

Frequency, Knowledge, Attitude and Intent to Stop Cigarette Smoking among Nursing Students

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ABSTRACT

Background: Cigarette smoking is a foremost health-related problem worldwide that can lead to morbidity and mortality. The prevalence of cigarette smoking and cessation intentions vary from one country to another. However, smoking cessation is the single most effective preventive strategy for enhancing health and extending life.

Objective: (a) To determine the frequency of cigarette smoking; (b) To assess the knowledge, attitude of cigarette smoking and intent to stop it (c) To identify the association of cigarette smoking with demographic variables.

Methods: This cross-sectional study was conducted in two private nursing colleges in Karachi, from January to June 2019. The study included both male and female Nursing students. The non-probability convenience sampling technique was used to approach the participants. The chi-square test was applied to determine the significant association between cigarette smoking and demographic variables such as age, gender, marital status, and language. p -value ≤ 0.05 was taken as statistically significant.

Results: Out of 150 study participants, the smoking frequency was 16 (10.7%). Eighty-eight (58.7%) of the study participants had a fair knowledge of cigarette smoking in this study. About one-fifth of (18.7%) participants intended to quit smoking. Almost one-fourth (24%) of the study participants verbalized that their friends are smokers, while 15.3% of participants' parents were smokers.

Conclusion: It is concluded that nursing students had some knowledge about adverse health effects of tobacco use, and few participants intended to stop smoking. It is recommended that nursing institutions organize smoking cessation sessions periodically to avoid from detrimental effects of smoking.

KEY WORD: Frequency, knowledge, attitude, Cigarette smoking, Nursing students

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INTRODUCTION

Globally, cigarette smoking is more prevalent in developing countries than in developed countries.¹ Moreover, it is also reported that more than eight million people die yearly from tobacco use. Although smoking is recognized as a modifiable risk factor for many chronic illnesses, such as respiratory, cardiovascular,

and cerebrovascular diseases.² According to the World Health Organization (WHO), the prevalence of cigarette smoking in Pakistan was found to be 38% in men and 4% in women, which is estimated to increase up to 45% in men and 2% in women by 2025.³ A research study reported that smoking causes five million smoker deaths each year and also expected that its rate will be eight million per year by 2030.⁴

Tobacco chemical contains carcinogens such as tar, nicotine, ammonia, formaldehyde, benzene, carbon monoxide, phenols, and nitrosamine, which may cause tumors.⁵ Tobacco smoking is also a major cause of non-communicable diseases like cancer. Moreover, it increases the burden of the disease, which is still manageable in developed countries. In contrast, it remains challenging for developing ones.⁶ Healthcare providers also consume cigarettes in the healthcare sector, primarily in educational institutions. At the same time, they can perform a major role in the community for cigarette cessation.⁷ Due to early adulthood, a vast friend circle, and free access to tobacco, undergraduate students are more intimate towards smoking.⁸ It is established by current research that cigarette smoking prevalence among college students is much higher in males than females.⁹ Cigarette smoking has become a fashion among students. Family history, illiteracy, friendship circle, mood instability, academic failure, and joblessness are considered as risk factors for cigarette smoking.¹⁰

Healthcare workers are considered as a pivotal asset in the fight against tobacco, due to their credibility in society as a reliable source of health information. The positive role of healthcare professionals can influence the public in smoking cessation efforts and can support national tobacco control policy.¹¹ Furthermore; documentary evidence shows that applied intervention is a viable option among students to quit smoking.¹² Another research study was accomplished in Pakistan, which depicted poor

knowledge about smoking hazards among students.¹³

There is a lack of data about the prevalence of tobacco smoking among nursing students. This study aimed to determine the frequency, knowledge, attitude, and intent on stop cigarette smoking and identify the association of cigarette smoking with demographic variables including age, gender, marital status, and mother tongue of nursing students at the private nursing institutes of Karachi, Pakistan.

METHODS

The descriptive cross-sectional study was conducted at New Life College of Nursing and Karachi King College of Nursing, Karachi during the period of six months from January to June 2019. Based on a previous study¹⁴, the calculated sample was 159 nursing students of both genders with a 95% confidence level and a 5% confidence limit. The response rate was 98.94%.

Participants were selected through the non-probability convenience sampling method. Male and female nursing students studying in the first year to final year in Post RN-BSc Nursing (Post-Registered Nurse Bachelor of Science in Nursing) and age ranges from 18 years to 30 years were included in the study. Furthermore, known cases of psychotic disorder and those who were unwilling to participate in the study were excluded from the study. Students were approached in their classrooms.

The study protocol was approved by Institutional Review Committee (IRC) [Ref. No: IRC-18/NLCON/01]. Study objectives and questionnaires were explicitly explained to all subjects, and written informed consent was obtained before data collection from all the subjects. Firstly, the self-administered, validated, open-accessed questionnaire was distributed among all classes and collected back. The principal investigator was there all the time for any query. For the knowledge, correct answers awarded 1 number and zero scores for

the wrong answer. The level of knowledge was categorized as <50% poor, 51-79% fair and ≥80% considered as good knowledge. The subject's participation was voluntary. The confidentiality of subjects was entirely guaranteed. Moreover, written permission was taken from respective departments for data collection.

Statistical Analysis

The data entry and analysis were carried out by using SPSS version 21. The descriptive variables were presented as mean, frequency, and percentages. The chi-square test was applied to determine the significant association between cigarette smoking and demographic variables. The p-value < 0.05 was regarded as significant.

RESULTS

The frequency of smoking among the participants was found to be 10.7%, with a high proportion of smoking found among females 56.25%. In this study, 62% participants were female. As far as marital status is concerned, nearly two-thirds (63.3%) of the study subjects were single. No demographic variables were found to be statistically significant with smoking. The association between cigarette smoking and the socio-demographic factor of study participants is shown in Table 1.

Table 2 represents the knowledge about cigarette smoking among nursing students. More than half 58.7% and almost one-third 32% of the participants have Fair and poor knowledge of cigarette smoking respectively. A large number 82% of participants know that smoking causes lung cancer. 34.7% of subjects reported that there is no risk of passive smoking. 32.7% of study participants said that smoking reduces stress levels and lower blood pressure. Table 3 reveals the attitude toward cigarette smoking among students. More than one-fourth, 76.7% participants strongly agreed and agreed that it has a detrimental effect on health. 38.7% of respondents strongly recommended the ban on smoking.

Table 4 shows the intention to quit smoking. 6.25% strongly agreed and 18.75% of participants agreed on having the intention to quit smoking at this point. While, 25%, and 18.75% of subjects showed the intention to quit smoking within six months and within the year respectively. Family and friends' history of smoking is revealed in Figure 1. The majority (26.6%) verbalized that no one is smoking, 24% said their friends are smokers, and only 15.3% said that their parents are smokers.

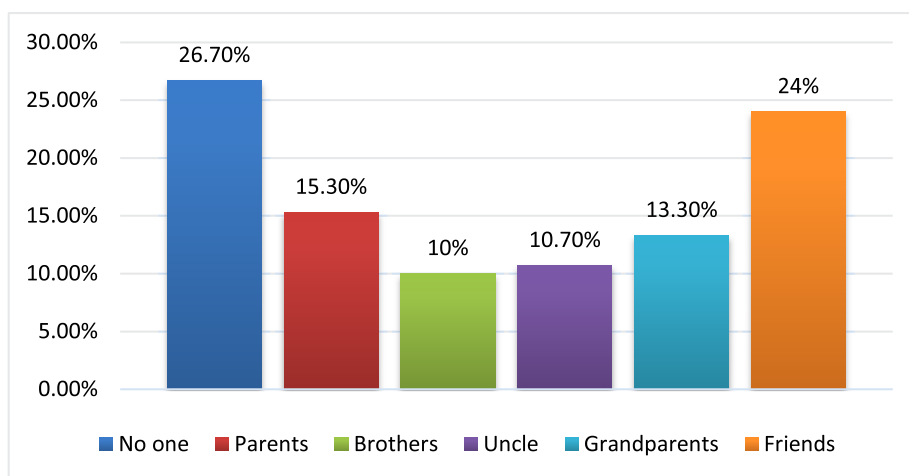


Figure 1: Family and Friends History of Smoking

Table 1: Association of cigarette smoking with demographic variables

Variable	Ever Smoked		χ^2	p-value
	Yes n (%)	No n (%)		
Age			7.72	0.22
18-19	1 (4.35)	22 (95.65)		
20-21	1 (4.55)	21 (95.45)		
22-23	1 (4)	24 (96)		
24-25	3 (14.29)	18 (85.71)		
> 25	10 (17.55)	47 (82.45)		
Gender			0.19*	0.78
Male	7 (12.29)	50 (87.71)		
Female	9 (9.68)	84 (90.32)		
Marital Status			6.81	0.08
Married	10 (18.87)	43 (81.13)		
Single	6 (6.31)	89 (93.69)		
Widow	0 (0)	1 (100)		
Divorced	0 (0)	1 (100)		
Language			5.18	0.23
Urdu	3 (7.5)	37 (92.5)		
Punjabi	8 (18.6)	35 (81.4)		
Sindhi	3 (5.89)	48 (94.11)		
Balochi	0 (0)	5 (100)		
Others	2 (18.19)	9 (81.81)		
Onset of Smoking			NA	NA
Before nursing education	10 (100)	0 (0)		
During nursing education	5 (100)	0 (0)		
After nursing education	1 (100)	0 (0)		
Duration of smoking (years)			NA	NA
1-2	1 (100)	0 (0)		
3-4	1 (100)	0 (0)		
5-6	1(100)	0 (0)		
>6	13 (100)	0 (0)		
Usually Smoking at			NA	NA
Home	4 (100)	0 (0)		
Friends	11 (100)	0 (0)		
Public place	1 (100)	0 (0)		

Pearson's chi-square test was applied; N/A: Statistical test was not applicable

Table 2: Knowledge about cigarette smoking among nursing students

Statements	Correct n (%)	Incorrect n (%)	Don't know n (%)
Humans cannot become addicted to the nicotine in cigarettes.	50 (33.3)	89 (59.4)	11 (7.3)
Smokers are more likely than non-smokers to develop lung cancer.	123 (82)	21 (14)	6 (4)
Smoking in pregnancy only harms maternal health but does not affect the fetus.	29 (19.3)	110 (73.4)	11 (7.3)
Second-hand smokers' health is unaffected.	52 (34.7)	91 (60.7)	7 (4.6)
Smoking can relieve stress and lower blood pressure.	49 (32.7)	65 (43.3)	36 (24)
Smoking can make you feel fatigued easily	81 (54)	40 (26.7)	29 (19.3)
Nicotine first stimulates the human nervous system and then inhibits it.	96 (64)	27 (18)	27 (18)
Smoking enhances the lungs' ability to exchange air.	81 (54)	47 (31.3)	22 (14.7)
The cilia in the respiratory mucosa atrophy with prolonged smoking.	104 (69.3)	21 (14)	25 (16.7)
The ability of red blood cells to bind oxygen and hemoglobin is decreased by the carbon monoxide in cigarettes.	109 (72.7)	17 (11.3)	24 (16)

Table 3: Attitudes toward cigarette smoking among students

Statements	Strongly Agree n (%)	Agree n (%)	No Opinion n (%)	Disagree n (%)	Strongly Agree n (%)
Smoking signifies that one is a grown-up.	16 (10.7)	43 (28.7)	30 (20)	53 (35.3)	8 (5.3)
Smoking relieves stress and helps to relax the body.	18 (12)	31 (20.6)	34 (22.7)	52 (34.7)	15 (10)
Smoking is a disgusting behavior	50 (33.3)	56 (37.3)	8 (5.3)	25 (16.7)	11 (7.4)
Smoking is harmful effects on people's health.	76 (50.7)	39 (26)	7 (4.6)	9 (6)	19 (12.7)
Smoking helps thinking.	7 (4.7)	10 (6.7)	41 (27.3)	74 (49.3)	18 (12)
Accepting a friend's offer of a cigarette, the friend will accept you more.	11 (7.3)	33 (22)	37 (24.7)	50 (33.3)	19 (12.7)
For public health, smoking should be strictly prohibited in public areas.	58 (38.7)	46 (30.7)	8 (5.3)	20 (13.3)	18 (12)
Others have no right to interfere with one's freedom to smoke.	24 (16)	25 (16.7)	16 (10.7)	59 (39.3)	26 (17.3)
I prefer being with friends who do not smoke.	80 (53.3)	37 (24.7)	5 (3.3)	11 (7.3)	17 (11.4)
I hope that my children will not smoke.	88 (58.7)	27 (18)	4 (2.6)	6 (4)	25 (16.7)

Table 4: Intention to quit smoking

Statements	Strongly Agree n (%)	Agree n (%)	No Opinion n (%)	Disagree n (%)	Strongly Disagree n (%)
I like smoking and do not want to quit at this time.	2 (12.5)	2 (12.5)	2 (12.5)	8 (50)	2 (12.5)
I smoke cigarettes but I am not addicted.	1 (6.25)	3 (18.75)	3 (18.75)	6 (37.5)	3 (18.75)
I would like to quit smoking but have never really tried.	1 (6.25)	6 (37.5)	3 (18.75)	4 (25)	2 (12.5)
I wish I could quit smoking cigarettes but now I cannot quit.	2 (12.5)	0 (0)	3 (18.75)	9 (56.25)	2 (12.5)
I have tried to quit smoking but was unsuccessful.	2 (12.5)	1 (6.25)	6 (37.5)	5 (31.25)	2 (12.5)
I am trying to quit smoking at this time.	1 (6.25)	3 (18.75)	3 (18.75)	7 (43.75)	2 (12.5)
I plan to quit smoking cigarettes within six months.	0 (0)	4 (25)	6 (37.5)	4 (25)	2 (12.5)
I smoke cigarettes now but intend to quit within the year.	1 (6.25)	2 (12.5)	5 (31.25)	7 (43.75)	1 (6.25)

DISCUSSION

Tobacco smoking is one of the biggest threats to health and contributes to high mortality and morbidity worldwide. Nurses are considered the backbone of the health profession and can contribute to smoking cessation and prevention. Therefore, it is of greater consideration to know their understanding of tobacco smoking, their attitude, and their practice towards it. This study revealed that the frequency of smoking among nursing students was 10.67%. It is in line with studies conducted in Spain¹⁴ and India.¹⁵ In

contrast, different from studies carried out in Tunisia 20.6%,¹⁶ and in Saudi Arabia, 30.1%.¹⁷ It has been documented that the prevalence among nursing students is comparatively lower than other health professionals in Pakistan. Compared with the general population (22%)¹⁸ and university students (49.5%)¹⁹, frequency is much lower in nurses, probably due to sound knowledge and awareness of its hazardous effects. It is surprising that among those who smoke, 56.25% were female. It is in contrast

with the previously conducted studies^{20,21} also national and global prevalence²² but congruent with a study carried out in China.²³ Majority of the smokers were from the age group above 25 years and initiated smoking before nursing education, and smoked with friends. Another influencing factor found is smoking by parents. A study carried out in Rawalpindi, Pakistan on medical students revealed that 41.9% initiate smoking by friends.²¹

The figures depicted that those participants having friendships with smokers are more vulnerable to initiating smoking in their life. An interesting finding of the study is that 78% of the participants prefer friends who do not smoke. According to Learning Theory, people learn from others through observation, imitation, and modeling.²⁴ Close social bonding with Parents and friends in the environment of human development are key influencing factors in developing behaviors.

The overall attitude towards anti-smoking was found positive. A high proportion of respondents (69.4%) agreed that smoking should be strictly prohibited in public areas for the good of public health. A study conducted in Sousse, Tunisia on nursing students to know their smoking behavior, knowledge, and attitude toward anti-smoking regulation reveals that banning the sale of cigarettes to minors and smoking in public places have key importance in anti-smoking regulation.¹⁶ WHO highlights that exhibiting and broadcasting promotion and sponsorship rise and continue tobacco use via enrolling new users and by dispiriting users from quitting.²⁵

It is in the constitution of Pakistan vide ORDINANCE No. LXXIV OF 2002, "Prohibition of Smoking and Protection of Non-Smokers Health Ordinance, 2002"; smoking is prohibited in public places and vehicles also prohibit the sale to minors and any type of advertisement.²⁶

It is important to note that 76.7 % of the participants do not want to have their children

smoke. This finding is significant and encouraging for a smoking-free environment.

A study conducted in Auckland, New Zealand revealed parents believed in a smoking-free life and desired to safeguard their children from smoking. Building children's knowledge of the hazardous effects of smoking, minimizing access, prohibiting sales to minors, and banning smoking in public places are effective strategies to prevent children from this bad habit of smoking.²⁷

It is more surprising that besides fair knowledge of smoking effects, very few participants (18.7%) have an intention to quit smoking while 32.6% have no such intentions. This behavior resembles with the study conducted in Spain, where the majority gave a great deal of importance to quitting smoking but they show very little motivation. Even though, 34.7% of participant nurses replied that smoking is a bad habit.¹⁴

CONCLUSION

It is concluded that most of the participants had a fair knowledge of the hazardous effect of cigarette smoking, whereas few participants had the intention to quit tobacco smoking. The current study's findings recommend initiating a necessary antismoking campaign like educational intervention or seminars for nursing students to get maximum awareness about the harmful effects of cigarette smoking. A smoking-free zone may be developed at educational institutions.

Conflict of Interest:

All authors and co-authors declare that they have no conflict of interest.

Contributors:

R: Designed the study, and is responsible and accountable for the accuracy or integrity of the work.

B: data analysis, interpretation

AUK: draft the manuscript, investigation

AG: Data collection, data entry

G: final revision and approval

All authors approved the final version and signed the agreement to be accountable for all aspects of work.

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Data Sharing Statement:

The data that support the findings of this study are available from the corresponding author on reasonable request.

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