all tobacco products and their easy access strongly need to be banned for children and adolescents.

Acknowledgements

We are grateful to all participants for their consent to participate in the study. We acknowledge the management and administration of study sites for their help and support throughout the data collection phase.

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