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Original Article

Knowledge Assessment about Hazards of Smokeless Tobacco Use in Patients coming to a DHQ Hospital

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Abstract

Background: Smokeless tobacco use is not perceived as an addiction in most South East Asian countries therefore both men and women use it frequently.
Objectives: To assess the knowledge of smokeless tobacco users about its hazards in District Head quarter hospital, Thatta.
Study design, settings and duration: Descriptive cross-sectional study was conducted in District Head Quarter hospital, Thatta for 06 months duration.
Subjects and Methods: The statistically calculated sample size was 325. Participants were enrolled using systematic random sampling technique. Written informed consent was taken and information related to demography and smokeless tobacco use was collected from the patients and their relatives on questionnaire. Data was entered and analyzed using SPSS.
Results: There were a total of 325 respondents whose mean age was 34 years. Only 4% had higher school certificate or were graduates while 50% had no formal education. The mean age of initiation of Smokeless tobacco (SLT) was 19.3 years. The mean length of use of smokeless tobacco was 13.87 years. The mean number of Smokeless tobacco use was 5.0. Factors influencing SLT use were cultural acceptability, easy access, low price, peer influence and used as mouth freshener. Male respondents were 2.7 times more aware about the hazards of SLT as compared to females ($p < 0.001$). Nearly, one-in-three respondents reported trying to give up SLT use in the past.
Conclusion: Cultural acceptability, low price and easy access of smokeless tobacco have led to high usage in under privileged uneducated population.
Policy message: Tobacco cessation advising and warning should also be placed on smokeless tobacco products and health care providers should advise the smokeless tobacco users to quit it.
Key words: Smokeless, tobacco, knowledge, hazards.

Introduction

Smokeless Tobacco (SLT) is a form of tobacco which is chewed, sniffed or sucked. SLT is one of the preventable causes of death and disease [1] and it contains nitrosamines which are carcinogens.[2] Smokeless tobacco causes localized lesions like oral sub-mucosal fibrosis, oral cancer, pancreatic cancer and cardiac diseases including myocardial infarction.[3]

Use of SLT is common in females and is gaining in popularity among women in many parts of the world.[4] More than 300 million people in at least 70 countries use SLT products.[5] SLT use in India is 26% in adults (highest in the world).[6] Reasons for this high prevalence include the concept of these being non-hazardous to health, low-price, longer shelf life, increasing trade and export markets.

Cancer threat to smokeless tobacco users is lower than that of smokers, but is greater than that of non-tobacco users.[7] In India and Sudan, over 50% oral cancers are attributed to SLT use while this figure is 4% for oral cancer in USA and 20% in Swedish men. In US, the Family Smoking Prevention and Tobacco Control Act necessitates pictorial health forewarnings covering half of cigarette packages and at least 4 text warnings covering 30% of smokeless tobacco packing.[8]

Smokeless tobacco users estimated in India and Pakistan together are around 100 million.[9] Common forms of SLT used in Pakistan include Paan (Betel quid), Gutka, and Snuff, Naswar, Main Purhi and Mava.[10] SLT use is integral to Pakistani culture. The Global Adult Tobacco Survey (GATS) 2014 showed that 11.4% men,

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MHM and GSQ have done the conceptualization of project. Data collection was done by MHM. IR has participated in drafting and writing the manuscript and reviewing it intellectually.

3.7% women (overall 9.6 million adults) currently used smokeless tobacco.[11] Another study from Rawalpindi reported that 13.5% population used SLT alone while 6% consumed both smoked and SLT forms.[12] There is an increase in the number of oral cancer cases in Pakistan with disease occurring more in younger age group and people associate this to the SLT use. There is very little evidence available in Pakistan on the awareness about SLT use and its health consequences among SLT users therefore this study was conducted to find out which factors promote the use of smokeless tobacco and see the relationship between level of knowledge about health hazards SLT and the extent of consumption among users.

Subjects and Methods

A descriptive cross-sectional study was carried in District Head Quarter hospital, Thatta. Sample size was calculated using Epi-Info 6. Assuming the prevalence of knowledge and perception of SLT users is 30% and worst acceptable result as 20% at 95% Confidence interval and the power of study as 80%, a sample size of 325 respondents was calculated. Male & female patients/ attendants aged 15 years and above, using any SLT product were included in the study however patients coming for emergency treatment were excluded.

A close ended questionnaire (translated in Sindhi and Urdu) was administered in a face to face interview to understand users' knowledge towards hazards, attitudes and behaviours related to SLT use. The questionnaire included information on age, gender, socio-demographic details, knowledge, attitude, behaviour and frequency of consumption of SLT products. Data collectors (4 Community midwife) were hired from the surrounding community and were trained on survey questionnaire for 2 days. Pre-testing was done at indoor departments of DHQ hospital, Thatta, and necessary changes were made. Data was collected over two weeks to reach the desired sample size.

Patients coming to the dental, medical, surgical and Gynae/ Obs OPDs were the study population. Using a systematic random sampling technique, every 7th patient was enrolled. If the 7th patient was not a SLT user then his/her attendant was asked, and if they were also not using SLT then next patient who fulfilled the criteria was taken.

The data was transformed from pre-coded survey form to computer. A master file was created for data analysis. SPSS 20.0 was used for the statistical analyses. Descriptive statistics such as means, standard deviations, and frequencies were calculated for different variables. Chi-square test was used for analysing the results.

Approval was taken from the ethical committee of Health Services Academy, Islamabad. Permission was sought from the concerned hospital authorities. Written informed consent was obtained from participants and their confidentiality & privacy was maintained.

Smokeless tobacco is described as tobacco that is consumed in un-burnt form. It can be used orally or nasally and comes in two forms i.e. snuff, which is a fine grained tobacco that comes in tea bags like pouches and the user "pinches" or "dips" it between their lower lip and gums or use it as snuff. Chewing tobacco comes as shredded, twisted or bricked tobacco leaves that the user puts between the cheeks and gums. Most popular forms in Pakistan are Paan with tobacco, Gutka, Naswar, Paan Parag, Mava, Main Puri etc.

Results

Questionnaire was filled from 325 participants. Majority (35.1%) belonged to 26-35 age group followed by 34% from 36-45 years age group. Mean age was 34 years (range 15-75 years). There were 53.5% females and 46.5% males. Only 4.3% had higher education while almost 50% had no formal education (Figure). Most (70%) study population were married and were Sindhi speaking (72%). Socioeconomically, 19.1% had a monthly income of more than Rs. 30,000 while 6.2% were earning less than Rs.5000.

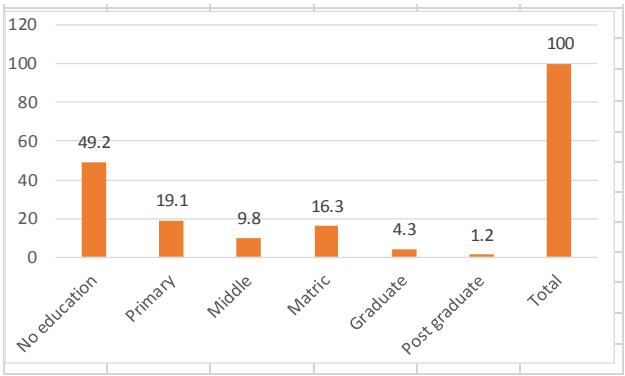

Figure: Educational Status of participants.

The types of SLT use are shown in Table-1. Gutka was the most popular type (42.8%) followed by Paan with tobacco (14.2%), Paan Parag (12.3%), Snuff (12%), Mava (8.9%) and Main Puri (8.0%).

Table-1: Types of smokeless tobacco product.

Type	*Users (%)*
Gutka	42.8
Paan with Tobacco	14.2
PaanParag or its other types	12.3
Snuff	12.0
Mave	8.9
Main Puri	8.0
Naswar	7.1
Combination of above products	4.9

Overall, 55.4% had no knowledge about the hazards of using SLT, while 20.3% had some knowledge, 21.6% had low and only, 2.7% had a high knowledge. The consumption of SLT is shown in Table-2. Most participants (34.2%) used SLT products 2-5 times/day while 9.2% used it 16-20 times/day (Table-3).

Table 2: Frequency of use of SLT.

Knowledge	*Frequency of Use*				
	On Occasion %	*Once in a month %*	*Weekly %*	*Alternative Days %*	*Daily %*
No	1.20	0.40	0.40	14.70	51.40
Low	0.00	0.40	0.00	4.60	21.60
High	0.00	0.00	0.80	1.90	2.70

Table 3: Extent of SLT use in daily consumers.

Extent of daily use	*Frequency*	*%*
2-5 times	111	34.2
6-10 times	99	30.5
11-15 times	60	18.5
16-20 times	30	9.2
More than 20 times	25	7.7
Total	325	100.0

Mean duration of SLT use was 13.87 years (range 1-45 years). Almost 55.7% population was using products costing less than Rs.5.00 per unit. However, a small percentage was using products costing Rs.21-25 per unit. On an average 30% population was spending more than Rs.2000 per month on purchase of SLT products, regardless of its type and frequency of use. About 79.7% were purchasing it from open market and 4.3% had it delivered at home (Table-4).

Table 4: Sources from where SLT was purchased (make it into descending) Table needs to be changed in descending order.

Source of SLT Purchase	*Frequency*	*%*
Open market	259	79.7
A specific store	34	10.5
Home delivery	14	4.3
Street vendor	9	2.8
A particular household	8	2.5
A particular salesman	1	0.3

Factors which influenced SLT use are shown in Table-5. Among these factors, quitting smoking (44.4%) was mostly the reason in males, while pregnancy (41.7%) was the reason in females. Almost 52.3% SLT users said that they were never told to stop its use by any healthcare provider while 45.5% were advised by family members to stop it. About 64% SLT users tried to its use, but failed. Most SLT users (86%) agreed to putting strict legislation against production, sale and consumption of SLT while only 7.7% agreed that it should be available in the market. Almost 95% agreed to that there should be a rehabilitation program for SLT users while 87% said that they would quit SLT use.

Discussion

The present study showed that Gutka is the most common smokeless tobacco product consumed by the people and most of them were unaware of its hazardous effects.

In the present study, majority of users were between 26 to 35 years, showing its popularity in people who have the most productive years of life. Similar results were reported by GATS India in 2010 where high prevalence of SLT was seen in males between of 25 to 44 years.[13] However, the same study showed a greater prevalence of SLT use in females over the age of 65 years.

The current study showed that Gutka use was commonest (42.8%) and this was also reported in 2014 study conducted in amongst South Asian communities throughout the World.[14]

A study from Alaska reported that SLT use was higher in those who were under 45 years (7%) than those over 45 years (3%).[15] Earlier initiation of SLT use leads to its addiction and thus increases the disease burden by increasing users' duration of lifetime exposure to carcinogens.

An association between the educational level and awareness about health hazards of SLT exist. In the present study, around 50% respondents had no formal education and had no knowledge about the hazards of SLT use. Within gender, males were 2.7 times more knowledgeable about hazards of SLT when compared with females ($p < 0.001$). Another study from

Table 5: Influencing factors for smokeless tobacco.

Age groups	*Influencing Factors for SLT Use*									
	Easy availability %	*Family Use %*	*Parent Use %*	*Friend Use %*	*Low Price %*	*Advertisement %*	*Quit Smoking %*	*Tooth Ache %*	*Bad Mouth Odour %*	*During Pregnancy %*
<18	2.80	0.80	1.20	1.80	2.20	3.40	0.00	0.00	1.60	0.90
18-25	20.30	20.60	20.70	15.80	20.50	22.60	15.60	16.70	14.80	16.50
26-35	34.80	31.70	39.00	40.40	37.10	30.80	31.10	35.90	39.30	41.70
36-45	31.60	37.30	31.70	33.30	29.30	34.90	44.40	30.80	27.90	31.50
>45	10.40	9.50	7.30	8.80	10.90	8.20	8.90	16.70	16.40	9.30

Karachi also reported that knowledge about oral carcinogenic effect of SLT use was higher in males and in those who had schooling of >10 years.[16] Another study conducted in squatter area of Karachi in 2006, reported that the knowledge of health hazards of SLT age and gender were powerful predictors and of its use.[17]

In the present study, 61% married women used SLT during pregnancy. Consumption of SLT has poor effects on neonate as seen in 5/7 studies which reported LBW, 3/6 studies reported preterm, in all 4 studies reported stillbirth.[18]

This study showed that 64% SLT users tried to quit it in the past but failed. This percentage is highest when compared with Bangladesh (25%), India (35%) and Thailand (22%). This missed opportunity must be addressed to assist SLT users in withdrawal of the addiction. The way forward is that awareness programs on health hazards of tobacco should reach at the door steps of socio economically disadvantaged population. Legislation and surveillance measures should equally focus on smokeless products. "Tobacco Questions for Surveys (TQS)" need to be integrated in routine health system surveys to obtain standardized tobacco use data at regular intervals that will help in providing trends of SLT use in countries.

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Conflict of interest: None declared.

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