

# PREVALENCE AND FACTORS ASSOCIATED WITH SHEESHA SMOKING IN A SAMPLE OF MEDICAL STUDENTS

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## ABSTRACT

**Objective:** To determine the prevalence of sheesha smokers among medical students and to examine the factors associated with sheesha smoking.

**Methodology:** A total of 578 medical students from both public & private sector in Rawalpindi were selected by consecutive sampling technique. Preformed & pretested questionnaire was administered to them after assuring of confidentiality & taking their informed verbal consent.

**Results:** Five seventy eight medical students were administered questionnaire, 207 (36%) of them confessed that they smoke sheesha, 82(39.42%) out of them were regular sheesha smokers while 125(60.09%) said they smoke sheesha occasionally. Out of 207sheesha smokers 84(40.5%) started for fun sake, 39(19.5%) out of curiosity, 56 (27%) for style 28 (13.5%) started smoking sheesha because of peer pressure. Of smokers 123(59%) believed that sheesha smoking was less harmful than cigarette. 69 (33%) of sheesha smokers had no plans to quit sheesha smoking.

**Conclusion:** Lack of correct information & mistaken believe that sheesha smoking is less harmful than other methods of tobacco smoking is reason for its high use among youth. Moreover its easy availability at restaurants and cafés has made it a social activity that promises both pleasure & entertainment.

**Key Words:** Sheesha smoking, Water pipe smoking, Medical students

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## INTRODUCTION

Sheesha (water pipe) smoking a traditional method of tobacco use is re-emerging as a virulent strain in global tobacco epidemic<sup>1,2</sup>. Sheesha now is a commonplace among young people in our society<sup>3,6</sup>. In Pakistan 20% students in colleges & universities smoke sheesha<sup>5</sup>. Sheesha smoking is considered a social activity that takes place at cafes and restaurants as it present an attractive means of smoking tobacco and often contains flavors that allows for many taste preferences<sup>3,4</sup>. There is a misconception that it is benign & less lethal than cigarette smoking, because its smoke gets filtered in the water<sup>5,6,7</sup>. Available data suggest that there is additional risks of water pipe smoking over cigarette smoking<sup>7</sup>& Water pipe smoking is linked to respiratory disease, cardiovascular disease and cancer<sup>9,10</sup>. Waterpipe can also become a vector to highly lethal and addictive cigarette smoking<sup>11</sup>. Factors that facilitate its use among youth and individuals of low socioeconomic status are its' cost, easy and wide availability, curiosity, peer pressure followed by pleasure seeking and boredom<sup>4,12</sup>.

## METHODOLOGY

It is a descriptive cross sectional study done in public and private medical colleges (Foundation University Medical College, Islamic International Medical College, Yusra Medical College, Rawalpindi Medical College, Army Medical College) situated in Rawalpindi city between 26<sup>th</sup> May 2012 to 10<sup>th</sup> Nov. 2012. Colleges were selected by convenient sampling technique. Students registered with the above mentioned colleges who gave written consent were included in the study sample.

The sample size calculation was based on findings from previous literature regarding prevalence of sheesha smoking in medical & dental students<sup>5</sup>. A sample size of 246 was calculated at a 95% confidence interval and 5% sample error with a prevalence of 23% ( $n = z\alpha/2P(1 - P)/d^2$ ). The study consisted of a total of 578 medical students recruited from the above mentioned medical colleges. A self-administered questionnaire was distributed in classes. The questionnaire consisted of 3 parts 1<sup>st</sup> part contained socio demographic information like age & gender. The 2<sup>nd</sup> part explored the factors associated with sheesha smoking, perception to harmful

effects of sheesha, social acceptability, frequency and place of smoking and peer and family influence. The 3<sup>rd</sup> and the last part were to access the practices and attitude of non-smokers. A preformed & pretested questionnaire was administered by investigators to the study subjects after taking their informed verbal consent. The participants were assured of confidentiality. The data was analyzed by using SPSS version 17.

## RESULTS

Our study population consisted of 578 medical students from both public and private sector medical colleges of Rawalpindi city as 578 students returned usable questionnaires. Mean age was  $21 \pm 2$ . 58% of study sample were females (female students were reluctant to participate initially but agreed later when assured of anonymity). 231(40%) were from public sector medical colleges 347(60%) were from private sector medical colleges. 165 (28.5%) of students in the study sample were 1<sup>st</sup> year medical students, 147(25.4%) were 2<sup>nd</sup> year 106(18.3%) were 3<sup>rd</sup> 102(17.8%) were 4<sup>th</sup> year 58 (10%) were final year student. Overall 207(36%) students in sample population confessed that they had smoked water pipe at least once whereas 82(39.42%) of them were regular sheesha smokers (smoked at least once in a month) while 125 (60.09%) said they smoke sheesha occasionally. Overall prevalence of sheesha smoking was thus 36%, in females 32% and in males 38%. Prevalence of sheesha smoking in medical students of public sector medical college was 22.1% & in students of private sector medical college was 44.9% Chi square test was applied & the difference in sheesha smokers in public & private sector was found statistically significant ( $p < .05$ ). Eighty four (40.5 %) said they started smoking sheesha just for sake of fun, 56(27%) said for sake of style, 39(19%) started just out of curiosity & 28(13.5) because of peer pressure. In the study population 40(19.4%) experienced sheesha for 1<sup>st</sup> time between 10-15 years of age, 110(53.1%) between 15-20 years of age and 57(27.5%) above 20 years of age. 71 (34%) said

that they used other addictive substances like cigarette and 163 (79%) believed that sheesha smoking is more acceptable than cigarette.

Table No. 1 shows the practices and attitudes of sheesha smokers. 118(57%) said that their parents were aware of this habit, 87 (42%) said that their parents do not object to sheesha smoking whereas 136(66%) said they like sheesha more than cigarette. 123 (59%) believed it to be less harmful and 151(73%) believed it to be less addictive than cigarettes. 151 (73%) believed that sheesh smoking is socially more acceptable specially for females. 139(67%) thought that sheesha smokers looked cool and attractive whereas 89(43%) said that they feel craving for sheesha.

Table 2 depicts practice and attitude towards sheesha smoking in smokers. 107(52%) believed that sheesha smoking increased their energy level where as 65(31%) felt no change in the energy level. 99(48%) used both cigarettes and sheesha. 107(52%) wanted to quit sheesha smoking, 151(73%) smoked sheesha at café. Only 25 (12%) said that they smoke sheesha at home. 151 (73%) believed that sheesh smoking is socially more acceptable especially for females. 139(67%) thought that sheesha smokers looked cool and attractive whereas 89(43%) said that they feel craving for sheesha.

Table number 3 shows that 184(49.6%) of non sheesha smokers said that they were invited for sheesha smoking but they refrained from it. 207(56%) do not want to smoke water pipe because they were aware of its harmful effects. 255 (69%) said they have no future plans to start sheesha smoking in future 82(22%) were not sure about their future plan regarding sheesha smoking.

## DISCUSSION

This study showed high prevalence of sheesha smoking especially in medical students in general and in females in particular. This is due to wide spread misconception that sheesha smoking is less harmful

**Table 1: Factors studied in sheesha smokers**

Factors		Number Percentage
Like sheesha more than cigarettes	Agree	136(66 %)
	Disagree	71(34%)
Sheesha less harmful than cigarettes	Agree	123(59 %)
	Disagree	84(41%)
Sheesha less addictive than cigarettes	Agree	152(73%)
	Disagree	55(27%)
Feel craving for sheesha	Agree	89(43%)
	Disagree	118(57%)

<b>Sheesha smoking not hazardous</b>	Agree	89(43%)
	Disagree	118(57%)
<b>Shisha smokers look cool and attractive</b>	Agree	139(67%)
	Disagree	68(33%)
<b>Sheesha is more acceptable by society than cigarettes</b>	Agree	44(21%)
	Disagree	163(79%)
<b>Sheesha is more acceptable for females than cigarettes</b>	Agree	151(73 %)
	Disagree	56(27%)

**Table 2: Practice and attitude towards sheesha smoking in smokers**

Variable		Number Percentage
<b>Does smoking sheesha changes your energy level.</b>	Increase	107 (52%)
	Decrease	35(17 %)
	No change	65(31%)
<b>What are your smoking items:</b>	Sheesha only	108(52%)
	Both Sheesha & Cigarettes	99(48%)
<b>Used any other addictive subs before</b>	Yes	71(34 %)
	No	136(66 %)
<b>Want/tried to quit sheesha smoking</b>	Yes	107(52%)
	No	69(33%)
	May be	31(15%)
<b>Place of smoking sheesha ?</b>	Café	151(73%)
	Secret meeting place	31(15 %)
	Home	25(12 %)
<b>How many sheesha clubs do you know.</b>	2-3	59(29%)
	5-8	69(33 %)
	More than 8	78(38%)

**Table 3: Attitude of non-smokers towards sheesha smoking in 371 medical students**

Variable		Number Percentage
<b>Ever been invited for sheesha smoking?</b>	Yes	184(49.6%)
	No	187(50.4%)
<b>What kept you refrained from smoking sheesha?</b>	Knowledge about harmful adverse effects	207(56%)
	There is no fantasy in smoking sheesha	95(26%)
	Parents have forbidden you	56(15%)
	It is an expensive hobby	13 (03%)
<b>Future plans regarding sheesha smoking?</b>	Never ever	255(69 %)
	Would try later	34(09%)
	Can't say anything	82(22 %)

than cigarette smoking. In present study more than one third (36%) of students in the study sample confessed that they had smoked sheesha at least once in their life time. In another study done on college, university and madrassa students in 5 cities of Pakistan by Sultana Habibullah also shows high prevalence of sheesha smoking in professional (23.8%) students<sup>5</sup>. The results coincide with the study conducted by Sutfin et al, on college students in California which reported that more than one third (40.3%) of the sample have ever smoked tobacco from a waterpipe (sheesha)<sup>13</sup>. The findings are similar to prevalence reported among young adults in Canada<sup>14</sup>, Europe<sup>15</sup>, Australia<sup>16</sup>, and the United States<sup>17,18,19</sup>. The high prevalence especially among youth is due to the wrong perception that smoking sheesha is less addictive and safer than cigarettes smoking<sup>20</sup>. In a cross sectional study conducted by Sameer-ur-Rehman<sup>20</sup>, that included youth from four cities of Pakistan 61% of study population were sheesha smoker & 60% of them considered sheesha smoking to be less harmful than cigarette smoking. In this study majority (59%) of the study participants believed that sheesha smoking is less harmful and addictive (73%) than cigarettes smoking whereas 66% of the study population said they like sheesha more than cigarettes because sheesha smoker looks cool. Similar are the results of study carried out by Al-Naggar et al, in Malaysia in which nearly half (48.5%) of the participants mentioned that waterpipe (sheesha) is less harmful than cigarette<sup>21</sup>. This however is a misperception and reality is that majority of regular water pipe (sheesha) smokers who tried to quit smoking water pipe (sheesha), restarted as they experienced craving to smoke (sheesha) water pipe<sup>22</sup>. Findings of the study also supports this fact as forty-three percent of (sheesha) smokers in the study sample said that they feel craving for sheesha. Sheesha smoking has is highly correlated with the use of other substances, specifically cigarette smoking and alcohol use<sup>13</sup>. This is consistent with the results of present study as 42% of sheesha smokers in this study admitted that they use other addictive substance (mostly cigarette) along with sheesha smoking.

More than half of the respondents (57.89%) claimed that their parents had no objection of their smoking sheesha, 78.36% of study participants were with the perception that sheesha smoking is more acceptable in the society as compared to cigarettes. Sheesha cafes are favorite place of young people to smoke sheesha<sup>24</sup>, majority of study participants in present study (73%) said that they prefer smoking sheesha at café with their friends to unwind in the evening. Prevalence of sheesha smoking in female population in the study was 32% whereas in another study conducted by Sameer-ur-Rehman et al in four cities of Pakistan found 29% of young females smoke

sheesha<sup>20</sup>. The reason being that sheesha (hookah) smoking is socially more acceptable than any other form of tobacco smoking, as it is considered part of cultural heritage, even girls feel more comfortable in smoking water pipe (sheesha) as compared to cigarettes even at public places<sup>23</sup>.

## CONCLUSION

Easy availability, social acceptability & lack of correct information in public about its adverse health effects of using the fragrant water pipe (sheesha) are among the reasons for its high prevalence. It is the need of time to conduct extensive research related to epidemiology, health effects and public policy about this emerging public health problem. Sheesha smoking should be banished in public places especially in restaurants and café. Its use should be restricted to specially designated areas. It is hoped & believed that the findings from the study will be useful at the policy level to complement knowledge and awareness about this important public health issue.

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### CONTRIBUTORS

NFB conceived the idea, did data collection and wrote the manuscript. SR helped in data collection and writing up of manuscript. Both authors contributed significantly to the final manuscript.