

Prevalence, Knowledge, Attitude, and Practices of Narghile Smoking among AL-Nasiriya Technical Institute Students

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Abstract:

Tobacco smoking rates are increasing, as are chronic diseases associated with tobacco. Reported WHO figures show smoking rates in Iraq as high as 31% and 4% for males and females, respectively, but there is limited information specifically available among students on smoking. To assess the prevalence, knowledge, attitude, and practices of narghile smoking among a sample of students in Al-Nasiriyah Technical Institute, a descriptive cross-sectional investigation utilizing self-administered questionnaire was directed during 2017 including 350 male students. General descriptive statistics were used to analyze the data.

Out of the 350 participants, there were 65 (18.57%) smokers, 22 (34%) of them smoke narghile only, 15 (23%) smoke cigarettes only and 28 (43%) smoke both of them. About 91. % of non-smoking thought that narghile was dangerous for health, with the majority believe that narghile smoking leads to addiction and contain more nicotine than cigarettes. Friends and social trend were the common factors for initiation of narghile. The non-smoking students were more aware of the hazards of narghile smoking than smokers. Most of the smokers believed that narghile smoke was a good source of stress relief and fill free time. Many of the narghile smokers 47.7% reported that at least one of their family members was a narghile smoker. Most of the non-smoking students support a law prohibiting narghile smoking.

There was awareness about the hazards of narghile smoking but smoking it was relatively common among those students. More prominent endeavors must be put toward teaching students about the dangers of smoking to keep it's from developing.

Keywords: *Narghile, smoking, students, Al-Nasiriyah, Iraq.*

I. INTRODUCTION

The prevalence of narghile smoking has increased over the past two decades (Eissenberg, et al., 2008). Although this kind of smoking had historically linked to the Middle East centuries ago, its worldwide predominance has grown greatly since the production of the fruit-flavored tobacco “Maasel” which introduced in Egypt since 1990. Narghile use has to turn out to be particularly mainstream among youth worldwide (Eissenberg, et al., 2008; Knishkoway and Amitai, 2005).

In Iraq, Thabit, et al., (2015) conducted a cross-sectional study to assess the attitudes and knowledge of narghile smoking among male students. They found that 58.7% of the smokers in the age of 20-24 year, only 2% hadn't smokers in their family, 58% smoke at cafes, and 76% smoke to relieve tension. The students' responses were relatively not enough regarding attitudes, knowledge and health dangers, to quit smoking they are confident enough.

A recent study by Abed (2017) indicated that the prevalence of shisha smoking among medical students was 12.1% and 57.5% of them were smoking for more than 3 years, 87.5% choose friends to smoke with, 76.2% choose cafés for smoking.

Not like cigarette smoking, which is a concentration of much research and public health activities, moderately little research exists to understand narghile use among students and youth (Farrelly et al. 2005). In this way, facilitate investigation of attributes identified with narghile smoking was incredibly required.

Several factors affected the prevalence of narghile smoking among youth and students. First, narghile smoking has the appearance of social activity, where several users sharing and passing it around to others. Narghile cafes offer an alternative social scene for students, and a large number of narghile cafes have been found everywhere (Martinasek et al. 2011).

Besides, narghile smoking is frequently showcased as “natural “ which might be seen by youth as more possibly safe than cigarette smoking (Martinasek et al. 2011).

In any case, rising evidence exhibits that narghile smoking is related with a scope of negative results like those of cigarette smoking, including cardiovascular illness, cancer, anomalous aspiratory capacities, lifted heart rate and blood pressure, decreased fertility, and death (Neergaard et al. 2007; Akl et al. 2010).

A report from the World Health Organization showed that 60 minutes in length narghile smoking session might be proportional to smoking 100 cigarettes, which possible outcomes from inhaling the smoke from both the tobacco and the coal which used to the tobacco heating in the water pipe (WHO, 2005). Essentially the narghile device includes a body, head, water bowl, and hose (Jasim et al., 2009). The burned coal in the head heats the tobacco, below it, streams and diffuses into the water bowl to be smoked by the hose. Despite the fact that smoke is diffused into the water bowl, the smoke breathed in contains the unsafe substance of the tobacco smoke, and in addition, the cancer-causing agents of the coal warming the tobacco (WHO, 2005).

Although the known toxicants in smoke and its presumed health outcomes, the prevalence of narghile smoking in the world and Iraq is expanding even when cigarette utilization is at its most reduced levels in more than 5 decades (Primack et al. 2008; Al-Mousawi, 2014).

Much research has demonstrated that early exposure to nicotine is related to a higher probability of creating addiction, so the expansion and prominence among students and youth might be a specific long-term community health problem (NAAG, 2006).

Generally, few investigations exist on the study of the prevalence, knowledge, attitude, and practices of narghile smoking among college and institutes students, and just as of late have efforts started to study the situations of narghile smokers in Iraq. Given the ascent of narghile smoking, these endeavors are extraordinarily required.

Without adequate knowledge of the use and attitudes that college students have towards narghile smoking, researchers and policymakers will be uninformed or misinformed about how best to intervene. The purpose of the present study is to assess patterns, perceptions, and knowledge of university students' narghile use, as well as to identify the factors associated with its use among a sample of Al-Nasiriyah Technical Institute male students.

II. MATERIAL AND METHOD

A simple random cross-sectional study design was used to assess narghile smoking patterns among 350 male students with 18 to 22 years old from different departments at the Nasiriyah Technical Institute south of Iraq during March to May 2017. The participants were informed about the topic of the study before the Arabic written questionnaires had been distributed.

The questionnaire contains questions about demographic situations, prevalence, knowledge, attitude, and practices of smoking in general, and to narghile smoking in specific. They were given enough time to answer the questions freely, without consultation and then, the questionnaires were collected. General descriptive statistics were used to analyze the obtained data.

Data were analyzed using the Statistical Package for the Social Sciences (SPSS) version 25. Descriptive statistics were intended (frequencies for categorical variables, percentage, means and standard deviations for continuous variables) for all demographic variables gained, current narghile use, ever narghile use, current cigarette use, and ever cigarette use. Descriptive statistics (percentage values and frequencies) were also calculated for the belief measures related to narghile smoking.

III. RESULTS

Out of the 350 students participated in this study, there were 65 smokers, of these 65 smokers, 22 (34%) smoke narghile only, 15 (23%) smoke cigarettes only and 28 (43%) smoke both narghile and cigarettes. The average age at the beginning of narghile smoking was 16.7 years. Friends who smoke narghile had a role in starting with narghile smoking in most of the smokers (73.4%) and non-smoking (88.2%).

The students' answers to questions about their knowledge of the health risks of narghile smoking were as follows (Table 1). The majority of non-smoking 259 (90.9%) and 23 (35.4%) of the smokers considered narghile as harmful to health like cigarettes. From the 65 students who smoke narghile, only 5 (7.7%) and only 48 (16.8%) from the 285 non-smokers had agreed that narghile contains more carcinogens than cigarettes.

Most of the students participated in this study (smokers and non-smokers) believed that passive smoking hurts others, narghile smoker inhales smoke more than a cigarette smoker, narghile contains more nicotine than cigarettes and

narghile smoking lead to addiction. But only 31 (47.7) of the smokers agreed that sharing the same narghile among several people causes diseases (Table 1).

Table 1. Knowledge about narghile smoking among a random sample of Al-Nasiriyah Technical Institute students.

Questionnaire statement	Yes		No	
	N	%	N	%
<u>Narghile contains more carcinogens than cigarettes.</u>				
Smokers	5	7.7	60	92.3
Non-smokers	48	16.8	237	83.2
<u>Passive smoking hurts others.</u>				
Smokers	48	73.8	17	26.2
Non-smokers	262	91.9	23	8.1
<u>Narghile such as cigarettes is associated with serious diseases.</u>				
Smokers	23	35.4	42	64.6
Non-smokers	259	90.9	21	9.1
<u>Narghile smoker inhales smoke more than a cigarette smoker.</u>				
Smokers	54	83	11	17
Non-smokers	251	88	34	12
<u>Narghile contains more nicotine than cigarettes.</u>				
Smokers	55	84.6	10	15.4
Non-smokers	202	70.9	83	29.1
<u>Narghile smoking leads to addiction.</u>				
Smokers	36	55.4	29	44.6
Non-smokers	234	82.1	51	17.9
<u>Sharing the same narghile among several people causes diseases.</u>				
Smokers	31	47.7	34	52.3
Non-smokers	259	90.9	26	9.1

Regarding the attitude of the students participating in this study towards narghile smoking, the results were as follows (Table 2). The majority of students participated in this study (smokers and non-smokers) didn't agree that smoking narghile increases ability to fit in a group or smoker has more friends or narghile is cheaper than cigarettes but they agree that it helps to fill free time with friends. Most smokers thought that narghile is modern, universal, with less polluted and disturbing to others, but most of the non-smokers do not share this view.

Table 2. The attitude of the institute students toward narghile smoking.

Questionnaire statement	Yes		No	
	N	%	N	%
<u>Smoking increases the ability to fit into a group.</u>				
Smokers	24	36.9	41	63.1
Non-smokers	74	26	211	74
<u>Narghile smoker has more friends.</u>				
Smokers	12	18.4	53	81.6
Non-smokers	68	23.8	217	76.2
<u>Narghile helps infill free time with friends.</u>				
Smokers	50	76.9	15	23.1
Non-smokers	154	54	131	46

Narghile is modern, universal, and my friends smoke it.

Smokers	59	90.7	6	9.3
Non-smokers	34	11.9	251	88.1

Narghile is cheaper than cigarettes.

Smokers	31	47.7	34	52.3
Non-smokers	74	26	211	74

Narghile is less polluting and disturbing to others.

Smokers	55	84.6	19	15.4
Non-smokers	43	15	242	85

As for the practice of students to smoke narghile, their answers were as follows (Table 3).

The majority of the smokers (91%) as expected, were against the ban of narghile by the government authority whereas the majority of the non-smokers (89%) support the action against narghile smoking. The largest part of students in this study (smokers and non-smokers) expressed that they haven't a family member who smokes narghile and they didn't agree that smoker can quit smoking easily. Most of the participants smoked cigarettes during their life even once, the majority of the smokers thought that narghile relieves tension and stress but non-smokers do not agree with them.

Table 3. Narghile smoking practice of the institute students.

Questionnaire statement	Yes		No	
	N	%	N	%
<u>Do you think that friends encouraging smoking?</u>				
Smokers	48	73.4	17	26.6
Non-smokers	251	88.2	34	11.8
<u>Do you support a law prohibiting narghile smoking?</u>				
Smokers	6	9.2	59	90.8
Non-smokers	254	89.1	31	10.9
<u>Have you smoked cigarettes during your life even once?</u>				
Smokers	65	100	0	0
Non-smokers	171	60	141	40
<u>Does a member of your family smoke narghile?</u>				
Smokers	31	47.7	34	52.3
Non-smokers	42	14.7	243	85.3
<u>Can smoker quit smoking easily?</u>				
Smokers	8	12.3	57	87.7
Non-smokers	125	43.9	160	56.1
<u>Does narghile relieve tension and stressors?</u>				
Smokers	56	86.2	9	13.8
Non-smokers	94	33	191	67
<u>Is the narghile cafés increase behind the high smoking prevalence.</u>				
Smokers	55	85	10	15
Non-smokers	270	95	15	5

IV. DISCUSSION

In this study the prevalence of narghile smoking among the participants was (18.57%). Available data indicate that there are large differences between countries in the prevalence of narghile smoking.

Al-Mousawi (2014) found that the prevalence of narghile smoking among the University of Karbala students was 10.5%, and 45.7% started before the age of 18. The smoking habit was positively related to males, being unmarried, increasing age, college, having a positive disposition toward smoking and higher educational level of their fathers (Al-Mousawi, 2014).

Thabit, et al., (2015) found that Iraqi male students in their study had unsatisfactory knowledge and attitudes regarding narghile smoking. Taha et al. (2010) reported that the popularity of narghile smoking among male students in Saudi Arabia was 8.6%. But, in a Jordanian study directed by Dar-Odeh et al. (2010), they found that 44.1% of students were smoking narghile. Likewise, in a study conducted by Al-Turki et al. (2006), they found that 42.1% of the students in central Saudi Arabia were smoking narghile and that 24.6% smoking both narghile and cigarettes.

In the present study, 90.9% of the non-smokers believed that narghile smoking is harmful to health. Maziak et al. (2004) reported the opposite when they found that 89% of the students thought that cigarettes were more harmful than narghile. From Egypt a study by Labib et al. (2007) showed that 74% of students reported that the narghile was less harmful.

There is a false opinion that narghile smoking is harmless than cigarette smoking because the smoke passes through water and filtered (Kandela, 2000).

About the perceived health risk, 18% of the students believe that narghile was harmless. This finding agreed with some of the previous studies Shafagoj et al. (2000) and Ward et al. (2006).

In all actuality, narghile smoke is similarly as perilous as tobacco smoke. When contrasted with a solitary cigarette, narghile smoke contains a significantly more elevated amount of metals, like, arsenic, nickel, and lead, 15 times more CO and nicotine, 36 times more tar (Knishkoway and Amitai, 2005).

Friends of the narghile smokers had an encouraging role at the beginning of smoking in the greater part of the smokers in this study. In studies conducted by Smith-Simone et al. (2008) and Ward et al. (2006) revealed that most of the smokers started with friends in narghile cafés. The narghile cafés were the most common place for narghile smoking. The increase in the numbers of narghile cafés may be another explanation behind the high prevalence. Narghile smokers were likely to smoke with friends for the first time. This demonstrates the impact of friend's pressure on narghile smoking and several studies like Mohammed et al. (2010) in Kuwait and Maziak et al. (2004) have demonstrated the effect of friends.

In this study, the average age of starting narghile smoking is 17.4 years, this result is agreeing with the Maziak et al. (2004) study in which the mean age of the beginning of narghile smoking was 19.2 years. It was also agreeing with Mohammed et al. (2010) study where 30% in Kuwait started narghile smoking at ages 14 to 17 years. All these findings show that narghile smoking is becoming more popular among youths who are the producer part of the population.

The popularity of smoking in the institute students (18.57%) is less than in other Iraqi studies (which has already been mentioned here) and Jordanian studies (Khader and Alsadi, 2008; Madanat et al., 2009). This study explained significant factors related to attitude, knowledge, and practice of institute students towards smoking. Most of the institute students have good knowledge about the health effects of smoking. However, the smoking students have less knowledge than non-smokers. This may be clarified by the way that smokers to some degree encounter abstemiousness towards such information or potentially truly think little of the rates of future complications and death related with smoking as long as they are healthy.

Similar results are found in students in both developed and developing countries (Seguire and Chalmers, 2000; Ruff et al., 2000).

Some smokers believed that smoking encourages them to fit in with their companions; this might be because of the sentiment instability in social circumstances, and that restricted to dispose of this inclination is to smoke in order to get a quick association with the gathering as everybody is smoking. Gaining friends acceptance and feeling of personality can without much of a stretch be obtained by smoking (Seguire and Chalmers, 2000).

There are some limitations in this study that must be considered. The sample size was good, but the research was done at one institute. There is a critical requirement for population-based research about narghile smoking and hazard factors related to it.

V. CONCLUSION

There is a high prevalence of narghile smoking, poor knowledge and confused judgment about its impact on health among youngsters. This investigation reveals the exasperating situation of high routine concerning narghile smoking among students and therefore that dynamic measures should be taken to control this current condition especially among students by growing care in them with the perilous side effects of narghile smoking. Extended perception and additional exploration are imperative to deliver this creating risk to public health.

References

- Abed, H., K. (2017) Shisha Habit among Medical Students at College of Medicine and College of Dentistry-Baghdad University J Health Educ Res Dev 2017, 5:4
- Akl EA, Gunukula SK, Aleem S, (2010) The prevalence of waterpipe tobacco smoking among the general and specific populations: a systematic review. BMC Public Health; 11:244–255.
- Al-Mousawi, A. (2014) The Prevalence of Smoking Among Karbala/Iraq University Students in Iraq in 2005. Tobacco Use Insights 2014;7 9–14 doi:10.4137/TUI.S12238
- Al-Turki A. (2006) Smoking habits among medical students in central Saudi Arabia. Saudi Med J. 2006; 27:700
- Dar-Odeh NS, Bakri FG, Al-Omiri MK. (2010) Narghile (water pipe) smoking among university students in Jordan: prevalence, pattern, and beliefs. Harm Reduc J. 2010; 7:10.
- Eissenberg T, Ward KD, Smith-Simone S, Maziak W. (2008) Waterpipe tobacco smoking on a U.S. college campus: prevalence and correlates. J Adolesc Health.42:526–529.
- Farrelly MC, Davis KC, Haviland L, Messeri P, Healton CG. (2005) Evidence of a dose-response relationship between “truth” antismoking ads and youth smoking prevalence. Am J Public Health. 95:425–431.
- Jasim, S. M., Kadhim, L., El-Awa, F., Fouad, H., Warren, C. W., Lee, J., ... & McKenna, M. (2009). Tobacco use among students aged 13-15 Years-Baghdad, Iraq, 2008. Morbidity and Mortality Weekly Report, 58(12), 305-308
- Kandela P. (2000) Narghile smoking keeps Arabs in wonderland. Lancet. 2000; 356:1175.
- Khader, Y. S., Alsadi, A. A. (2008). Smoking habits among university students in Jordan: Prevalence and associated factors. East Mediter. Health J. 14 (4):897-904.
- Knishkowsky B, Amitai Y. (2005) Water-pipe (narghile) smoking: an emerging health risk behavior. Pediatrics.116:113–119.
- Labib N, Radwan G, Mikhail N. (2007) Comparison of cigarette and water pipe smoking among female university students in Egypt. Nicotine Tob Res. 2007; 9:591-6.
- Madanat, H. N., Barnes, M. D., Cole EC, Wells P, Finnigan, C. (2009). Current Smoking Practices among Jordanian College Students: A Pilot Study. Int. Q. Commun. Health Educ. 29(1):89-100.
- Martinasek MP, McDermott RJ, Martini L. (2011) Waterpipe (hookah) use among youth. Curr Probl Pediatr Adolesc Health Care. 2011 41:37–51.
- Maziak W, Eissenberg T, Rastam S, Hammal F, Asfar T, Bachir M E (2004) Beliefs and attitudes related to narghile (water pipe) smoking among university students in Syria. Ann Epid. 2004; 14:646-54.
- Mohammed HR, Zhang Y, Newman M, Shell DF. (2010) Water pipe smoking in Kuwait. East Mediterr Health J. 2010; 16:1115-20.
- National Association of Attorneys General (NAAG) (2006). Cigarette sales in US reach historic 55-year low. Available at: [http:// www.tobacco.org/news/218950.html](http://www.tobacco.org/news/218950.html).
- Neergaard J, Singh P, Job J, Montgomery S. (2007) Review waterpipe smoking and nicotine exposure: a review of the current evidence. Nicotine Tob Res. 9:987–994.
- Primack A, Sidani J, Agarwal AA, Shadel WG, Donny EC, Eissenberg TE. (2008) Prevalence of and associations with waterpipe tobacco smoking among U.S. university students. Ann Behav Med. 36:81–86.
- Ruff L, Volmer T, Nowak D, Meyer A (2000). The economic impact of smoking in Germany. Eur. Respir. J. 16(3):385-390.
- Seguire M, Chalmers KI (2000). Late Adolescent Female Smoking. J. Adv. Nurs. 31(6):1422-1429.
- Shafagoj YA, Mohammed FI. (2000) Levels of maximum end expiratory carbon monoxide and certain cardiovascular parameters following hubble-bubble smoking. Saudi Med J. 2000; 23:953-8.
- Smith-Simone S, Maziak W, Ward K, Eissenberg T. (2008) Water pipe tobacco smoking: knowledge, attitudes, beliefs, and behavior in two U.S. samples. Nicotine Tob Res. 2008; 10:393-8.
- Taha AZ, Sabra AA, Al-Mustafa ZZ. (2010) Water pipe smoking among male students of medical colleges in the eastern region of Saudi Arabia. Ann Saudi Med.; 30:222-6.
- Thabit, M., F., Abdul Mohsin, M. and Niazy, S., M. (2015) Water pipe (Shisha) smoking among a sample of Iraqi male college students: knowledge and attitudes. J. of Nursing and Health Science Volume 4, Issue 6 Ver. V (Nov. - Dec. 2015), PP 50-54
- Ward KD, Eissenberg T, Rastam S. (2006) The tobacco epidemic in Syria. Tob Control. 2006; 15:24-9.

- World Health Organization (WHO) (2005) (Tobacco Free Initiative). Waterpipe tobacco smoking: health effects, research needs and recommended actions by regulators [Advisory Note]. Available at: [http://www.who.int/tobacco/global interaction/tobreg/en](http://www.who.int/tobacco/global_interaction/tobreg/en).