ORIGINAL ARTICLE

KNOWLEDGE AND PERCEPTION OF ARECA/SMOKELESS TOBACCO USERS ABOUT ORAL CANCER

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Background: According to World Health Organization (WHO), six million deaths are attributable to tobacco use globally, of which nearly 1.2 million occur in South-East Asia. Use of smokeless tobacco is highly prevalent in subcontinent and is home to over 250 million smokeless tobacco (ST) users. ST is a major public health problem. It cause localized oral lesions and poses risk for developing oral cancers owing to it containing more than 30 cancer causing substances, in addition to nicotine which is a highly addictive. This study was conducted to assess the overall knowledge and compare knowledge, attitude and perceptions of ST users presenting to private and public health care facilities. **Methods**: This cross sectional comparative study was carried out from April to July 2011 to establish the details of underlying factors and perceptions of areca/ST users presenting in public and private health care facilities of Karachi. Through systematic random sampling, 464 male and female users (≥14 years) were interviewed. The data was analysed in SPSS-16. **Results:** Mean age of the users of Private Clinic (PC) was 25±7.183 years while that of Public hospitals (PH) respondents was 34±11.3 years. The respondents present in PC (94%) had comparatively more knowledge than the users in PH (75%). About 78% of the study population in PH wanted to quit this habit of chewing whereas 88% in PC have the same attitude (*p*-0.01). About 68% in Public and 89% in Private clinics ever tried to quit but failed; (*p*-0.000). **Conclusion**: Although respondents have substantial knowledge about the harmful effects of smokeless tobacco but due to their perceived psychological and emotional dependency, they remain addicted.

Keywords: Smokeless Tobacco, Areca, oral cancers,

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INTRODUCTION

Tobacco smoking has attracted worldwide attention because of morbidity and mortality associated with it. According to World Health Organization (WHO), six million deaths are attributable to tobacco use globally, of which nearly 1.2 million occur in South-East Asia.[1] Use of smokeless tobacco is highly prevalent in subcontinent and is home to over 250 million smokeless tobacco (ST) users. ST consumption among adults in India, Sri Lanka, Myanmar and Bangladesh are 20%, 15.8%, 20.8% and 27.9% respectively.[2–5] In Pakistan, very few studies that have been carried out and these studies indicate that the ST use is somewhere between 16.1–20%.[6–7] These high numbers can be attributed to the fact that use of smokeless tobacco is imbedded in the culture of this region. Factors that boost ST use include its relative affordability, wide availability and misconception that it has some medicinal value.[8] Moreover the government awareness campaigns focuses more on preventing cigarette use rather than use of tobacco as a whole. All these, coupled with the belief that ST is less harmful than cigarette smoking results in its use by huge numbers of people. In Pakistan, ST is used mainly in two forms, sniffing, for example, *Naswar* - a product made from fresh tobacco leaves, calcium oxide and wood ash and chewing Areca/Betel nuts which includes *Chalia, Paan Parag* and *Gutka*.

Smokeless tobacco (ST) is a major public health problem and is a preventable cause of adult morbidity and mortality. This fact has been accepted and is being emphasized by the World Health Organization.[9] Long-term use ST can lead to serious health problems. It cause localized oral lesions and poses risk for developing oral cancers owing to it containing more than 30 cancer causing substances, in addition to nicotine which is a highly addictive substance.[8]

Areca nut is considered as the etiological factor for the unremitting disease: oral sub mucous fibrosis. Once the disease has developed; there is neither regression nor any effective treatment. It is considered as a premalignant stage of oral cancer.[9] The habit of sweetened areca chewing is becoming progressively more popular and regretfully their use is increasing among school going children, some as young as four to five years of age.[10,11] High consumption of ST has lead the incidence of oral cavity cancers in Karachi, Pakistan the highest in the world.[12]

It is evident that costs and consequences of tobacco use impose a heavy social and economic burden on a nation. Much of this can be avoided by policies and awareness programmes aimed at reducing tobacco use.

This study was conducted to assess the overall knowledge and compare knowledge, attitude and perceptions of ST users presenting to private and public health care facilities and compare the socio-demographic and economic factors of the users.

MATERIAL AND METHODS

This cross sectional comparative study was carried out from April to July 2011 to establish the details of underlying factors and perceptions of areca/ST users presenting in public and private health care facilities of Karachi. Health belief model was followed to understand the perceptions and beliefs of areca/ST users as theoretical basis of the study. Through systematic random sampling, 464 male and female users (≥14 years) were interviewed. Three hundred and thirty-one (71%) from Public Hospitals (PH) while 133 (29%) from Private Clinics (PC). A structured questionnaire designed after pilot testing in the local language was used to obtain the information on the socio-demographic factors; knowledge, attitude and perceptions, frequency, duration and age at first use were recorded from the respondents. The data was analysed in SPSS version 16. Ethical considerations and protection of the subject's welfare were kept paramount. The permission of the concerned hospital's authority was obtained through an official letter from the Health Services Academy, mentioning the type and purpose of the study. Confidentiality and privacy of the data was safeguarded. Approval from ethical committee of Health Services Academy was taken for the commencement of research work.

RESULTS

Respondents from both types of facilities were compared to find out any difference in the level of knowledge and common perceptions associated with ST usage. A total of 331 (71%) respondents (users) from the PH and 133 (29%) users from PC participated in the study.

The socio-demographic and economic features of the two comparing groups are shown in the Table 1. Mean age of the users of Private Clinic was 25±7.183 while that of Public hospitals respondents was 34±11.3.

As far as the type of product usage is concerned, use of *Ghutka* was highly prevalent in both groups. However use of *Paan* with tobacco was seen to be more popular in respondents visiting PH. Generally, majority (71%) of the respondents in PC started using by observing other users in the community, whereas 53% users in PH were influenced by friends who prompted them to do so. However, more than half of the respondents of both fields believed these substances were addictive in nature.

Almost all of the respondents in both the facilities were using it on daily basis. The frequency of use per day percentages is shown in figure-1.

Both types of respondents were assessed for knowledge about the harmful effects using the same questionnaire. Majority of the respondents in both the groups said they were aware about the hazards of chewing areca/ ST. Although respondents present in PC (94%) had comparatively more knowledge than the users in PH (75%). Respondents were further probed about the possible health hazards. Respondents were opting for various given options indicating confused perceptions, though most of the respondents in both the facilities reported oral cancers as shown in figure-2.

Table-2 shows common perceptions of the respondents with respect to the type of facility, i.e., reasons to start, common perceptions after chewing the product, perceived advantages and perceived immediate side effects and hence shows the significant results. As far as the attitude of the respondents is concerned, significant difference is seen between the two facilities. About 78% of the study population in PH wanted to quit this habit of chewing whereas 88% in PC have the same attitude (p-value=0.01). About 68% in Public and 89% in Private clinics ever tried to quit but failed; (p-value=0.000).

Moreover, more than 90% of the respondents in both the facilities were against the sale, consumption, production of these items; it is also interesting to note that almost all of the respondents were in favour of organizing an awareness campaigns against areca and ST, building a project to rehabilitate the addicted people and banning of the products from the country as it contains carcinogenic elements. On the other hand, it is clear from the above figures that people were aware about the hazards but were not able to stop because of addiction. Respondents suggested that the production of these items be blocked in the country including stopping imports from neighbouring countries, thereby preventing its use.

It was noted that popularity of chewing habit is highly supported by trend among families. 37% in PH and 11% user's families in PC had also

been using these items. This intensifies the fact that tobacco/areca considered a normal cultural practice among families.

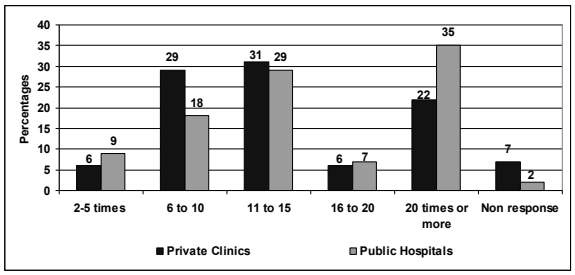

Figure-1: Frequency of use per day between Private clinics and Public hospitals

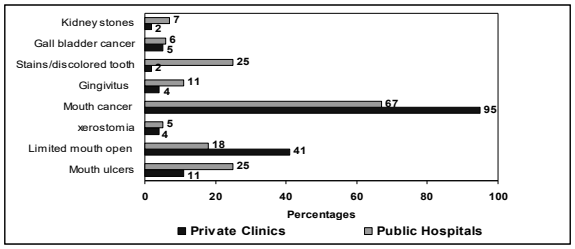

Figure-2: Perceived Health Hazards

Table-1: Socio-demographic and economic factors

	Type of facility			
		Public Hospitals%	Private Clinics %	*p*-value
Age	<30 years	48	81	0.000
	>30 years	52	19	
Sex	Male	89	97	0.007
	Female	11	3	
Education	No formal education	37	11	0.000
	Formal education	63	89	
Ethnic group	Mother tongue non Urdu	28	16	0.009
	Mother tongue Urdu	72	84	
Marital status	Single	34	69	0.000
	Married	66	31	
Monthly family income	<Rs. 10000	59	47	0.021
	>Rs. 10000	41	53	

Table-2: Common perceptions of the respondents with respect to the type of facility

	Type of facility %		*p*-value
Reason to start areca/ST	Public hospital	Private clinics	
Just to taste and try	50	65	0.01
It act as medicine	6	2	0.02
To concentrate on work	10	24	0.00
Peer pressure	38	49	0.04
Common perceptions after chewing the product			0.01
Feel good	75	85	
Feel not good	25	15	
Perceived beneficial	19	8	0.000
Perceived immediate side effects	19	84	0.000

DISCUSSION

There is a rising burden of cancers associated with Areca and ST usage in Pakistan. Socio-economic and demographic data of the study population typically represented a multi-ethnic group of Pakistan. Although majority of the users in both the groups were Urdu speaking, this could be due to the fact because the data is collected from the city of Karachi where majority of the population is Urdu speaking. Another possibility could be that they are migrants from other provinces of the country but they speak Urdu at home.

In this study not much difference was found in the usage of ST by the different age groups as young students as well as users above 30 years of age were addicted in this habit. A study done on school children in Karachi reported that more than 74% of them use chewable ST/Areca items on daily basis.[13] Educational status and knowledge towards the harmful effects of areca/ ST were higher in those visiting PC compared to PH; *p*-value 0.00. Similar results were reported from study conducted in Private Facilities of Karachi.[14] Younger (<30 years) age group and mostly singles were found in Private setup (*p*-value 0.00). This demonstrates the high prevalence of use of these items among youth because they consider it a normal cultural practice.[14] However, by sex, males were more prone to use ST in high proportion than females this may be due to the fact that males have more freedom to choose and have easier access and availability for any type of addictive substances.[5] This might provide an explanation for reported high age standardized rates of oral/pharynx cancers among males (31%) than females (24%) and also laryngeal malignancies (males: 8.5% where as 1.5% in females).

The sources of information about the areca/ST were; observing in the community, prompting by friends and family influence. This proves that environmental influences play a major role in moulding practices.[15] Users start this habit to try it out and then become addicted to it. Frequency of taking these substances noted was 20 times or more per day. Both of the substances contain nicotine, which hints towards the addictive potential of these substances.

Generally, habits and attitudes acquired by a person in earlier years of life are more likely to persist in later years and tobacco use is no exception as reported by research studies that show most tobacco users first acquired their habits during their preteen and teenage years[16]. In Pakistan, tobacco is easily available and accessible to everyone including children; the average age when the student started smoking was 17 years.[17] Findings also clarify that there were long term users of smokeless tobacco, i.e., more than 10 years.

CONCLUSION

Although respondents have substantial knowledge about the harmful effects of smokeless tobacco but due to their perceived psychological and emotional dependency, they remain addicted.

AUTHOR'S CONTRIBUTION

NL: Principal author, data collection, literature review, write-up, MJ, MZH, MBH, HH, literature search, data analysis, proof reading.

REFERENCES

1. World Health Organization. WHO report on the global tobacco epidemic, 2011: warning about the dangers of tobacco. Geneva: World Health Organization; 2011.
2. Pandey A, Patni N, Sarangi S, Singh M, Sharma K, Vellimana AK, *et al*. Association of exclusive smokeless tobacco consumption with hypertension in an adult male rural population of India. Tob Induc Dis 2009;5:15.
3. Somatunga LC, Sinha DN, Sumanasekera P, Galapatti K, Rinchen S, Kahandaliyanage A, *et al*. Smokeless tobacco use in Sri Lanka. Indian J Ccancer 2012;49(4):357–63.
4. Kyaing NN, Sein T, Sein AA, Htike MT, Tun A, Shein NN. Smokeless tobacco use in Myanmar. Indian J Cancer 2012;49(4):347–51.
5. Rozi S, Akhtar S. Prevalence and predictors of smokeless tobacco use among high-school males in Karachi, Pakistan. East Mediterr Health J 2007;13(4):916–24.
6. Gupta PC, Ray CS. Smokeless tobacco and health in India and South Asia. Respirology 2003;8(4):419–31.
7. Smokeless tobacco major source of oral cancer. DAWN. [Internet]. 2011 [cited 2013 Nov 19]. Available from: http://dawn.com/news/633013/smokeless-tobacco-major-source-of-oralcancer-2.
8. Iqbal MP, Yakub M. Smokeless tobacco use: a risk factor for hyperhomocysteinemia in a Pakistani population. PloS One 2013;8(12):e83826.
9. Gupta PC, Sinha DN. Tobacco research in India. Indian J Public Health 2004;48(3):103–4.
10. Creath CJ, Wright JT, Wisniewski JF. Characteristics of smokeless tobacco use among high school football players as related to type of smokeless tobacco and period of use. J Drug Educ 1992;22(1):69–85.
11. Lisnerski DD, McClary CL, Brown TL, Martin JP, Jones DR. Demographic and predictive correlates of smokeless tobacco use in elementary school children. Am J Health Promot 1991;5(6):426–31.
12. Khawaja MR, Mazahir S, Majeed A, Malik F, Merchant KA, Maqsood M, *et al*. Chewing of betel, areca and tobacco: perceptions and knowledge regarding their role in head and neck cancers in an urban squatter settlement in Pakistan. Asian Pac J Cancer Prev 2006;7(1):95–100.
13. Shah S, Qureshi R, Syed IA. Is Chaalia/Pan Masala harmful for health? practices and knowledge of children of schools in Mahmoodabad and Chanesar Goth, Karachi. J Pak Med Assoc 2009;59(8):550–4.
14. Mazahir S, Malik R, Maqsood M, Merchant KA, Malik F, Majeed A, *et al*. Socio-demographic correlates of betel, areca and smokeless tobacco use as a high risk behavior for head and neck cancers in a squatter settlement of Karachi, Pakistan. Subst Abuse Treat Prev Policy 2006;1:10.
15. Khuwaja AK, Kadir MM. Smoking among adult males in an urban community of Karachi, Pakistan. Southeast Asian J Trop Med Public Health 2004;35(4):999–1004.
16. Rozi S, Akhtar S. Smoking among high school adolescents in Karachi, Pakistan. Int J Epidemiol 2004;33(3):613–4.
17. Hussain SF, Moid I, Khan JA. Attitudes of Asian medical students towards smoking. Thorax 1995;50(9):996–7.

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