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Frequency of E-cigarette and Cigarette Smoking and Associated Health Symptoms among the Youth

[1] Dr Laraib Khan, [2] Dr Fatima Khan, [3] Dr. Nisha Parmani, [4] Dr Kanza Fatima, [5*] Dr Ali Hamza, [6] Dr Umer Khalid, [7] Dr Ahmed Asif, [8] Dr Ahmad Subhan Asad

[5*] Islamic International Medical College

alihamza7877@gmail.com

https://orcid.org/0009-0007-1663-2650

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Abstract

Purpose: To determine the prevalence of e-cigarette and traditional cigarette use among Pakistani youth and to identify the associated health symptoms.

Methodology: This cross-sectional study was conducted using a sample size of 178 respondents aged 15-25, selected through non-probability convenience and snowball sampling methods. Data were collected over five days (1st September 2023 to 6th September 2023) using a questionnaire adapted from validated studies (GATS and YUPESS) and distributed via Google Forms.

Findings: The study population consisted of 178 respondents, with a gender distribution of 72.1% males and 27.9% females. Among the respondents, 41.2% had tried either e-cigarettes or traditional cigarettes. The age of first smoking experience varied, with many trying their first cigarette between ages 15 and 18. Significant health symptoms associated with smoking included respiratory issues, general malaise, and worsened asthma.

Unique Contribution to Theory, Policy and Practice: The research highlights the prevalence and health impacts of e-cigarette and traditional cigarette use among Pakistani youth. It underscores the need for targeted public health interventions and stricter regulations to mitigate these health risks.

Keywords: *E-Cigarettes, Traditional Cigarettes, Youth Smoking, Health Symptoms, Pakistan, Cross-Sectional Study*

Introduction

E-cigarettes have surged in popularity, particularly among young people, raising significant health concerns. Initially marketed as a safer alternative to traditional cigarettes, e-cigarettes have been linked to various health issues, including lung irritation, exacerbation of asthma, and even E-cigarette or Vaping Product Use-Associated Lung Injury (EVALI) [1]. Despite their perceived lower risk, e-cigarettes deliver nicotine and other harmful substances that can lead to addiction and other health problems [2].

In Pakistan, tobacco use among the youth is a growing public health issue. The country has seen a rise in both traditional cigarette and e-cigarette use among adolescents and young adults [3]. This trend is alarming given the lack of comprehensive regulations governing e-cigarette use and the aggressive marketing strategies employed by tobacco companies targeting young people [4].

This study aims to bridge the knowledge gap regarding the prevalence and health effects of e-cigarettes and traditional cigarettes among Pakistani youth. By understanding these patterns, policymakers can develop more effective strategies to combat youth smoking and protect public health. This research seeks to determine the prevalence of e-cigarette and traditional cigarette use among young people in Pakistan and identify the associated health symptoms. Furthermore, the study aims to provide evidence-based recommendations for public health interventions and regulatory measures to address this issue.

Previous studies have highlighted the various health risks associated with e-cigarette use. For instance, a review by Grana et al. (2014) indicated that e-cigarettes are not without health risks and can lead to nicotine addiction and other adverse health effects [1]. Additionally, a study by Adkison et al. (2013) found that the use of electronic nicotine delivery systems (ENDS) is prevalent among young adults and can have significant health implications [2].

Given the rising popularity of e-cigarettes and the persistent use of traditional cigarettes among Pakistani youth, there is a critical need for research that examines the health impacts and prevalence of these behaviors. This study provides a comprehensive analysis of the current state of e-cigarette and traditional cigarette use among Pakistani youth, contributing valuable insights for future public health initiatives.

Methodology

Study Design: This research adopts a cross-sectional design to capture a snapshot of smoking behaviors and health symptoms among the youth in Pakistan.

Sample Size: The required sample size was calculated as 341 using the Raosoft Online Sample Size Calculator with a 95% confidence interval and a 5% margin of error. However, the actual sample size collected was 178 respondents.

Sampling Type: Non-probability convenience and snowball sampling methods were employed. These methods were chosen due to their efficiency in gathering data from a hard-to-reach population within a short time frame. However, it is acknowledged that these methods introduce potential biases due to the non-random selection of participants.

Study Duration: Data collection took place over five days, from 1st September 2023 to 6th September 2023.

Inclusion Criteria: Respondents aged between 15-25 years.

Residents of Pakistan.

Exclusion Criteria: Respondents outside the age range of 15-25 years.

Data Collection: Data were collected using a structured questionnaire adapted from pre-tested and validated studies, including the Global Adult Tobacco Survey (GATS) and the Youth Tobacco Survey (YTS). The questionnaire was designed to gather information on demographic characteristics, smoking behaviors, and associated health symptoms.

The questionnaire was distributed via Google Forms, leveraging messaging apps to target colleges in the Rawalpindi/Islamabad twin city region. This method ensured broad dissemination and facilitated the collection of a diverse sample within the study's limited timeframe.

Variables Measured: Demographic Information: Age, gender, educational status, and residential area.

Smoking Behaviors: Frequency and duration of e-cigarette and traditional cigarette use, age of initiation, and reasons for smoking.

Health Symptoms: Respiratory issues, general malaise, and other self-reported health symptoms associated with smoking.

Data Analysis: Collected data were analyzed using SPSS software. Descriptive statistics were employed to summarize the demographic characteristics and smoking behaviors of the respondents. Chi-square tests were used to assess the association between smoking behaviors and reported health symptoms. A p-value of <0.05 was considered statistically significant.

Results

Demographics

The study population consisted of 178 respondents aged 15-25. The gender distribution was skewed, with 72.1% males and 27.9% females.

Table 1: Demographic Characteristics of Respondents

Characteristic	Number (n=178)	Percentage (%)
Gender		
Male	128	72.1
Female	50	27.9
Age Group		
15-17 years	30	16.9
18-20 years	48	27.0
21-23 years	60	33.7
24-25 years	40	22.4

Age Distribution

The age distribution among participants showed a fairly even spread across the targeted age range, with a slight peak in the 21-23 age group.

Table 2: Age Distribution of Respondents

Age Group	Number (n=178)	Percentage (%)
15-17 years	30	16.9
18-20 years	48	27.0
21-23 years	60	33.7
24-25 years	40	22.4

Usage Frequency

Among the respondents, 41.2% had tried either e-cigarettes or traditional cigarettes. The age of first smoking experience varied, with many trying their first cigarette between ages 15 and 18.

Table 3: Usage Frequency of E-cigarettes and Traditional Cigarettes

Usage Category	Number (n=178)	Percentage (%)
Tried Smoking	73	41.2
Never Tried	105	58.8

Age of First Smoke

Table 4: Age of First Smoking Experience

Age Group of First Smoke	Number (n=73)	Percentage (%)
15-17 years	40	54.8
18-20 years	20	27.4
21-23 years	13	17.8

Health Symptoms

Significant health symptoms associated with smoking included respiratory issues, general malaise, and worsened asthma.

Table 5: Reported Health Symptoms Among Smokers

Health Symptom	Number (n=73)	Percentage (%)
Respiratory Issues	50	68.5
General Malaise	45	61.6
Worsened Asthma	20	27.4

Discussion

The study reveals a high prevalence of smoking among Pakistani youth, with significant gender disparities. The findings indicate that both e-cigarettes and traditional cigarettes are widely used among young people, with a substantial portion of the study population having tried smoking by the age of 18. The early initiation of smoking is particularly concerning given the addictive nature of nicotine and the potential for long-term health consequences.

The gender distribution of smokers shows a higher prevalence among males compared to females. This aligns with previous research indicating that smoking behaviors are more common among males in many cultures, including Pakistan. The skewed gender ratio may be influenced by societal norms and the greater social acceptability of smoking among males.

The study identified several health symptoms associated with smoking, including respiratory issues, general malaise, and worsened asthma. These symptoms are consistent with existing literature on the adverse health effects of smoking. For instance, respiratory problems are well-documented among smokers, and e-cigarettes have been shown to cause lung irritation and exacerbate conditions like asthma [1, 2]. The prevalence of these symptoms among young smokers highlights the immediate health risks posed by both traditional and e-cigarettes.

The social and psychological factors influencing smoking behaviors among youth are critical areas for intervention. Peer pressure, targeted advertising by tobacco companies, and misconceptions

about the relative safety of e-cigarettes compared to traditional cigarettes contribute to the initiation and continuation of smoking among young people. Addressing these factors through public health campaigns and education is essential for reducing smoking rates among youth [6].

Comprehensive regulations and public health policies are necessary to curb the rise of smoking among Pakistani youth. The study underscores the need for stricter regulations on the sale and marketing of e-cigarettes, similar to those for traditional tobacco products. Additionally, educational programs in schools and communities should emphasize the health risks associated with smoking and provide resources for cessation support [7].

Public health interventions should be tailored to address the specific needs and behaviors of young people. For example, interventions could focus on debunking myths about the safety of e-cigarettes and highlighting the long-term health risks associated with nicotine addiction. Social media campaigns and peer-led initiatives may also be effective in changing attitudes toward smoking among youth [8].

The study's limitations include a relatively small sample size and the use of non-random sampling methods, which may not fully represent the broader youth population in Pakistan. Future research should aim to include a larger and more diverse sample to better understand the smoking behaviors and health impacts among different subgroups of youth. Additionally, longitudinal studies are needed to examine the long-term effects of smoking and the effectiveness of various intervention strategies [9].

In conclusion, the high prevalence of smoking among Pakistani youth and the associated health symptoms call for urgent public health action. Policymakers, educators, and healthcare providers must work together to implement comprehensive strategies that address the root causes of smoking and support young people in leading healthier lives.

Conclusion

The research highlights the significant prevalence of e-cigarette and traditional cigarette use among Pakistani youth and the associated health symptoms. The findings indicate that a substantial portion of the youth population has engaged in smoking by the age of 18, with notable gender disparities in smoking behaviors. The early initiation of smoking is particularly alarming given the addictive nature of nicotine and the potential for long-term health consequences.

The study identified several health symptoms associated with smoking, including respiratory issues, general malaise, and worsened asthma. These symptoms underscore the immediate health risks posed by both e-cigarettes and traditional cigarettes, which are consistent with global research on the adverse effects of smoking.

Addressing the high prevalence of smoking among youth requires comprehensive public health interventions and stricter regulatory measures. Public health campaigns should focus on debunking

misconceptions about the safety of e-cigarettes and emphasize the health risks associated with all forms of smoking. Educational programs in schools and communities should provide resources for smoking cessation and promote healthy lifestyle choices.

Policymakers need to prioritize the creation of stringent regulations governing the sale and marketing of e-cigarettes, similar to those for traditional tobacco products. These regulations should aim to reduce the accessibility of these products to minors and curb the influence of targeted advertising by tobacco companies.

The study's limitations, including a relatively small sample size and non-random sampling methods, highlight the need for further research. Future studies should include larger and more diverse samples to better understand the smoking behaviors and health impacts among different subgroups of youth. Longitudinal research is also necessary to examine the long-term effects of smoking and the effectiveness of various intervention strategies.

In conclusion, the high prevalence of smoking among Pakistani youth and the associated health symptoms call for urgent and coordinated public health action. By implementing comprehensive strategies that address the root causes of smoking and support young people in making healthier choices, policymakers, educators, and healthcare providers can work together to reduce smoking rates and improve public health outcomes.

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