

Shisha smoking: what do medical students think?

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Abstract: A Shisha is a water pipe used to smoke tobacco through cooled water. The tobacco is heated in the bowl at the top of the Shisha and the smoke is filtered through the water in the base of the Shisha. It is a very moist and sticky tobacco that has been soaked in honey or molasses. The basis of our study to assess the patterns and beliefs regarding Shisha smoking among medical students of our institution. A questionnaire was designed and a cross-sectional survey was conducted among the Medical students of Liaquat National Hospital and Medical College, Karachi. Data was analyzed in the SPSS 13 software and a $p < 0.05$ was considered significant. A total of 246 responses were received. There were 79 people who had tried Shisha and 43 were exclusively Shisha smokers, with 68.8% using Shisha and cigarette both, ($p = < 0.001$) suggestive of a strong relation with cigarette smoking and Shisha smoking. About 36.6% of the Shisha smokers believed that it is safer than cigarettes, 41.5% believed that it is not safer than cigarettes and 22.0% Don't know if it is safer than cigarette or not ($p = 0.024$). Majority of the respondents believed that Shisha is less addictive than cigarette. There is high prevalence of Shisha smoking among medical students, even though there is some knowledge but misconceptions and lack of knowledge regarding its safety and health effects is present in medical students. Awareness should be created and restrictions should be ensured similar to cigarette smoking especially among medical students as they would be the future caregivers.

Keywords: Shisha, smoking, medical students, misconceptions, awareness.

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INTRODUCTION

Shisha is a method of smoking in which smoke is first passed through a water base and then inhaled, hence also named as waterpipe smoke¹. This technique was first invented by Hakeem Abu Fateh in the reign of Emperor Akbar to render it "harmless". This concept however even persists today and is the factor for the most mistaken belief that smoking Shisha is safer than smoking cigarettes². For four centuries it was used by natives of Africa and Asia², but recently it has gained popularity in the western society especially among the university students and is mainly an activity of students rather than other young people³.

The role of Physicians is the key factor in the prevention of tobacco use by influencing national tobacco control policies and adequate counselling of smoking cessation and education regarding hazards of tobacco^{4,5}. In a study conducted by *Behbehani et al* among physicians regarding their smoking practices noticed that the attitude of smoking physicians was pessimistic for tobacco control⁶.

Even medical students are using this form of tobacco. In a study conducted in Pakistan among medical and non-medical university students the prevalence of Shisha smoking was found to be high due to lack of knowledge regarding its hazards⁷. Therefore this problem became the basis of our study to assess the patterns and beliefs regarding Shisha smoking among medical students of our institution.

MATERIALS AND METHODS

This was a survey among medical students of Liaquat National Hospital and Medical College, Karachi, Pakistan, carried out in the year 2012. This was a cross-sectional survey among medical students. A self administered questionnaire was designed and was given to the students in their respective classes with the verbal consent of the students who wished to participate in this survey. All the questionnaires that were inadequately filled were neglected. In the questionnaire, we inquired about the participant's details, their attitudes and beliefs towards Shisha smoking, whether current Shisha smokers would like to quit or if it is a public issue or not. Ex – Shisha smokers were defined as those students who have tried Shisha smoking at least once in their life but currently have discontinued. Current Shisha smokers were those who continue to smoke Shisha. Statistical analysis was done via SPSS-13 software. Student t-test was used for age and chi-square test was used for significance and a p -value of < 0.05 was considered significant. Students were divided into three groups on the basis of responses received. These groups were students who are current Shisha smokers, students who are ex-Shisha smokers and students who have never smoked Shisha. Same questions were put forward to each student to see the difference of opinion and their knowledge and attitudes towards Shisha smoking among both the groups.

RESULTS

A total of 246 responses were received. Mean age was 20.92 years 1.12 S.D. Gender characteristics with respect to age and smoking are depicted in Table 1. Among the students who are currently smoking Shisha 65.9% are also cigarette smokers. It was found that Shisha smokers preferred Shisha clubs (68.3%) for smoking Shisha over restaurants (17.1%) and at home (14.6%). Students who wanted to quit Shisha smoking were n=9. Among the current Shisha smokers considered n=17 (42.5%) believed that shisha smoking is no safer as compared to cigarettes (Table 2), despite having knowledge regarding hazards of Shisha smoking. Majority of the respondents believed that shisha smoking is less addictive than cigarettes (Table 3). Regarding health effects, 44.1% of the students who tried Shisha felt a change in mood (p<0.001) and 31.6% (p<0.001) felt that their heart beats faster after smoking Shisha. Perceptions of knowledge regarding Shisha and health hazards, among shisha smokers (ex-Shisha smokers) and non-Shisha smokers are shown in Table 4. Shisha smoking was considered to be a public health issue by 70% of all the 246 students.

Table 1: Gender characteristics with respect to age and smoking.

Gender	Mean Age	Cigarette Smokers n=43	Tried Shisha n= 79	Currently Smoking Shisha n=40
Male (n=74)	20.83±1.15	25	41	22
Female (n=172)	20.95±1.11	18	38	18

Table 2: Knowledge regarding shisha smoking among current shisha smokers.

	Current shisha smokers n=40		
	Yes	No	Don't know
Is shisha smoking safer than cigarettes?	15 (37.5%)	17 (42.5%)	08 (20%)
Does shisha filter any harmful products?	10 (25%)	23 (57.5%)	07 (17.5%)
Shisha tobacco contains fruit, so is it healthier than regular tobacco?	06 (15%)	23 (57.5%)	11 (27.5%)

DISCUSSION

Shisha smoking has gained phenomenal popularity among the youth of the western society, especially among the university students and is mainly an activity of students rather than other young

people³. Not only the western but the young generation of the eastern societies has also indulged in this form of tobacco use. Studies have shown a high prevalence of Shisha smoking among the youth of Pakistan⁷⁻⁸. Our survey shows that about one third of the Medical students had tried Shisha and of them 50% is still smoking Shisha. Majority of the current Shisha smokers are also cigarette smokers and prefer smoking Shisha in Shisha clubs. More than one third of the non-smokers don't know if Shisha smoking is safer than cigarette or not and majority believed that it is less addictive than cigarette smoking. We noticed that majority of the ex-Shisha smokers had better knowledge than the non-Shisha smokers.

	More	Less	Equal
Current shisha smokers (n=40)	10 (25%)	24 (60%)	06 (15%)
Ex-shisha smokers (n=39)	09 (32%)	14 (35.89%)	16 (40%)
Non-shisha smokers (n=167)	35 (21%)	82 (49%)	50 (29.94%)
Total respondents (n=246)	54 (22%)	120 (49%)	72 (29%)

Table 3: Views of respondents regarding how much shisha is addictive as compared to cigarette smoking.

This might be the reason that they discontinued Shisha smoking. Even though most of the medical students have knowledge, there is still a group of students which have unawareness as either they have misperceptions or they don't know about its potential hazards. It is also noted that majority of the respondents agreed that they are not safe when exposed to passive Shisha smoke. Shisha is becoming highly famous due to misperceptions that it filters out harmful ingredients when smoke passes through water and it contains lesser amounts of nicotine and other chemical ingredients⁷. Studies have shown that Shisha smokers inhale smoke equal to 100 cigarettes during a single Shisha session which exposes them to a higher risk of smoking related diseases². Majority of the Shisha smokers or non smokers don't consider it as an insecure form of tobacco use, either they consider it to be safe or they don't know if it is safe or not. Awareness sessions should be implemented so that there is an increase in knowledge regarding tobacco related health effects of smoking Shisha and cigarettes. A literature review by K.Chaouachi states "Shisha is not a safe alternative to cigarettes"⁹. Smoking of one head of flavoured tobacco in Shisha (about 20 grams) contains nicotine levels equal to 1/3rd the levels of 20 cigarettes which

raises plasma nicotine levels up to 20%¹¹ and daily Shisha use is associated with nicotine absorption rate equivalent to smoking 10 cigarettes/day shown in a recent review¹². A study comparing carbon monoxide in Shisha and cigarette smoke found carbon monoxide concentrations of 0.34% to 1.40% for Shisha smoke and 0.41% for cigarette smoke¹³. Study done in Saudi Arabia on 595 Shisha smokers showed that Shisha smoking declines vital capacity, FEV1, and FVC, which declines further with age¹⁴. In a clinical study of 18 healthy Shisha smokers, it was shown that Shisha smoking is associated with increase in heart rate and blood pressure after smoking¹⁵ with increased markers for atherosclerosis and coronary heart disease¹⁶⁻¹⁷. Some students would like to quit Shisha but unfortunately there was no published or unpublished trial regarding Shisha smoking cessation as mentioned by Wasim Maziak in his literature review¹⁸.

CONCLUSION

Despite of some knowledge, the misconceptions and lack of knowledge regarding its safety and health effects is present in medical students. There is high prevalence of Shisha smoking among medical students. Proper medical education should be provided and restrictions should be ensured similar to cigarette smoking especially among medical students as they would be the future health providers.

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Table 4: Knowledge regarding shisha smoking among Ex- shisha smokers and Non- shisha smokers.

	Ex-shisha smokers n=39			Non-shisha smokers n=167		
	Yes	No	Don't know	Yes	No	Don't know
Is shisha smoking safer then cigarettes?	09 (23.07%)	22 (56.41%)	08 (20.51%)	29 (17.36%)	69 (41.31%)	69 (41.31%)
Does shisha filter any harmful products?	4 (10.25%)	22 (56.41%)	13 (33.33%)	15 (8.98%)	82 (49.10%)	70 (41.91%)
Shisha tobacco contains fruit, so is it healthier then regular tobacco?	2 (5.12%)	29 (74.35%)	8 (20.51%)	17 (10.17%)	100 (59.88%)	50 (29.90%)