

Knowledge and Attitude Towards Shisha Smoking Among Health College Students at Princess Nourah University.

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Abstract

Background Despite the negative effects of tobacco use, Saudi Arabia is one of the leading causes of death globally. In Saudi Arabia, 17.1% of both sexes and 3.0% of females aged 15 or older smoke. One common way to consume tobacco is through a shisha (waterpipe). This study aims to measure the knowledge of the negative health effects and attitudes toward shisha use among health college students at Princess Nourah University (PNU) in Riyadh, Saudi Arabia.

Method A descriptive, cross-sectional study was conducted at PNU's health colleges, with the 525 student participants selected evenly from each college by using cluster sampling into five health colleges (College of Health and Rehabilitation Sciences, Nursing, Dentistry, Medicine and Pharmacy), data was collected by a pretested, structured questionnaire and was coded, entered and analyzed by Statistical Package for the Social Sciences (SPSS) v.20.

Results 15.4% is the percentage for who had a history of smoked shisha. The percentage of current smokers was 4.19%. There was no association between the knowledge and shisha smoking practice ($P = .603$).

Conclusion In conclusion, the percentage of shisha smoking was high, in spite of having a high level of knowledge. Also, the knowledge toward shisha smoking and shisha practice was not associated. In contrast to a study conducted in USA which showed a slight association between the knowledge and smoking practice. (44)

Introduction

Tobacco use is one of the leading causes of death globally. The estimated number of people who used tobacco in 2015 was 1.1 billion.⁽¹⁾ According to the WHO, over 6 million deaths across the world in 2017 were a result of exposure to tobacco, either because of direct use or second-hand exposure.⁽²⁾ The rate of tobacco use showed an increase in the Eastern Mediterranean Region.⁽¹⁾ In Saudi Arabia, 17.1% of both sexes and 3.0% of females aged 15 or older currently smoke.⁽³⁾ One popular method of tobacco use in Arab culture that has recently become more popular across the world is shisha, or as they called it in other places, "argila."⁽⁴⁾ The estimated number of people who smoke shisha worldwide is 100 million.⁽⁵⁾ Shisha can be defined as flavoured tobacco whose smoke is more aromatic compared to other tobacco products'.^(6,4) Shisha consists of four parts: head, body, water bowl and hose. After a coal on the shisha's head heats up the tobacco, the smoker inhales the smoke from the head after it passes through the water bowl into the smoker's lungs.⁽⁷⁾

Many studies have shown that shisha has the same negative health effects of cigarette smoking. Furthermore, one hour of shisha smoking has a similar effect as smoking 100 cigarettes.⁽⁸⁾ In addition, various studies have shown that shisha use is one of the most important risk factors associated with

ailments such as respiratory diseases, oral cancer, lung cancer, stomach cancer, heart diseases, reduced lung function and decreased fertility.⁽⁹⁾

The factors that can be associated with shisha smoking include age, sex and income. One factor that may explain the popularity of shisha smoking could be people's tendency to socialize through a shared activity or interest.⁽¹⁰⁾

Shisha smoking has become more popular among college students in many countries. In 2012 in the USA 11.5% of the student's population in Florida were shisha smokers, while in Pakistan (2008), 22% of female college students were smokers.^(11,8) Moreover, some studies have shown that in Arab countries there is a high prevalence of shisha smoking among college students. At the national level of Saudi Arabia in Dammam 'on the Arabian Gulf is the capital city of Saudi Arabia's eastern province, a study conducted showed that 3.7% of the female students were shisha smokers.⁽¹²⁾ 2% of female students were shisha smokers in a study carried out at King Saud University in Riyadh.⁽¹³⁾

The Ministry of Health in Saudi Arabia predicts an increase of shisha smoking among females in the future, which would be a serious issue because tobacco use is associated with many diseases.^(9,14) Measuring the knowledge and attitude towards shisha smoking will help to find out what insufficient information students have and what their attitudes are towards shisha smoking. Determining the number of shisha smokers and analysing the factors behind smoking will help to explain why the students are shisha smokers, That will help to build a stronger strategy to avoid the increase of shisha smoking by establishing public health campaigns.

This study aims to measure the knowledge of and attitude towards shisha use among health college students at Princess Nourah University in Riyadh, Saudi Arabia.

Methodology

A descriptive, cross-sectional and facility-based study was conducted at Princess Nourah University (PNU), Riyadh, Saudi Arabia which is a female university. The target population was all students in PNU's health colleges (Health and Rehabilitation Sciences, Nursing, Dentistry, Medicine and Pharmacy) except the foundation programme. The calculated sample was 576 participants who were selected evenly from the five colleges by using cluster sampling; the number of students from each college was 115, while the response rate was 91.1% (525 students out of 576). Students available at the time of data collection were chosen from all academic levels. Data was collected by using self-administrated, structured questionnaires. The questionnaires included 31 questions, classified into four parts. The first part included demographic factors (college, age and marital status). The second part contained 8 questions to measure the knowledge of the negative health effects toward shisha smoking. The third part contained 5 questions to measure the attitude towards shisha smoking and 6 questions to gather students' opinions toward shisha smoking. The last part contained 9 questions, only for current smokers, included questions to find out why, where and with whom they are smoking shisha and if they have the intention to quit

smoking. Before the data collection, a pilot study of 6 students was conducted to test the validity of the questionnaire.

Data was coded and entered into the Statistical Package for Social Sciences (SPSS). Descriptive statistics were in the form of frequency tables to describe the socio-demographic factors and the percentage of shisha smoking among the students, students' friends and family members. A chi-square test was used to determine the relationship between dependent and independent categorical variables, with a cutoff point of less than 0.05. The test was used to find out the relationships between socio-demographic factors and the knowledge, attitudes and shisha smoking habits of participants. It was also used to find out differences in knowledge, attitudes and opinions toward shisha smoking among the smokers and non-smokers.

Ethical approval

IRB approval was given before the start of the study. Informed consent was taken from all participants. The information and data collected were kept confidential. This study included no personal information or identifiers such as names or ID information. There were no risks for the participants, as the research was verbal with no actions or experiments. Two parties benefitted: the participant and society.

Results

The results are divided into four sections: First, the socio-demographic factors for the sample population. Second, the prevalence of shisha smoking among health college students. Third, percentages of the students' knowledge, attitude and perceptions. Fourth, the relationship of age with knowledge and attitude.

Socio-demographic factors

Table (1) shows the percentages of the different age groups; 98.5% of the students were between 19 and 25. The percentage of the students who were married or have been married was 3.6%, while the rest of the students were single.

Table 1
Frequency of socio-demographic factors among health colleges students in PNU.

Age	Frequency	Percent
less than or equal 18 years	4	0.8
Between 19–25 years	517	98.5
More than 25 years	4	0.8
Total	525	100
Marital statuses		
Single	504	96.4
Ever marriage	14	3.6
Total	523	100

Prevalence of shisha smoking among health college students at PNU

Table (2) shows the percentage of the students who had ever smoked shisha. The total percentage was 15.4% (80 out of 525). 27.5% of the smokers were current smokers and 11.3% were ex-shisha smokers, while 61.3% of them had smoked only one time.

Table 2
Percentages of shisha smoking among health colleges

Prevalence of shisha smoking	Frequency	Percent
No	444	84.6
Yes	81	15.4
Total	525	100
Shisha smoking status		
Once just to try	49	61.3
For period of time but I quit	9	11.3
Yes, I still smoking	22	27.5
Total	80	100

Knowledge, attitude and perception toward shisha smoking

Figure (1) presents the level of knowledge of shisha smoking the students have. Approximately 59.4% of the students had good knowledge, 36% of the students had fair knowledge and few of the students had poor knowledge – only 4.6%.

Figure (2) presents the attitudes the students have toward shisha smoking. Most of the students (72.6%) have a neutral attitude toward shisha smoking, and only 5.1% of the students have a positive attitude.

Relationship of age to knowledge and attitude

Table (3) shows there is association between age and knowledge toward shisha smoking: ($P = .033$) of the students aged 19–25 years.

Table 3
Association between knowledge and age among health colleges students in PNU

Age	Knowledge			Total	P Value
	Poor	fair	good		
less than or equal 18 years	1	3	0	4	.033
Between 19–25 years	25%	75%	0.0%	100%	
More than 25 years	23	186	308	517	
Total	4.4%	36%	59.6%	100%	
	0	0	4	4	
	0.0%	0.0%	100%	100%	
	24	189	312	525	
	4.6%	35.2%	64.8%	100%	

* statistically significant difference ($p < 0.05$).

Table (4) shows 72.7% of the students aged 19–25 years had a neutral attitude and only 5% of them had a positive attitude. Of the students who were more than 25 years old, 75% of had a neutral attitude. However, 72% of the single students had a neutral attitude and only 5.4% of them had a positive attitude. The results show no difference between the attitude and socio-demographic factors.

Table 4
Association between attitude and age among health colleges students in PNU.

Students colleges	Attitude toward shisha			Total	P-Value
	Negative attitude	Neutral attitude	Positive attitude		
less than or equal 18 years	2	2	0	4	.21
Between 19–25 years	50.0%	50.0%	0.0%	100.0%	
More than 25 years	115	376	26	517	
Total	22.2%	72.7%	5.0%	100.0%	
	0	3	1	4	
	0.0 %	75.0%	25.0%	100.0%	
	117	381	27	525	
	22.3%	72.6%	5.1%	100.0%	

Discussion

In this study, the percentage of shisha smoking among the students is 15.4% (27.5% of them are current smokers, 61.3% smoked once and 11.3% are ex-smokers), which is slightly less than in a study conducted at King Saud University in Riyadh that showed 18.9% of the students smoked shisha at least once during

their lifetime⁽¹⁵⁾ However, another study conducted earlier at King Saud University, in 2007, showed a lower prevalence (2%) in comparison to the results in this study.⁽¹³⁾

There is no different level of knowledge between health colleges. The majority of the participants in all colleges have a good level of knowledge, with knowledge increasing with age. The high level of knowledge could be a reflection of the students' backgrounds. This is in contrast to a study that was conducted in Pakistan that found the level of knowledge is different from college to college, specifically that pharmacy students have better knowledge than medical students.⁽¹⁶⁾

The study finds no association between the knowledge of shisha smoking and smoking practice. This is in contrast to several studies conducted around the world: In the USA a slightly significant association between knowledge and smoking practice was shown.⁽¹⁷⁾ This is in addition to another study done in Turkey in 2015 which showed that smokers have less knowledge compared to non-smokers.⁽¹⁸⁾ A study conducted in London also found out that shisha smokers have less knowledge compared to non-smokers.⁽¹⁹⁾ In this study, the students have a similar level of knowledge, which could explain why there is no association between the knowledge and shisha smoking practices.

The results show that most shisha smokers have a family member who also smokes shisha. Likewise, a study in Dammam showed that students are more likely to be a smoker if their mother or father is a smoker.⁽¹²⁾ The association between being a smoker and having a family member who smokes could be because of the availability of the shisha in their home. This is in contrast to a study conducted in Pakistan found out there is no association between shisha smoking and having a smoker in the family.⁽²⁰⁾ The results also show that most of the students who have a positive attitude have a shisha smoker friend. In the same way, a previous study in Riyadh showed that most of the students who have a positive attitude toward shisha smoking reported that one of their closest friends used shisha.⁽¹⁵⁾

Limitations

This study had one limitation The study targeted students in health colleges, so the results cannot be generalized to non-health colleges.

Conclusion

In conclusion, the percentage of shisha smoking was high, in spite of participants having a high level of knowledge. There was no association between colleges and knowledge of shisha smoking. Most of the students who are shisha smokers or have tried during their lifetimes have a shisha smoker in their family.

Declarations

Ethics approval and consent to participate:

The ethics approval was obtained from the Human Research Ethics Committee, Princess Nourah University, Riyadh, Saudi Arabia. The consent of the participants was written.

Consent for publication:

Not applicable.

Availability of data and material:

Not applicable.

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Not applicable

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Competing interests:

The authors declare that they have no competing interests

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Figures

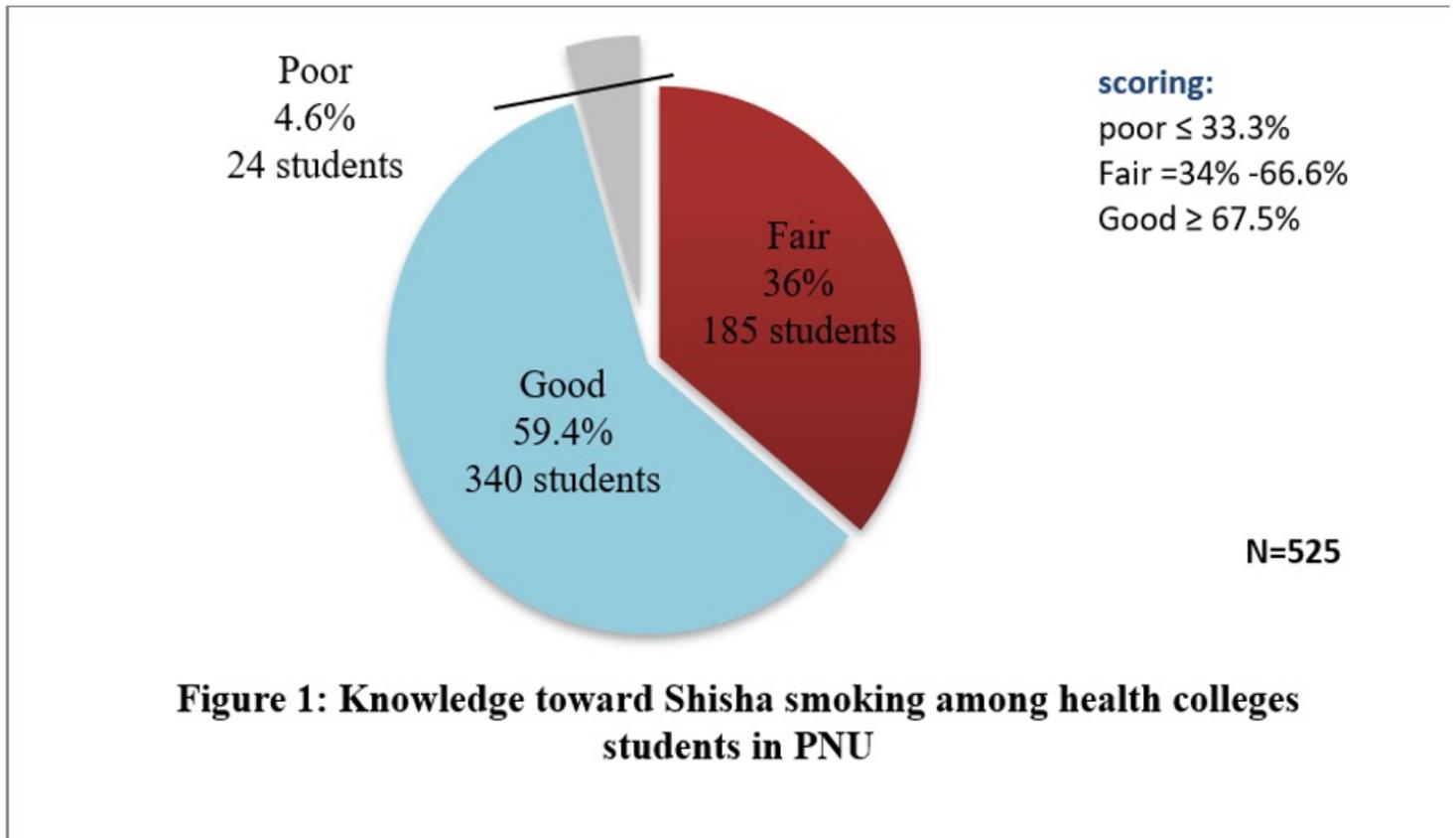


Figure 1

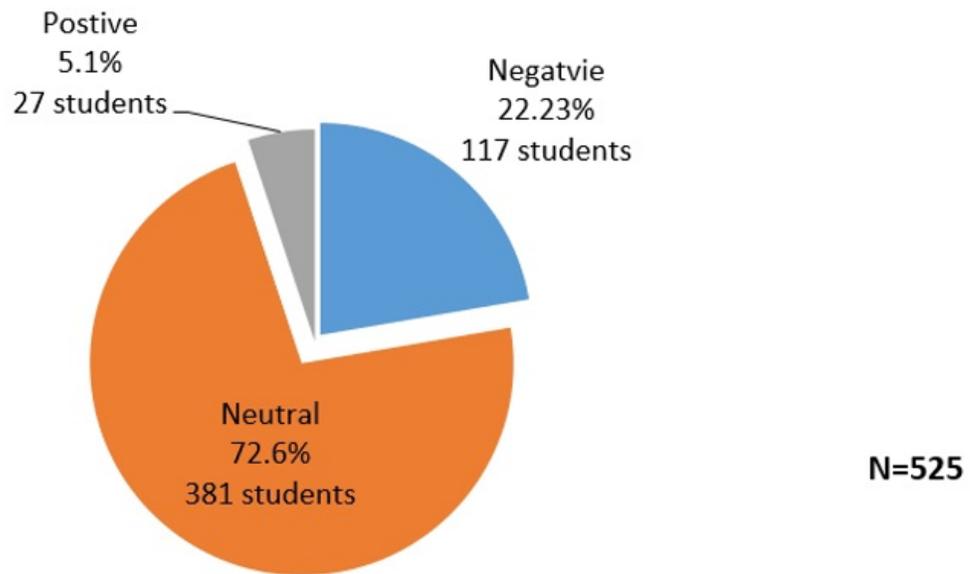


Figure 2: Attitude toward Shisha smoking among students in health colleges

Figure 2