

Reported Health Problems Among Shisha or Waterpipe Smokers In Misurata, Libya

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ABSTRACT

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Background: Waterpipe or Shisha smoking is a major public health problem in Arab countries, especially in the Eastern Mediterranean region. This study was conducted to study the health problems and the effect of socio-demographic correlates on health problems among waterpipe smokers in Misurata, Libya.

Materials and Methods: A community based cross sectional study conducted among 242 regular waterpipe smokers in Misurata, Libya using a semi structured questionnaire from 1st January 2010 to 30th June 2010.

Results: The majority of smokers in this study (34.4%) were of the age group 35-44 years. (Mean age 41.2 and Standard deviation 10.92). Chronic cough, Hypertension, Diabetes, Breathlessness and Acid peptic disorder were the most commonly reported health problems among the shisha smokers. The presence of reported health problems such as chronic cough, hypertension, diabetes, breathlessness, recurrent respiratory infections and ischemic heart disease were significantly higher among those who were 35 years of age or above, those with duration of usage more than 20 years and those who smoke more than 3 times a week.

Conclusions: The most commonly reported health problems among the shisha or waterpipe smokers were chronic cough, hypertension, diabetes, breathlessness and acid peptic disorder. Age above 35 years, duration of shisha smoking for more than 20 years and smoking for more than 3 times a week were significantly associated with the health problems.

Keywords: Waterpipe Smoking, Shisha Smoking, Reported Health Problems, Smoking, Cigarette

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BACKGROUND

Waterpipe or Shisha smoking is becoming a global public health problem, especially in the Eastern Mediterranean region.¹ The global tobacco epidemic may kill 10 million people annually in the next 20-30 years. More than 70% of these deaths are estimated to occur in developing countries. Current research, treatment, and policy efforts focus on cigarettes, while many people in developing regions smoke tobacco using waterpipe or Shisha.² Waterpipes or Shishas have long been used for smoking tobacco in the Middle East and parts of Africa and Asia. Shisha smoking is often a social activity and two or more people may share the same pipe. Although their usage appeared to be declining by the mid 1980's, more recently there has been an upturn in their popularity in the eastern Mediterranean region.³ Globally, the highest rates of Shisha smoking occur in the North African, Eastern Mediterranean and South East Asian regions.⁴

Shisha or waterpipe smoke probably contains several of the chemicals which are considered to be the causal factors of cancer, cardiovascular disease and dependence in cigarette smokers.⁵ The reports suggest that Shisha smoking has a deleterious effect on health as well as has the ability to induce dependence on nicotine similar to cigarette use.⁶ Shisha use is associated with classical features of tobacco / nicotine dependence, as well as features unique to this tobacco use method.⁷ The smoke that emerges from a waterpipe contains numerous toxicants known to cause lung cancer, heart disease and other diseases.⁸ Waterpipe smoking has been associated with non-carcinogenic morbidity and patho-physiologic effects in the respiratory system. In addition to its intrinsic pathogenic ability, waterpipe smoking has the potential for spreading infectious diseases, given that smokers often share the same mouthpiece and pipe.⁸

Not many studies are published on the health problems

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among waterpipe smokers and the determinants of health problems among waterpipe smokers in Libya. This research was aimed to study the health problems among waterpipe smokers in Misurata, Libya and the effect of socio-demographic correlates on those health problems.

MATERIALS AND METHODS

This was a cross sectional study conducted in Misurata city of Libya during the period of 1st January 2010 to 30th June 2010. Data was collected from 242 regular waterpipe or shisha smokers who visited the 14 popular shisha cafes. These shisha cafes were selected by systematic random sampling from different parts of Misurata city. The study variables included were, health problems among waterpipe smokers and socio-demographic variables such as age, education level, occupation, and monthly family income. The variables regarding practices such as duration of waterpipe use and the frequency of usage were also studied. Association between duration and frequency of usage with presence of various reported health problems were studied. Data were collected by interview method, based on a semi structured questionnaire. Data were tabulated using frequency distribution tables and analyzed using proportions and chi square test. A p-value of less than 0.05 was considered as the level of statistical significance. SPSS 17.0 software was used for analysis.

RESULTS

The majority of shisha smokers in this study (34.3%) were of the age group 35-44 years (**Table 1**). Mean age was 41.2 years with a standard deviation of 10.92. About half of the water-pipe users in the study were businessmen (46.3%) followed by skilled labourers (23.6%). Majority of the waterpipe smokers (75.2%) were having education up to secondary school or college. Majority of the Hookah or water-pipe users (68.6%) were of high income group with a monthly income of 400 US Dollars or more. Majority of the waterpipe smokers (28.1%) started usage between 20-24 years of age.

More than half of the shisha smokers started this habit before 25 years of age. Mean age of initiation (SD) was 23.69 + 5.828 years, and most of the shisha smokers (65.7%) were using shisha or waterpipe more than 3 times a week (**Table 2**). Majority of the Hookah smokers (37.6%) in the study were smoking for duration of 10-19 years. A proportion of 65.7% of

Table 1. Distribution of Shisha smokers according to socio demographic factors

Age group	No	%
15-24 yrs	24	9.9
25-34 yrs	33	13.6
35-44 yrs	83	34.3
45-54 yrs	57	23.6
55-64 yrs	45	18.6
Total	242	100
Education	No	%
Primary school	60	24.8
Secondary school	151	62.4
College	31	12.8
Total	242	100
Occupation	No	%
Business	112	46.3
Skilled labourers	57	23.6
Drivers	49	20.2
Teachers	10	4.1
Students	14	5.8
Total	242	100

waterpipe smokers were smoking for duration of less than 20 years.

Chronic cough, Hypertension, Diabetes, Breathlessness and Acid peptic disorder were the most commonly reported health problems among the shisha smokers. Less commonly reported health problems were recurrent respiratory infections, irritable bowel syndrome, ischemic heart disease, arrhythmias and Tuberculosis. The presence of reported health problems

Table 2. Distribution of shisha smokers based on factors related to smoking

Age of initiation	No	%
15-19 yrs	57	23.6
20-24 yrs	68	28.1
25-29 yrs	64	26.4
≥30yrs	53	21.9
Total	242	100
Frequency of smoking	No	%
< 3 times a week	83	34.3%
> 3 times a week	159	65.7%
Total	242	100
Duration of smoking	No	%
< 10 yrs	68	28.1
10-19 yrs	91	37.6
20-29 yrs	53	21.9
≥ 30 yrs	30	12.4
Total	242	100

Table 3. Association between age and reported health problems

Health problems	Age in years			P value	
	< 35	> 35	Total		
Chronic cough	Present	10	114	124	<0.001
	Absent	47	71	118	
	Total	57	185	242	
Hypertension on treatment	Present	4	104	108	<0.001
	Absent	53	81	134	
	Total	57	185	242	
Diabetes on treatment	Present	2	86	88	<0.001
	Absent	55	99	154	
	Total	57	185	242	
Breathlessness	Present	7	72	79	<0.001
	Absent	50	113	163	
	Total	57	185	242	
Acid peptic disorder	Present	24	41	65	<0.01
	Absent	33	144	177	
	Total	57	185	242	
Recurrent respiratory infections requiring treatment	Present	2	26	28	<0.05
	Absent	55	159	214	
	Total	57	185	242	
Irritable bowel syndrome	Present	15	8	23	<0.001
	Absent	42	177	219	
	Total	57	185	242	
Ischemic heart disease on treatment	Present	0	19	19	<0.05
	Absent	57	166	223	
	Total	57	185	242	
Tuberculosis on treatment	Present	0	3	3	>0.05
	Absent	57	182	239	
	Total	57	185	242	

such as chronic cough, hypertension, diabetes, breathlessness, recurrent respiratory infections and ischemic heart disease were significantly higher among those who were 35 years of age or above. Presence of irritable bowel syndrome and acid peptic disorder were significantly higher among those below 35 years of age (Table 3).

The presence of reported health problems such as chronic cough, hypertension, diabetes, breathlessness, acid peptic disorder, recurrent respiratory infections and ischemic heart disease were significantly higher among those who were smoking for duration of 20 years or above (Table 4). The presence of health problems such as chronic cough, hypertension, diabetes, breathlessness, acid peptic disorder and ischemic heart disease were significantly higher among those who were smoking for more than 3 times a week (Table 5).

Table 4. Association between duration of waterpipe smoking and reported health problems

Health problems	Duration of Smoking (years)			P value	
	< 20	> 20	Total		
Chronic cough	Present	73	51	124	<0.05
	Absent	86	32	118	
	Total	159	83	242	
Hypertension on treatment	Present	44	64	108	<0.001
	Absent	115	19	134	
	Total	159	83	242	
Diabetes on treatment	Present	23	65	88	<0.001
	Absent	136	18	154	
	Total	159	83	242	
Breathlessness	Present	32	47	79	<0.001
	Absent	127	36	163	
	Total	159	83	242	
Acid peptic disorder	Present	22	43	65	<0.001
	Absent	137	40	177	
	Total	159	83	242	
Recurrent respiratory infections requiring anti-biotic treatment	Present	11	17	28	<0.01
	Absent	148	66	214	
	Total	159	83	242	
Irritable bowel syndrome	Present	14	9	23	>0.05
	Absent	145	74	219	
	Total	159	83	242	
Ischemic heart disease on treatment	Present	2	17	19	<0.001
	Absent	157	66	223	
	Total	159	83	242	
Tuberculosis on treatment	Present	2	1	3	>0.05
	Absent	157	82	239	
	Total	159	83	242	

DISCUSSION

The majority of smokers in this study (34.4%) were of the age group 35-44 years. Mean age was 41.2 with a standard deviation of 10.92. In a similar study done in Lebanon, the Mean age of Hookah smokers was 35.4 years with a standard deviation of 15.9.⁶

Most of the Hookah smokers in the current study (47%) were businessmen and majority of Hookah users (69%) were of high income group. In a study done in Karachi, Pakistan, Hookah smoking was more prevalent among the high socioeconomic group.⁹ This might be because of the affordability among the high income group. In the present study, majority of the Hookah smokers (75%) were having either secondary school or college education. In a study conducted in

Lebanon, 82.7% of Shisha users were either intermediate or high education groups, which was almost similar to this study.⁶ This shows that the knowledge about the harmful effects of Hookah or water-pipe smoking is very less even among those with good education. More health education sessions are required to improve the knowledge and attitude of the public. A study done in United Arab Emirates, showed that education plays an important role and creates awareness about the hazards of various smoking practices, including Shisha.¹⁰

In the present research, majority of the Hookah smokers started usage, between the ages of 20-24 years. Mean age of initiation was 23.69 + 5.828 years. According to a study done in Syria, age of initiation of Hookah smoking was 19.2 + 2.2 years.¹¹ The study in Syria was among university students and our study was among the general public. That might be the reason behind this difference.

In the present research, Chronic cough, Hypertension, Diabetes, Breathlessness and Acid peptic disorder were the most commonly reported health problems among the shisha smokers. Less commonly reported health problems in the current study were recurrent respiratory infections, irritable bowel syndrome, ischemic heart disease, arrhythmias and Tuberculosis. The presence of health problems such as chronic cough, hypertension, diabetes, breathlessness, acid peptic disorder and ischemic heart disease were significantly higher among those who were smoking for more than 3 times a week. Smoking waterpipe has significant effects on both the cardiovascular and respiratory system.¹⁰

CONCLUSION

The most commonly reported health problems among the shisha or waterpipe smokers were chronic-cough, hypertension, diabetes, breathlessness and acid-peptic disorder. Age above 35 years, duration of shisha smoking for more than 20 years and smoking for more than 3 times a week were significantly associated with the health problems.

END NOTE

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REFERENCES

1. Rastam S, Ward KD, Eissenberg T, Maziak W. Estimating the beginning of the Shisha epidemic in Syria. BMC Public Health. 2004 Aug;4(4):32.
2. W M, KD W, Soweid RA A, T E. Tobacco smoking using a Shisha:a re-emerging strain in a global epidemic. Tob Control. 2004 Dec;13(4):327-33.
3. Action on Smoking and Health, Factsheet – 28, Shishas, [Internet]. 2006. Available from: http://www.ash.org.uk/files/documents/ASH_134.pdf
4. Shihadeh A et al. Towards a topographical model of narghile water-pipe cafe smoking: a pilot study in a high socioeconomic status neighborhood of Beirut, Lebanon. Pharmacol Biochem Behav. 2004 Sep;79(1):75-82.
5. Shihadeh A, Saleh R. Polycyclic aromatic hydrocarbons, carbon monoxide, “tar”, nicotine in the mainstream smoke aerosol of the narguile water-pipe. Food Chem Toxicol. 2005 May;43(5):655-61.
6. M. Waked, P. Salameh, Z. Aoun. Water-pipe (narguile) smokers in Lebanon: a pilot study. East Mediterr Health J [Internet]. 2009;15(2). Available from: http://www.emro.who.int/emhj/1502/15_2_2009_0432_0442.pdf
7. Maziak W, Eissenberg T, Ward KD. Patterns of Shisha use and dependence: implications for intervention development. Pharmacol Biochem Behav. 2005 Jan;80(1):173-9.
8. Knishkowsky B, Amitai Y. Water-pipe (narghile) smoking: an emerging health risk behavior. Pediatrics. 2005;116(1):e113-e119.
9. Anjum Q, Ahmed F, Ashfaq T. Knowledge, attitude and perception of water pipe smoking (Hookah) among adolescents aged 14-19 years. J Pak Med Assoc. 2008 Jun;58(6):312-7.
10. Shaikh RB, Vijayaraghavan N, Sulaiman AS, Kazi S, Shafi MS. The acute effects of Shisha smoking on the cardiovascular and respiratory systems. J Prev Med Hyg. 2008 Sep;49(3):101-7.
11. Maziak W, Fouad FM, Asfar T, et al. Prevalence and characteristics of narghile smoking among university students in Syria. Int J Tuberc Lung Dis. 2004 Jul;8(7):882-9.