

ATTITUDES, PRACTICE AND ADDICTION TOWARDS WATER-PIPE / SHISHA SMOKING IN LAHORE CITY

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ABSTRACT

This study was aimed at assessing the various factors associated with shisha smoking such as attitudes, practice and addiction among the adult population aged 15 - 44 years in Lahore city.

A cross-sectional survey was held in Shisha bars, tobacco shops and Shisha cafes along with some major undergraduate colleges and Universities of Lahore in summer of 2013. All adults aged between 15 and 44 years of age who consumed Shisha were included in the sample. All other age groups and people not smoking were excluded. The data for this study were collected with the participants using an approved self-administered questionnaire.

Data analysis was done using the IBM SPSS version 20. The final sample size was 300 (male 194 and female 106). The largest group was of young adults aged 21-25 years. Out of all the participants, 65% of the sample was smoking shisha for over a year. It was noteworthy that encouragement for shisha smoking was brought on more by friends (61%) as compared to colleagues (9%) and the money spent on such activities was utilized from their own pocket money (70.3%). It was also observed that 42.3% of the sample recognized water-pipe / shisha as being a stress reliever and 68.7% admitted it to be a status symbol. Hence, 77.7% of the sample smoked shisha in the company of friends with 11.3% claiming to be completely addicted to it. In addition, 72.3% of the participants of this study refused to quit water-pipe / shisha smoking.

Significance was found in Pearson's correlation between gender and duration, expenditure and frequency of consumption, addiction and duration, status symbol and stress reliever, company and status symbol and addiction with duration and wanting to quit ($p < 0.05$). A high significance was observed in age with duration, expenditures, company, stress reliever and status symbol ($p < 0.01$). Frequency of consumption with addiction, and stress reliever ($p < 0.01$); stress reliever with age ($p < 0.01$); addiction with stress reliever and status symbol ($p < 0.01$); wanting to quit with gender and duration ($p < 0.01$); and lastly expenditures with encouragement, addiction, status symbol and stress reliever ($p < 0.01$) were also observed in 2-tailed significance of Pearson's correlation.

This study concludes that shisha smoking is responsible for a lot of ill-effects in the oral cavity apart from the body itself. This habit should be minimized and the misconceptions related to it should be made clear to all young population to avoid further harm to their health.

Key Words: Water-pipe smoking, Shisha smoking, hookah smoking, addiction, ill-effects of tobacco.

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INTRODUCTION

The popularity of hookah smoking, also referred to as waterpipe smoking, narghile, shisha or goza has increased rapidly over the past 2 decades. Although hookah-based tobacco smoking had historically been a predominantly Middle Eastern practice, with roots

dating back as far as the 12th century, its worldwide popularity has grown substantially since the production of "Shisha" in the United States, which is a fruit-flavored tobacco introduced by Egyptian tobacco corporations in 1990.¹

Health effects are emerging in the light of evidence that WTS (Waterpipe Tobacco smoking) is perceived by users as less harmful than cigarette smoking. However, there remains a paucity of available evidence from which to draw firm conclusions about its public health significance. Waterpipe smoke contains significant levels of toxins, some of which are known to be carcinogenic to humans. Recent epidemiological trends have established an increasing prevalence of WTS in the Middle East and the United States, particularly among adolescents.² It is used commonly across multiple ethnicities and both genders with less of a social gradient than cigarette smoking. Attitudes and beliefs have been researched widely and several reasons for believing it is less harmful than cigarette smoking include water filtration and social acceptability.² A wide range of diseases have been associated with WTS, but research in this area is relatively underdeveloped and a better evidence base is needed. Worryingly, the waterpipe industry, including waterpipe cafes, operates in an almost completely unregulated market and employs deceptive marketing techniques to attract new users.

Waterpipe tobacco smoking often occurs in a social setting, among friends at a private residence, or in venues that offer ready-to-smoke waterpipes to customers. Recently, commercial waterpipe venues have proliferated in the US. Many such venues have opened in college towns, suggesting that college students are a target market for waterpipe venues. For example, in 2003 alone, four waterpipe tobacco smoking venues opened within five miles of Carnegie Mellon University and the University of Pittsburgh³; similar patterns have been observed elsewhere.⁴

Despite perceptions among young adults that waterpipe tobacco smoking is safer than cigarette smoking⁵, studies to date do not support these perceptions.^{6,7,8} Although research is limited, the existing evidence suggests that waterpipe smoking-associated health risks are similar to those of cigarette smoking. A recent meta-analysis concluded that waterpipe tobacco

smoking was significantly associated with lung cancer, respiratory illness, low birth-weight and periodontal disease.⁹ An analysis of mainstream waterpipe smoke (i.e., inhaled by the user) found large amounts of carcinogens, hydrocarbons, and heavy metals, including 36 times the amount of tar as in cigarette smoke.¹⁰

There is growing evidence that smoking tobacco through a waterpipe by youth and young adults are on the rise worldwide, including the US.^{11,12} In a recent sample of university students in Karachi, Pakistan, 54% reported ever use¹³; while ever use was reported by 38% of a sample of British university students.¹⁴

METHODOLOGY

The present study was carried out to observe the attitudes, practice and addiction in shisha/water-pipe smokers.

The cross sectional analysis was carried out in Lahore city. Data were collected from the general population visiting Shisha bars, tobacco shops and Shisha cafes. Students from some major undergraduate colleges and private as well as government Universities of Lahore were also included. The sample comprised of all adults aged between 15 and 44 years who consumed Shisha. Exclusion criteria included all other age groups and non-smokers. The data for this study were collected with the participants using a pre-tested self-administered questionnaire. Incomplete questionnaires were also excluded from the final sample.

Questions were asked regarding their social status, income, expenditures spent on shisha, the company they prefer to smoke with, frequency and the duration of their shisha smoking, relevant addiction and also the willingness to quit. All answers and details regarding the participants, the public bars, cafes and tobacco shops were kept strictly confidential.

Data entry and analysis was done using the IBM SPSS version 20. Frequency distribution and Pearson correlation R with two-tailed test of significance were performed.

RESULTS

The final sample size was 300. The sample comprised of 194 (64.7%) males and 106 (35.3%) females, the largest age group was 21-25 years (46%) and the

TABLE 1: FREQUENCY DISTRIBUTION OF GENDER, AGE, DURATION & FREQUENCY OF CONSUMPTION, EXPENDITURES AND ENCOURAGEMENT (N=300)

Gender	Total	Percent
male	194	64.7
female	106	35.3
AGE		
15-20	82	27.3
21-25	138	46.0
26-34	69	23.0
35-44	11	3.7
DURATION		
1 month	31	10.3
6 months	34	11.3
1 year	40	13.3
over a year	195	65.0
FREQUENCY OF CONSUMPTION		
daily	54	18.0
weekly	59	19.7
monthly	42	14.0
occasionally	145	48.3
EXPENDITURES		
pocket money	211	70.3
salary	89	29.7
ENCOURAGEMENT		
friends	183	61.0
family	33	11.0
colleagues	27	9.0
on my own	57	19.0

smallest 35-44 years (11%). Out of all the participants, 65% of the sample was smoking shisha for over a year with 48.3% consuming occasionally and 18% daily (Table 1). It was noteworthy that encouragement for shisha smoking was brought on more by friends (61%) as compared to colleagues (9%) and the money spent on such activities was utilized from their own pocket money (70.3%) rather than salaries (29.7%) (Table 1).

When asked about the reasons and effects of shisha smoking, 42.3% of the sample recognized it as a stress reliever and 68.7% admitted it to be a status symbol

TABLE 2: FREQUENCY DISTRIBUTION OF STRESS RELIEVER, COMPANY, STATUS SYMBOL, ADDICTION AND WANTING TO QUIT (N=300)

Stress Reliever	Total	Percent
yes	127	42.3
no	173	57.7
COMPANY		
alone	37	12.3
friends	233	77.7
colleagues	30	10.0
STATUS SYMBOL		
yes	206	68.7
no	94	31.3
ADDICTION		
not addicted	142	47.3
somewhat addicted	89	29.7
addicted	35	11.7
completely addicted	34	11.3
WANTING TO QUIT		
yes	83	27.7
no	217	72.3

(Table 2). Similar to the encouragement of friends, 77.7% of the sample smoked shisha in the company of friends with 11.3% claiming to be completely addicted to it and 47.3% denying it. Lastly, when inquired upon whether they would want to quit the habit of shisha smoking or not, 72.3% replied in the negative and 27.7% in the positive (Table 2).

Significance was found in Pearson's correlation between gender and duration, expenditure and frequency of consumption, addiction and duration, status symbol and stress reliever, company and status symbol and addiction with duration and wanting to quit ($p < 0.05$) (Table 3). A high significance was observed in age with duration, expenditures, company, stress reliever and status symbol ($p < 0.01$) (Table 3). Frequency of consumption with addiction, and stress reliever ($p < 0.01$); stress reliever with age ($p < 0.01$); addiction with stress reliever and status symbol ($p < 0.01$); wanting to quit with gender and duration ($p < 0.01$); and lastly expenditures with encouragement, addiction, status symbol and stress reliever ($p < 0.01$) were also observed in 2-tailed significance of Pearson's correlation (Table 3).

TABLE 3: LEVEL OF SIGNIFICANCE FOR THE ASSOCIATION BETWEEN SHISHA SMOKING AND ITS FACTORS (N= 300)

	Gender	Age	Duration	Frequency Of Consumption	Expenditures	Stress Reliever	Encouragement	Wanting To Quit	Status Symbol	Company	Addiction
Gender	Pearson Correlation										
	Sig. (2-tailed)										
Age	Pearson Correlation	-.053									
	Sig. (2-tailed)	.356									
Duration	Pearson Correlation	-.128*	.156***								
	Sig. (2-tailed)	.027	.007								
Frequency Of Consumption	Pearson Correlation	.046	-.047	-.089							
	Sig. (2-tailed)	.428	.420	.122							
Expenditures	Pearson Correlation	.008	.637***	.061	-.139*						
	Sig. (2-tailed)	.884	.000	.293	.016						
Stress Reliever	Pearson Correlation	-.101	-.144*	.032	.318***	-.344**					
	Sig. (2-tailed)	.082	.013	.580	.000	.000					
Encouragement	Pearson Correlation	.040	.153***	-.038	-.099	-.106					
	Sig. (2-tailed)	.493	.008	.512	.087	.068					
Wanting To Quit	Pearson Correlation	-.166**	.079	.298**	-.076	-.032	.033				
	Sig. (2-tailed)	.004	.175	.000	.188	.578	.564				
Status Symbol	Pearson Correlation	-.078	-.159***	.007	-.049	.142*	.049	-.080			
	Sig. (2-tailed)	.176	.006	.906	.395	.014	.399	.166			
Company	Pearson Correlation	.110	.239***	.009	.081	.202**	-.053	.048	-.119*		
	Sig. (2-tailed)	.056	.000	.877	.164	.000	.362	.404	.040		
Addiction	Pearson Correlation	.060	.095	.124*	-.482**	-.356**	.073	.119*	-.325**	-.083	
	Sig. (2-tailed)	.297	.102	.032	.000	.000	.209	.039	.000	.151	

*** p > 0.01

* p > 0.05

DISCUSSION

It has been indicated that compared to cigarette smoking, hookah smoke contains 36 times the amount of nicotine and higher concentrations of heavy metals.^{10,15} The investigation of the effects of hookah smoking on mortality is lacking in both Western and Asian populations. The association between cigarette or hookah smoking and mortality may differ from one population to another due to differences in the experience of different stages of epidemiologic transition, demographic profile, life expectancy, as well as distribution of other genetic and environmental risk factors of specific diseases that may interact with effect of smoking.¹⁶

It has been reported that water pipe smoking delivers the addictive drug nicotine and is at least as toxic as cigarette smoke¹⁷ and hookah smokers are at risk for the same categories of diseases associated with cigarette smoking.¹⁸ Although the prevalence of hookah smoking has reduced over the years, data¹⁹ has suggested that the use was more common in women and hookah smoking accounted for more deaths than cigarette/bidi smoking did in women. Consistent with previous research^{20, 21}, current waterpipe users were more likely to perceive that tobacco smoked from a waterpipe is less harmful than a regular cigarette.^{22,23,12} Some research suggests college students incorrectly believe that the water in the waterpipe filters out *all* harmful agents, rendering waterpipe tobacco smoking healthier than cigarette smoking.²⁴ This is one of the reasons, the participants of this study did not want to quit and “invested” more of their finances in this habit in their friends’ company. It is imperative for the young adults to understand the addiction related to water-pipe smoking, its ill effects and the false status symbol they appreciate with this habit. More research is needed to clarify the nature of such misperceptions about the health effects of waterpipe smoking, so that appropriate interventions to correct the misperceptions can be developed and implemented.

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