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. 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,

Nida Liaquat, Abdul Majeed Jaffar, Muhammad Zeeshan Haroon, Muhammad Bilal Khan, Hammad Habib
Health Services Academy, Islamabad-Pakistan

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,
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.

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](image1.png)

![Figure-2: Perceived Health Hazards](image2.png)

### Table-1: Socio-demographic and economic factors

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

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

<table>
<thead>
<tr>
<th>Reason to start areca/ST</th>
<th>Type of facility %</th>
<th>( p )-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Just to taste and try</td>
<td>50</td>
<td>65</td>
</tr>
<tr>
<td>It act as medicine</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>To concentrate on work</td>
<td>10</td>
<td>24</td>
</tr>
<tr>
<td>Peer pressure</td>
<td>38</td>
<td>49</td>
</tr>
<tr>
<td>Common perceptions after chewing the product</td>
<td>38</td>
<td>49</td>
</tr>
<tr>
<td>Feel good</td>
<td>75</td>
<td>85</td>
</tr>
<tr>
<td>Feel not good</td>
<td>25</td>
<td>15</td>
</tr>
<tr>
<td>Perceived beneficial</td>
<td>19</td>
<td>8</td>
</tr>
<tr>
<td>Perceived immediate side effects</td>
<td>19</td>
<td>84</td>
</tr>
</tbody>
</table>

### 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. 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. 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. 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. 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. 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. In Pakistan, tobacco is easily available and accessible to everyone including children; the average age when the student started smoking was 17 years. 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

Address for Correspondence:
Dr. Muhammad Zeeshan Haroon, Department of Community Medicine, Ayub Medical College, Abbottabad-Pakistan
Cell: +92 313 991 0239
Email: zeeshanharoon@yahoo.com