

Original Article

Frequency of Knowledge of Risk and Complications of Cigarette Smoking among Female Smokers

Mehak Ali^{1*}, Bashir Ahmed Shaikh¹, Imdad Ali¹, Zahid Ali¹, Aneel Kumar¹, Zunaira Zulfiqar², Sham Lal¹, Iqra Haider¹

¹Shaheed Mohtarma Benazir Bhutto Medical University Larkana, Pakistan.

²Sindh Institute of Urology and Transplantation Karachi, Pakistan.

*Corresponding Author: Mehak Ali; Email: Mehakansari84@gmail.com

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ABSTRACT

Background: Despite the significant role of smoking in causing preventable diseases, many women smokers lack an understanding of the associated risks. Gaining insights into their knowledge levels is crucial for designing effective health interventions that promote smoking cessation and enhance overall public health.

Objective: To assess the level of awareness regarding the risks and complications of cigarette smoking among female smokers.

Methodology: A cross-sectional study was conducted at the Outpatient Department of Medicine, Shaheed Mohtarma Benazir Bhutto Medical University, Larkana, Pakistan, from July to December 2023. The study involved 126 female smokers. Data were collected using a 15-item questionnaire to evaluate the participants' knowledge about the risks and complications of smoking. The responses were categorized as low, moderate, or high knowledge. Statistical analysis was performed using SPSS version 26.0.

Results: The participants' average age was 31.25 years (SD = 13.55 years). Knowledge levels about smoking risks among the participants were distributed as follows: 54.8% had low knowledge, 30.2% had moderate knowledge, and 15.1% demonstrated high knowledge of smoking risks and complications.

Conclusion: Over half of the female smokers surveyed exhibited low awareness of the dangers associated with smoking. This underscores the need for targeted educational and health-related activities to effectively reduce smoking levels among women.

Keywords: Cigarette Smoking, Knowledge Assessment, Public Health, Risk Factors, Smoking Cessation.

INTRODUCTION

Tobacco use represents a significant public health challenge, contributing to morbidity, premature death, and diminished functionality globally. Currently, there are approximately 1.8 billion tobacco smokers worldwide, with over 80% residing in low and middle-income countries. Tobacco is among the leading preventable causes of death globally, accounting for more than 8 million fatalities annually and imposing an economic burden of approximately US\$ 1.4 trillion each year. Of these deaths, over seven million are attributed directly to tobacco use, while an additional 1.2 million are due to exposure to secondhand smoke. Approximately 22.3% of the global population uses tobacco, which includes 36.7% of men and 7.8% of women (1-4).

In low- and middle-income countries, the prevalence of tobacco smoking is on the rise, whereas it is declining in many high-income nations. The South-East Asian region has seen an increased tobacco burden in recent years, with a notable percentage of the adult population in countries such as Pakistan, India, Bangladesh, and Sri Lanka engaged in tobacco use. Specifically, in Pakistan, about 23.9 million adults, or 19.1% of the population (31.8% men and 5.8% women), currently use tobacco in some form. The year 2017 alone saw approximately 163,360 deaths in Pakistan related to tobacco smoking, with daily hospitalizations of around 5,000 Pakistanis for tobacco-related ailments (5-9).

Research into the awareness of the risks and complications associated with cigarette smoking has been pivotal among various demographic groups, including students and healthcare providers. However, there has been limited focus on female smokers, particularly in ethnic communities where smoking is becoming increasingly prevalent. A study by Bhanji S. et al. revealed that a significant majority of Pakistani women are aware of the adverse effects of smoking on health: 84% acknowledged its detrimental impact on women's health, 77% were aware of its negative effects on the fetus, and 88% understood that passive smoking adversely affects children's health. Nevertheless, only 14% of respondents recognized its carcinogenic potential, and a mere 7% were aware

of its cardiovascular risks (12). Another study by Rahman M. et al. found that only 20.1% of women had a high level of knowledge regarding the dangers of secondhand smoke exposure, and 37.3% exhibited non-dismissive attitudes towards these risks (10). Show KL. et al. reported that while 80% of current female smokers smoked at home, only 16% were aware of having a pregnant woman in the vicinity during smoking, and less than 20% were cognizant of the negative impacts on pregnancy outcomes (13).

This study aims to address the critical gaps in research concerning the awareness of smoking-related health risks among Pakistani women. Given the scarcity of recent investigations and cultural influences on female smokers in lower and middle-income settings, this research seeks to update the literature, identify gaps, and propose interventions that could significantly impact health outcomes.

METHODS

The study employed a cross-sectional design, conducted at the Medicine Outpatient Department of SMBBMU, Larkana, from July to December 2023. A sample of 126 female patients, aged between 18 and 70 years, who regularly smoked cigarettes, was selected using a non-probability consecutive sampling method. These participants were either patients themselves or attendants accompanying other patients at the clinic.

Individuals who were former smokers, non-smokers, or those with cognitive impairments that could hinder effective communication during the interview process were excluded. Additionally, individuals who expressed unwillingness to participate in the study were not included. Data collected included demographic information such as names, ages, residential, educational, and marital statuses, as well as occupations, religions, socioeconomic statuses, employment statuses, and monthly incomes.

Information regarding tobacco use included the duration of cigarette smoking, the number of cigarettes smoked per day, and the number of smokers residing within each participant’s household. Participants’ awareness and understanding of the risks associated with cigarette smoking were assessed through a structured 15-question checklist. Responses to these questions were recorded and categorized as “Yes,” “No,” or “Don’t Know.” Based on their responses, participants were classified into categories of low, medium, or high levels of knowledge.

For data analysis, the Statistical Package for the Social Sciences (SPSS) software, Version 26, was utilized. Descriptive statistics were computed to outline the age distribution, smoking duration, and various demographic characteristics such as socioeconomic status, residential status, educational level, marital status, occupational status, religion, employment status, and monthly income. Additionally, the frequency of cigarette consumption per day and the number of smokers in each household were analyzed, along with the levels of knowledge regarding the risks of smoking.

Table 1: Effects of Smoking and Passive Smoking: Yes, No, and Uncertain

S. No.	Questions	Answers		
		Yes	No	Don't Know
1	Is smoking harmful?			
2	Does smoking cause cancer?			
3	Does smoking cause heart diseases?			
4	Does smoking cause lung disease?			
5	Does smoking cause stained teeth?			
6	Does smoking have ill effects on fetus?			
7	Does smoking cause premature aging?			
8	Does occasional smoking have ill effects?			
9	Is smoking associated with infertility?			
10	Is smoking association with osteoporosis?			
11	Does smoking cause lung cancer in non-smokers?			
12	Does smoking have more vulnerable effects on children than adults?			
13	Does passive smoking have ill effects on children?			
14	Does passive smoking cause lung disease in children?			
15	Does smoking have a bad influence on children?			

RESULTS

The study involved a cohort of 126 female smokers with an average age of 31.25 years (SD = 13.55 years). The majority, 66.7%, were aged between 18 to 30 years, with the remainder, 33.3%, being older than 30 years. The duration of smoking averaged 5.88 years, with 60.3% of participants reporting a smoking history of 1 to 6 years, and 39.7% having smoked for more than 6 years.

From a socioeconomic perspective, 29.4% of the participants were categorized as lower class, 45.2% as middle class, and 25.4% as upper class. A significant proportion of the participants, 88.1%, were married, and 92.1% identified as Muslims. In terms of education, 56.3% had attained secondary education, while 13.5% were illiterate. Geographically, 45.2% resided in urban areas, while 54.8% lived in rural settings. The employment status of the group showed that a vast majority, 83.3%, were unemployed.

The assessment of the participants' knowledge of the risks and complications associated with cigarette smoking revealed that 54.8% displayed low knowledge levels, 30.2% medium, and 15.1% high knowledge. This distribution is elaborated upon in the accompanying tables. Analysis of the data demonstrated a significant disparity in knowledge levels based on marital status; unmarried female smokers exhibited higher knowledge levels compared to their married counterparts ($p=0.0001$). However, no significant differences in knowledge were observed when examining other demographic factors such as age, duration of smoking, socioeconomic background, educational attainment, place of residence, occupational status, and religion. This suggests that awareness of the risks associated with smoking is relatively uniform across these variables.

Table 2: Demographic Characteristics of Study Participants (n=126)

Variable	Frequency%
Age, Mean \pm SD= 31.25 \pm 13.55 Years	
18-30 Years	84 (66.7)
>30 Years	42 (33.3)
Duration of Cigarette Smoking, Mean \pm SD= 5.88 \pm 3.94 Years	
1-6 Years	76 (60.3)
>6 Years	50 (39.7)
Socioeconomic Status	
Lower Class	37 (29.4)
Middle Class	57 (45.2)
Upper Class	32 (25.4)
Marital Status	
Married	111 (88.1)
Unmarried	15 (11.9)
Educational Status	
Illiterate	17 (13.5)
Primary	23 (18.3)
Secondary	71 (56.3)
Higher	15 (11.9)
Residential Status	
Urban	57 (45.2)
Rural	69 (54.8)
Occupational Status	
Employed	21 (16.7)
Unemployed	105 (83.3)
Religion	

Variable	Frequency%
Muslims	116 (92.1)
Non-Muslims	10 (7.9)
Knowledge Level	
Low	69 (54.8)
Medium	38 (30.2)
High	19 (15.1)

Table 3: Characteristics of Female Smokers Based on Knowledge Levels of Cigarette Smoking Risks and Complications (n=126)

Variables, n (%)		Knowledge Level			P-Value
		Low (n=69)	Medium (n=38)	High (n=19)	
Age Group	18 – 30 Years	48 (57.1%)	26 (31.0%)	10 (11.9%)	0.368
	>30 Years	21 (50.0%)	12 (28.6%)	9 (21.4%)	
Duration of Cigarette Smoking	1 – 6 Years	44 (57.9%)	20 (26.3%)	12 (15.8%)	0.510
	>6 Years	25 (50.0%)	18 (36.0%)	7 (14.0%)	
Socioeconomic Status	Lower Class	20 (54.1%)	11 (29.7%)	6 (16.2%)	0.893
	Middle Class	31 (54.4%)	19 (33.3%)	7 (12.3%)	
	Upper Class	18 (56.3%)	8 (25.0%)	6 (18.8%)	
Marital Status	Married	66 (59.5%)	34 (30.6%)	11 (9.9%)	0.0001
	Unmarried	3 (20.0%)	4 (26.7%)	8 (53.3%)	
Educational Status	Illiterate	13 (76.5%)	3 (17.6%)	1 (5.9%)	0.406
	Primary	13 (56.5%)	8 (34.8%)	2 (8.7%)	
	Secondary	36 (50.7%)	23 (32.4%)	12 (16.9%)	
	Higher	7 (46.7%)	4 (26.7%)	4 (26.7%)	
Residential Status	Urban	32 (56.1%)	18 (31.6%)	7 (12.3%)	0.724
	Rural	37 (53.6%)	20 (29.0%)	12 (17.4%)	
Occupational Status	Employed	11 (52.4%)	7 (33.3%)	3 (14.3%)	0.941
	Unemployed	58 (55.2%)	31 (29.5%)	16 (15.2%)	
Religion	Muslims	64 (55.2%)	34 (29.3%)	18 (15.5%)	0.748
	Non-Muslims	5 (50.0%)	4 (40.0%)	1 (10.0%)	

DISCUSSION

Cigarette smoking presents profound health risks for women, extending beyond mere physical harm to include serious conditions such as lung cancer, cardiovascular diseases, and respiratory illnesses (14). Moreover, smoking during pregnancy is linked to numerous adverse outcomes including preterm labor, congenital anomalies, stillbirth, low birth weight, and impaired lung function in infants, which critically affect both maternal and infant health (15). Despite the extensive documentation of smoking's deleterious effects, the persistence of smoking among women underscores a critical public health challenge.

The evaluation of knowledge levels concerning the risks and complications associated with cigarette smoking among female smokers is crucial for the formulation of effective public health strategies aimed at mitigating smoking-related health issues. The study revealed significant variations in knowledge levels, with some women displaying a comprehensive understanding of the health hazards, while others possessed minimal or no awareness, potentially perpetuating harmful misconceptions. Factors such as

educational attainment, socioeconomic status, cultural norms, and access to health information play pivotal roles in shaping these knowledge disparities.

The increase in awareness regarding smoking risks among female smokers does not uniformly translate into cessation behaviors, highlighting the complex relationship between awareness, behavioral change, and addiction (16). Public health initiatives and informational campaigns, including warning labels on cigarette packages, have significantly contributed to knowledge dissemination. However, the efficacy of these measures in compelling cessation is limited by factors such as addiction, social influences, and the use of smoking as a coping mechanism (17,18).

The study further identified disparities in knowledge levels across different demographic segments of female smokers. Women from marginalized communities or those with lower educational levels often face barriers to accessing reliable health information, resulting in significant knowledge gaps. These findings suggest that addressing these disparities necessitates targeted interventions that are tailored to specific demographic profiles. Such initiatives could include community-based educational programs, provision of accessible resources, and culturally sensitive health messaging to ensure comprehensive reach and impact.

Healthcare professionals also hold a vital role in the smoking cessation process by educating women on the health impacts of smoking and supporting them through cessation efforts. The integration of smoking cessation counseling into routine healthcare interactions could significantly enhance both knowledge and behavioral change among female smokers.

Reflecting on the study's strengths, the comprehensive collection of demographic and smoking-related data enabled a detailed analysis of knowledge levels across various subgroups, enhancing the understanding of factors influencing these levels. However, the study's limitations include its cross-sectional design, which restricts the ability to ascertain causal relationships between knowledge levels and smoking behaviors. Additionally, the use of self-reported data may introduce bias, affecting the accuracy of the findings.

In conclusion, while the study underscores the importance of education and targeted public health interventions in reducing smoking rates among female smokers, it also highlights the need for ongoing research to further elucidate the dynamics of knowledge acquisition and behavior modification in smoking cessation efforts.

CONCLUSION

In conclusion, the study reveals that over half of the female smokers exhibit low awareness of the risks and complexities associated with tobacco use. This highlights a critical need for enhanced educational and health-related interventions specifically designed to elevate awareness and reduce smoking prevalence among women. Effective strategies should include targeted education programs that address the specific informational deficits identified, along with comprehensive support systems to facilitate smoking cessation. By focusing on improving knowledge and providing support, public health initiatives can significantly impact smoking behavior and contribute to better health outcomes for women.

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