Knowledge And Attitude Toward Cigarette And Water-Pipe Smoking In Erbil City, Iraqi Kurdistan Region

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Abstract

The tobacco epidemic poses one of the greatest threats to global public health. It affects almost all organs of the body and carries several social and financial impacts on users and their families. Assessing public awareness and their attitude toward smoking provides essential details regarding the problem. This study was carried out to assess the knowledge and attitudes toward cigarette and water-pipe smoking in Erbil city. A cross-sectional study was done in Erbil between September 2021 to June 2022. The enrolled sample was 2601 respondents selected by a multi-stage cluster sampling method and interviewed using a specially designed questionnaire. About one-quarter were 20-29 years. The majority were males, married, graduates, semi-skilled manual workers, and from middle socioeconomic levels. 44.3% were smokers and the main reasons behind smoking were personal and peer influence, relieving stress, and for waterpipe one of the important factors was a misconception about waterpipe less harm. Knowledge about health problems as a result of smoking was good for respiratory disorders and lung cancer, whereas knowledge of stroke and infertility was the least. A considerable proportion of respondents agreed that smoking should be banned in public places.

The prevalence of smoking was high. Personal and peer pressure, in addition to curiosity was the main motivators for smoking. Generally, participants' knowledge was good for majority of health problems occur due to smoking and positive attitude was observed toward smoking.

Keywords: Smoking, Knowledge, attitude, water-pipe, cigarette

INTRODUCTION

The tobacco epidemic and rising smoking-attributable mortality pose one of the greatest threats to global public health, and according to WHO in the year 2020 tobacco use is killing up to 8 million people annually, with more than 7 million of those deaths directly linked to tobacco use and nearly 1.2 million of those deaths linked to exposure to secondhand smoke by non-smokers. Tobacco product consumption affects almost all organs of the body and smokers' health in general, moreover, smoking carries several impacts on users and their families, as well as social and financial consequences (Hamzeh et al, 2020). The initiation of most tobacco use occurs in childhood and adolescence, and approximately most tobacco products' first consumption occurs in less than 18 years (U.S. Department of Health and Human Services, 2012). Numerous studies ascertained that a lack of knowledge about the health effects of smoking is significantly related to a higher risk of smoking (Ahammed et al, 2019). Despite several outstanding efforts and effective solutions available, such as raising prices and banning promotions, sales to minors, and smoking in public places, tobacco continues to have a negative impact on

worldwide health trends (Shetty, 2018). As a result, one of the plans for lowering smoking-related morbidity and mortality in the community is to positively affect people's attitudes and encourage their participation in raising their knowledge and awareness regarding this global threat to population health (Shalaby and Soliman, 2019). To our knowledge, assessing public awareness about the tobacco-attributed disease and its health impact as well as evaluating their attitude toward smoking provides essential details regarding the scope and severity of the problem. Thus, this study aims to assess the knowledge and attitudes toward cigarette and water-pipe smoking in Erbil city.

SUBJECTS AND METHODS

This cross-sectional study was carried out in Erbil city, between September 1, 2021 through June 30, 2022. The sample size was calculated using the EPI-info computer program, assuming that the prevalence of smoking in Erbil is similar to Iraq's previously reported 30% (Ibrahim et al, 2018). It found that the sample size of 2578 was sufficient to achieve a 95% confidence interval in the population. The sample size was increased to 2600 to accommodate for incomplete, unreliable answers or non-response. A multi-stage sampling method was used, and in the first step, Erbil city was divided into 141 quarters based on the administrative map of the city, then in the second step, through systematic random sampling method households in each quarter were selected. For each quarter, it was determined a sampling interval k as the ratio of the estimated quarter size to the sample size. The first household in each quarter was selected randomly, and the next was selected by every (kth) interval household. The adults aged 18 years or over of both genders who were willing to participate were included in the study. Verbal consent was taken and the samples had been informed about the purpose of the study. Data was collected through direct interviews with the participants using a specially designed questionnaire comprising socio-demographic and economic features, besides smoking-related questions and questions about knowledge and attitude toward smoking. The statistical package for the social sciences (version 25) was used for data analysis. The socioeconomic level of participants was calculated based on the socioeconomic index for health research in Iraq (Omer and Al-Hadithi, 2017). Means, frequency, percentages, and Chi-square test were used in data presentation and analysis. A p-value of ≤ 0.05 was considered statistically significant.

RESULTS

The mean age $\pm$ SD was 38.75 $\pm$ 13.790 years. The majority (58.9%) were males, married (57.1%) and graduates (40.2%). A total of 795 (30.6%) were semi-skilled manual workers, and a total of 1182 (45.4%) individuals were from middle socioeconomic levels.
The details of participants' characteristics are shown in Table 1.

Table 1: Socio-demographic characteristics of study participants

Variables	No.	(%)
Age Groups		
< 20	176	(6.8)
20 - 29	647	(24.9)
30 - 39	597	(23.0)
40 - 49	525	(20.2)
≥ 50	656	(25.1)
$\overline{x}\pm SD$	38.75	(±13.790)
Gender		
Female	1069	(41.1)
Male	1532	(58.9)
Marital Status		
Single	984	(37.8)
Married	1485	(57.1)
Divorced	21	(0.8)
Widowed	111	(4.3)

Education

Illiterate/ Primary	781	(30.0)
Intermediate	306	(11.8)
High school or vocational	469	(18.0)
Graduates*	1045	(40.2)
Occupation		
Unskilled manual	534	(20.5)
Semi-skilled manual	795	(30.6)
Skilled manual	693	(26.6)
Others**	579	(22.3)
Socioeconomic Level		
Low	1134	(43.6)
Middle	1182	(45.4)
High	285	(11.0)
Total	2601	(100.0)

* Including Institute, College, and higher education

** Including associate professionals, skilled or highly professionals, and senior managers

Around half (44.3%) were smokers, about one-third (33.2%) never smoked before, and the rates of occasional smokers and Ex-smokers were 14.5% and 8.0% respectively. With regards to smoking type, 302 (19.8%) smoke cigarettes only, 456 (35.7%) smoke water-pipe only, and 610 (39.9%) smoke both cigarettes and water-pipe in combination (Table 2).

**Table 2: Distribution of the study population by smoking status and type of smoking**

Variable	No.	(%)
Smoking Status		
Current daily smoker	1153	(44.3)
Occasional Smoker	376	(14.5)
Ex-Smoker	207	(8.0)
Never-Smoker	865	(33.2)
Total	2601	(100.0)
Smoking Type		
Cigarettes	302	(19.8)
Waterpipe	546	(35.7)
Electronic Cigarette	16	(1.0)
Cigarettes and Waterpipe	610	(39.9)
Cigarettes +Waterpipe+ Electronic Cigarette	55	(3.6)
Total	1529	(100.0)

The main reasons behind cigarette smoking as mentioned by participants were personal pleasure (85.2%), entertainment (78.2%), and relieving stress and anxiety (61.7%), in addition to other reasons that are presented in Figure 1.
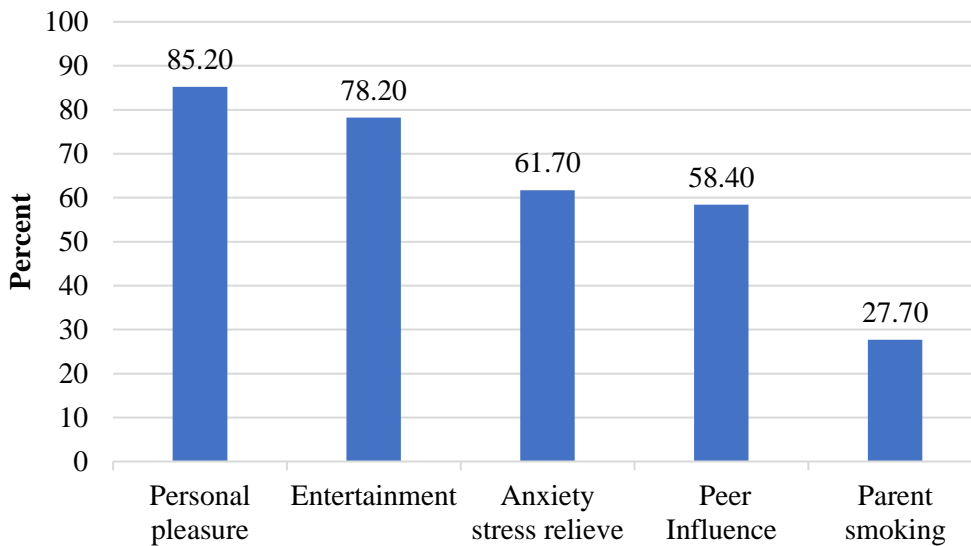
Figure 1. Reasons behind cigarette smoking

Almost all of the studied sample (99.0%) indicated personal pleasure as the main reason behind water-pipe smoking. The other reasons for waterpipe smoking were peer influence (71.8%), thinking that water-pipe is less harmful (71.1%), curiosity, and trying new things (42.5%), in addition to other reasons that have been presented in Figure 2.
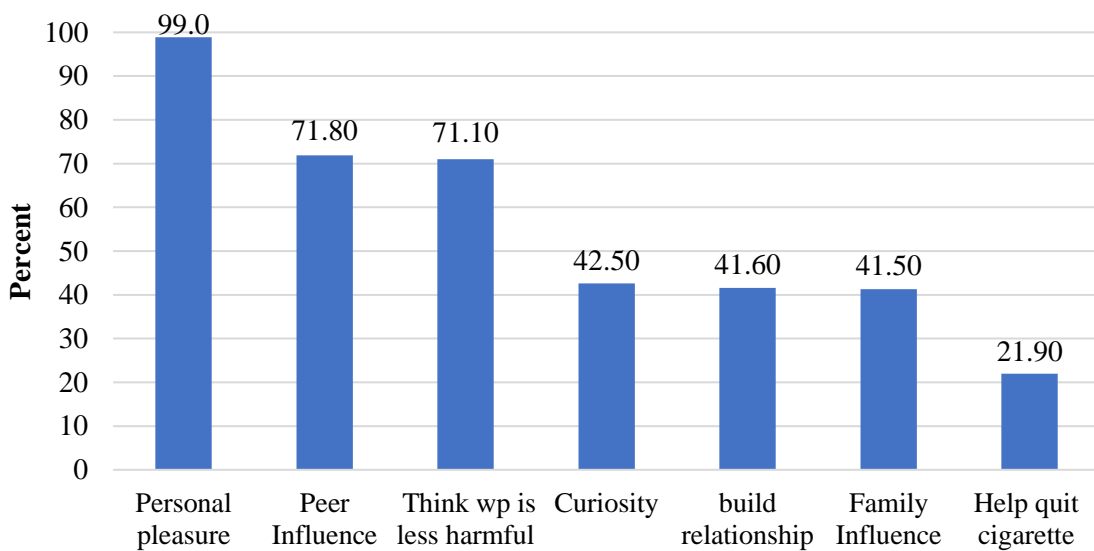
Figure 2. Reasons behind water-pipe smoking

Figure 3 shows participants' knowledge regarding health problems as a result of tobacco smoking. Respiratory diseases and lung cancer were the most common health problems indicated by 92.2% and 81.0% of the studied sample respectively, while the lowest rate was for stroke (30.60%) and infertility (22.10%).
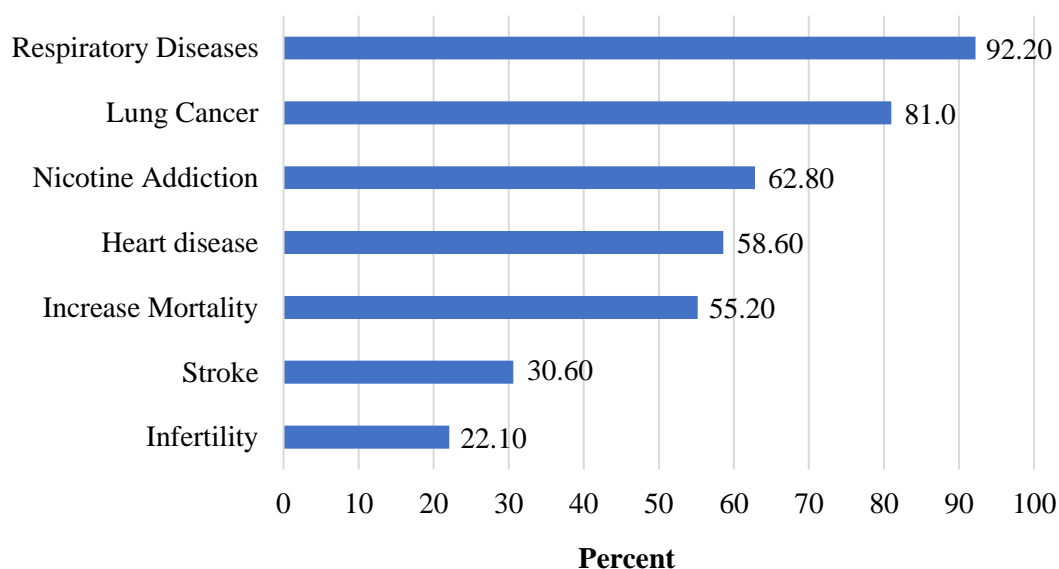
Figure 3. Distribution of the sample by knowledge of health problems due to smoking

Concerning attitudes toward smoking, nearly half (46.1%) of the sample disagree that smokers have more friends, and less than half (42.9%) disagree that smoking makes a person more attractive. Around two thirds of respondents (67.9%) agreed that smoking should be banned in public places and 61.2% believed that water-pipe smoking is addictive. The details of attitude toward smoking are shown in Table 3.

Table 3: The study participants' attitudes toward smoking

Variable	Disagree		Unsure		Agree	
	No.	(%)	No.	(%)	No.	(%)
People who smoke have more friends	1198	(46.1)	821	(31.5)	582	(22.4)
Smoking makes a person more attractive	1117	(42.9)	759	(29.2)	725	(27.9)
Smoking should be banned in public places	209	(8.0)	626	(24.1)	1766	(67.9)
Smoking is a good way to relaxation	883	(33.9)	929	(35.7)	789	(30.4)
Health warnings should be written on the pack	302	(11.6)	1006	(38.7)	1293	(49.7)
Water-pipe smoking is addictive	246	(9.5)	763	(29.3)	1592	(61.2)
Water-pipe smoking can harm children	204	(7.8)	873	(33.6)	1524	(58.6)
Water-pipe smoking in pregnancy harm baby	198	(7.6)	916	(35.2)	1487	(57.2)
Water-pipe smoking can kill you	323	(12.4)	1039	(39.9)	1239	(47.7)

* Multiple responses

DISCUSSION

In this study, 44.3% were current daily smokers. Albangy et al, (2019) and El-Shareif (2019) reported the prevalence of current smoking as 40.08% and 26.4% respectively. The variations in the reported prevalence of smoking may be attributed to the different study sites, sample sizes, and populations' socio-cultural and religious factors. The main reasons behind cigarette smoking were a personal pleasure, entertainment, relieving stress, and anxiety. Peer and parents' smoking were the reasons that led 58.4% and 27.7% respectively to start smoking. The same result was concluded from various studies by Nasser et al, (2018) in Yemen, and Jalal et al (2022) in Erbil city/Iraq. The strongest motivation and reason for smoking water-pipe in this study was a personal pleasure for nearly the entire sample (99.0%), in addition to peer pressure (71.8%), and the belief that water-pipe smoking is less harmful (71.1%). These findings are consistent with the study of Qasim et al, (2019) and Momenabadi et al, (2016) who indicated accessibility, curiosity, and peer pressure in addition to emphasizing misperception about fewer health risks of water-pipe smoking. Similar results were reported by Sighaldeh, et al (2020) in Iran, Soneji

et al, (2021) in the United States, and Nakkash et al, (2022) in three Eastern Mediterranean countries. Concerning knowledge about health problems as a result of smoking that respiratory disorders and lung cancer were the most frequently reported (by 92.2% and 81.0% of the sample, respectively), whereas fewer were aware of stroke (30.60%) and infertility (22.10%). These results are consistent with those of studies done by Hamadeh et al, (2018) in Bahrain, and Al-Sawalha et al, (2021) in Jordan. Moreover, other studies have reported somewhat similar to this study's observations showing the majority of the sample are aware that smoking causes lung cancer and heart diseases, but the rate was less for stroke and infertility (Trofor et al, 2018; He et al, 2021). Regarding attitude toward smoking this study showed that a considerable proportion of respondents agreed that smoking should be banned in public places, water-pipe smoking is addictive and harms children, especially during pregnancy smoking harm the baby. This result is supported by the result of Shalaby and Soliman, (2019) in Egypt and Nasser et al, (2018) in Yemen who mentioned that (94%) and (81.0%) of respondents respectively agreed that smoking should be banned in public places. In addition, the results of this study are in agreement with the studies by Sakka et al. (2022) in Jordan and Al-Jayyousi et al, (2022) in Qatar, which indicated that the majority of respondents believed that smoking is addictive. Furthermore, Nicholson et al, (2015) found that more participants (80.0%) than in the present study (30.4%) agreed that smoking calms down stress and is a helpful way to relax.

CONCLUSION

The prevalence of smoking was high and participants indicated that their personal desire, peer pressure, relieving stress and anxiety, curiosity and building relationship as the main motivators led them to smoke. Participants' knowledge was good for majority of health problems occur due to smoking. Positive attitude was observed toward smoking, the majority of respondents agreed that smoking should be banned in public places, and water-pipe smoking is addictive and harms children.

CONFLICTS OF INTEREST

The authors declare that they have no conflicts of interest.

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