



Article

# Smoking Trends Among Secondary Students in Kirkuk

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**Abstract:** Smoking is a major contributor to health disparities, associated with numerous illnesses including cancer and coronary heart disease. Despite extensive research on the health consequences of smoking, there remains a gap in understanding smoking behaviors among adolescents. This study investigates smoking behaviors and related factors among secondary school students in Kirkuk City. Employing a cross-sectional design, a sample of 119 students was surveyed using simple random sampling. Results reveal a prevalence of daily smoking among adolescents, indicating a habitual pattern, alongside intermittent smoking behaviors suggesting experimentation or occasional use. These findings underscore the varied smoking patterns among adolescents and highlight the need for targeted interventions to address smoking prevalence and promote adolescent health.

**Keywords:** Health risks – Family – Peer – Smoking Behavior.

## 1. Introduction

Cigarette smoking remains the most common type of tobacco use worldwide. The prevalence of smoking among men is much higher than among women worldwide. Mahmood et al., 2018 [1]. Smoking is the main avoidable cause of mortality. With almost 7 million fatalities annually, the smoking pandemic is one of the most serious public health dangers the world has ever faced. Of those fatalities, about 6 million are directly related to tobacco use, and over 890,000 are caused by passive smoking. Tobacco use is predicted to surpass all other causes of mortality and disability worldwide by 2030, accounting for about 8 million deaths annually, primarily in developing nations Zaatari & Bazzi, 2018 [2]. The World Health Organization advises expanding health initiatives for teenagers, as they are at a crucial stage of life where they often pick up experiences, knowledge, and abilities that have. However, the arrival of tobacco in the 17th century introduced a deadly and addictive aspect to smoking. Since then, numerous individuals have become hooked on smoking, prompting negative health consequences (Albany et al., 2019). By the 20th century, the health hazards of smoking were beginning to be realized. Today, cigarette smoking is recognized as the single most important source of preventive morbidity and premature mortality in the United States. Salih, 2019[3]. Although some individuals do admit to the increased risk of health problems, many smokers fail to realize the true severity of the health risks that are associated with smoking. This essay will discuss the health effects of smoking on adults and young people. It will also refer to the marketing strategies used by tobacco companies, the day-to-day realities of smoking, and ways that one can kick the habit Gritz et al., 2020 [4]. Smoking is when people breathe in the smoke

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from burning tobacco in cigarettes, pipes, or cigars. The smoke goes deep into the lungs and spreads throughout the body through the blood. Cigarettes are mostly made of shredded tobacco leaves wrapped in paper. People usually take puffs on a cigarette, which is inhaling the smoke and then breathing in air to mix it. This helps make the smoke less harsh. When testing how smoking affects health, animals are usually exposed to pure cigarette smoke. Rey-Brandariz et al., 2023 [5]. This outlines the crux of what is considered to be 'smoking' today. The act encompasses a wide range of behaviors delivered through the consumption of tobacco products, where the end result is always the intake of smoke through combustion or pyrolysis of the product. Lam et al., 2023 [6]

## 2. Materials and Methods

A cross-sectional study design was used in this study "Simple Random" sample was used for student at secondary school in Kirkuk. The study included (119) student. Had been used through the present study with the application of approach for participant group The study was carried out on the governmental secondary schools in Kirkuk City; region of Iraq. The study has conducted at (17) secondary schools. In order to obtain a representative sample, 119 students were chosen as size of study sample at secondary schools in Kirkuk city. according to the following sampling procedure: Based on an analysis of the students' needs and the relevant scientific literature as well as earlier studies, Experts in various fields evaluate the content, and changes are made based on their recommendations and suggestions. To assess the effectiveness of the study on health risks of smoking and its consequences of Secondary Schools in Kirkuk City, the researcher creates a questionnaire interview form for data collection, A panel of experts evaluates the study instruments and program's content validity; the tools' dependability was assessed using a test-retest methodology and data from the evaluation of 10 students. for assesses the degree to which items in a questionnaire or scale are interrelated and measure the same construct, the reliability coefficient was 0.8. The Statistical Package (SPSS) ver. 26.0 was used to analyse and evaluate the study's findings using statistical data analysis methods: Frequencies, percentages, the mean of the score (MS), , the standard deviation (SD), are used in descriptive analysis of data. Inferential data analysis is used to draw conclusions. The Independent-Samples t-test and Matched Paired-Samples t-test are used to compare means for two groups of cases.

### Statistical Analysis

Utilizing the statistical software (SPSS) ver. (26.0), the following statistical data analysis techniques were employed to analyses and evaluate the study's findings.

## 3. Results

The table (1) illustrates the secondary school student with regards to the age group , most of the student is between (15-16 years) consist of 38 (31.9%).in relations of schooling grades Subject has recorded the highest percentage which are accounted for 49 (41.2%) six intermediate class. The father education level of the student shows that, the most of them graduated from preparatory school graduation 56 (47.1 %) . the mother education level of the student shows that, the most of them graduated from preparatory school graduation 40 (33.6%). in connection to daily pocket money. The subject has recorded the highest proportion that are accounted 61 (51.2%). in regard to income source. The subject has recorded the highest proportion that are accounted 80 (67.2%).

**Table 1. Distribution of study sample (n=119) according to Demographical Characteristics of The study Sample**

| Demographical Characteristics | Classes                     | No | %     |
|-------------------------------|-----------------------------|----|-------|
| Age Groups<br>Years           | 13 -14                      | 4  | 3.36  |
|                               | 15-16                       | 38 | 31.9  |
|                               | 17-18                       | 77 | 64.70 |
| Schooling<br>grades           | First intermediate class    | 0  | 0     |
|                               | Second intermediate class   | 4  | 3.36  |
|                               | Third intermediate class    | 3  | 2.5   |
|                               | Fourth intermediate class   | 35 | 29.4  |
|                               | Fifth intermediate class    | 28 | 23.5  |
|                               | Sixth intermediate class    | 49 | 41.2  |
| Father Level of<br>Education  | read and write              | 20 | 16.8  |
|                               | Primary School graduate     | 10 | 8.4   |
|                               | Preparatory School graduate | 56 | 47.1  |
|                               | Secondary School graduate   | 12 | 10.1  |
|                               | University graduate         | 21 | 17.6  |
| Mother Level of<br>Education  | read and write              | 27 | 22.7  |
|                               | Primary School graduate     | 18 | 15.1  |
|                               | Preparatory School graduate | 40 | 33.6  |
|                               | Secondary School graduate   | 30 | 25.2  |
|                               | University graduate         | 4  | 3.4   |
| Daily Pocket Money            | 1000 - 2000                 | 61 | 51.2  |
|                               | 3000 -4000                  | 39 | 32.8  |
|                               | 5000 - 6000                 | 14 | 11.7  |
|                               | 7000 and more               | 5  | 4.2   |
| Income Source                 | Parents/Family Member       | 80 | 67.2  |
|                               | Self-Work                   | 39 | 32.8  |

The table (2) shows that 61 of students, and their percentage amounted to more than half of the sample (51.3%), were completely aware regarding health risks of smoking and its consequence's, while 40 of student some what aware (33.6% ) and only 18 of student don't aware and consistent (15.1% )

**Table 2. Awareness of the health risks of smoking and its consequences of the study samples (n=119)**

| Items            | No  | %    |
|------------------|-----|------|
| Completely Aware | 61  | 51.3 |
| Somewhat Aware   | 40  | 33.6 |
| Not at all       | 18  | 15.1 |
| Total            | 119 | 100  |

The table (3) illustrates the item related to secondary student Causes of Start Smoking in relations to Imitation to peers shows that ,the majority of study sample were 31 (26%), while 21 (17.6%) student start smoking as an experience, and only 16 (13.4% ) of student believed it was to relive stress .

**Table 3. Distribution of study sample (n=119) for the Causes of Start Smoking**

| Items                                  | No | %    |
|--|----|------|
| Don't Know                             | 0  | 0    |
| To be armature                         | 2  | 0.95 |
| To be trendy                           | 2  | 0.95 |
| To be accepted among peers             | 8  | 3.8  |
| Effect of media and advertising        | 8  | 3.8  |
| To be stylish                          | 12 | 10.5 |
| Imitation to a family member           | 12 | 10.5 |
| Releasing stress (other psych reasons) | 16 | 13.4 |
| As an experience                       | 21 | 17.6 |
| Imitation to peers                     | 31 | 26   |

The table (4) illustrates the item related to secondary student smoking behavior in relations to year s of smoking shows that ,the most of them were (1 year ) smoking accounted for 59 (49.5%). The period during smoking of the study sample shows that the most of them were daily smoking and accounted 44 ( 37%) . The study sample's revealed that the majority of Type of Smoking were 52 ( 43.7%) smoking electronic cigarette. the Acquiring of first smoking of the study sample shows that the most of them were 67 (56.3%) given by another peer.

**Table 4. Distribution of study sample (n=119) for the Smoking behavior**

| Items                      | Classes                  | No | %    |
|----------------------------|--------------------------|----|------|
| Years of smoking           | 1 years                  | 59 | 49.5 |
|                            | 2 years                  | 36 | 30.3 |
|                            | 3 years and more         | 24 | 20.1 |
| Period during smoking      | Daily                    | 44 | 37   |
|                            | Sometimes (Occasionally) | 36 | 30.3 |
|                            | Separate times, weekly   | 24 | 20.2 |
|                            | Rarely                   | 15 | 12.5 |
| Type of Smoking            | Electrical Cigarette     | 52 | 43.7 |
|                            | Hand Rolled Cigarette    | 44 | 37   |
|                            | Hookah (Shisha)          | 23 | 19.3 |
| Acquiring of First Smoking | Given                    | 67 | 56.3 |
|                            | Bought                   | 52 | 43.7 |

#### 4. Discussion

The findings of the study regarding the awareness of adolescents about the health risks of smoking and its consequences are promising. The majority of the respondents, have a high level of awareness about the risks and consequences of smoking, This is a significant percentage, as it indicates that these students have a good understanding of the negative impact of smoking on their health. Moreover, a further 33.6% of the respondents have some level of awareness about the health risks of smoking. While this percentage is

lower than those with a high level of awareness, it still suggests that these students have some knowledge about the potential harm caused by smoking. However, it is concerning that 15.1% of the respondents are completely ignorant of the health risks of smoking and its consequences. This highlights the need for increased education and awareness campaigns about smoking in secondary schools in Kirkuk city. It is essential to ensure that all adolescents have access to accurate information about the health risks of smoking and the potential consequences of smoking. Overall, the study's findings suggest that while there is a high level of awareness about the health risks of smoking among adolescents, there is still a need for further education and awareness campaigns. It is crucial to continue to promote healthy behaviors and prevent smoking among adolescents to reduce the prevalence of smoking and its associated health risks. Guo et al., 2022 [7]. The findings suggest that peer pressure plays a significant role in this behavior, with a majority of respondents citing imitation of friends or peers as the reason for starting smoking. This highlights the importance of peer influence in shaping adolescent behavior and the need for interventions that address peer pressure in smoking prevention programs. The study also revealed that family influence is another significant factor in adolescents' smoking behavior. While a smaller percentage of respondents cited imitation of family members as a reason for starting smoking, this finding underscores the importance of parental involvement in smoking prevention efforts. Parents can serve as role models for their children by not smoking or quitting smoking if they currently smoke.

This finding underscores the need for smoking prevention programs that address the psychological factors that contribute to smoking behavior, such as stress management and coping strategies. The study's findings also suggest that smoking is often seen as a way to appear mature or trendy. The research provides important insight into the factors that contribute to an adolescent's decision to start smoking. The findings highlight the importance of peer pressure, family influences, psychological factors, and social and cultural factors in smoking behavior. Addressing these factors through tobacco prevention programs can reduce youth smoking rates and promote healthy behaviors. Leshargie et al., 2019 [8]. The majority of students who have been smoking for one year suggests that smoking has become a regular habit for them during their adolescence. This finding is concerning as it indicates that smoking is not just a temporary experiment for these students but has become a part of their daily routine. (30.3 %) of student smoked for two years. The fact that minority (20.1%) of students have smoked for three year and more This trend could also indicate that smoking may become more deeply ingrained as an addiction over time as students continue to smoke for longer periods.

The study's results also highlight the need for interventions that target adolescents at an early stage to prevent smoking initiation. Carrión-Valero et al., 2023 [9] Smoking among adolescents in Kirkuk city is a prevalent issue, with many students having smoked for two years or more. Social factors such as peer pressure and family environment play a role in influencing smoking behavior. Interventions such as school-based programs, campaigns, and parental support are needed to prevent smoking initiation and promote healthy habits among adolescents. It is important to educate students about the dangers of smoking and provide support for quitting in order to discourage smoking among adolescents. The study's findings regarding the frequency of smoking among adolescents in Kirkuk city's secondary schools are noteworthy. The study's sample consisted of both smoking and non-smoking adolescents, and the results showed that the majority of the smoking sample (44 students, of the total research sample) smoked daily. This finding highlights the prevalence of daily smoking among adolescents in Kirkuk city that smoking has become a regular part of their daily routine. Moreover, the study revealed that a significant portion of the smoking sample (24 students, of the total research sample) smoked sporadically throughout the week. This finding suggests that some adolescents may be experimenting with smoking or may smoke only on certain occasions, such as social events or parties. Interestingly, the study also found that a considerable number of

students (36 students, of the total research sample) smoked either separately or at relatively distant periods.

This finding suggests that some adolescents may not smoke daily but still engage in smoking behavior on occasion. Finally, the study found that a small percentage of students (15 students, of the total research sample) rarely smoked. This finding suggests that some adolescents may be trying smoking for the first time or may be trying it out of curiosity but do not smoke regularly. Overall, the study's findings regarding the frequency of smoking among adolescents in Kirkuk city's secondary schools suggest that daily smoking is prevalent, but some adolescents may also smoke sporadically or at relatively distant periods. The study's findings also highlight the importance of addressing smoking behavior among adolescents, as it can lead to long-term health consequences. Carrión-Valero et al., 2023 [9]The findings of this study reveal that electronic cigarettes are the most popular form of smoking among adolescents in secondary schools in Kirkuk City. A significant proportion of the research sample reported smoking electronic cigarettes, which is higher than the percentage of students who smoke rolled (regular) cigarettes (37%) and shisha (hookah) (19.3%), This trend towards electronic cigarettes may be due in part to their perceived safety, as they are marketed as a healthier alternative to traditional cigarettes. However, recent studies have shown that electronic cigarettes still contain nicotine and other chemicals that can harm adolescent health, including increased risk of addiction and respiratory problems. Furthermore, the popularity of electronic cigarettes among adolescents may also be attributed to their availability and ease of use. They can be easily purchased online or in convenience stores, and their sleek design and variety of flavors make them appealing to young people.

## 5. Conclusion

This study highlights that electronic cigarettes are becoming increasingly popular among adolescents in secondary schools compared to traditional cigarettes or shisha (hookah). While electronic cigarettes are marketed as a healthier alternative due their perceived safety compared to traditional cigarettes; recent studies have shown that they still contain nicotine which can lead to addiction among adolescents as well as respiratory problems in some cases; hence it's essential that adolescents are educated about their health risks. Schools and communities should implement effective prevention strategies that address the root causes of smoking behavior among adolescents and promote healthy behaviors to prevent smoking among young people. Perikleous et al., 2018 [10].None of the participants chose the third option, stating that there was no specific way to start smoking. Most participants who started smoking were told by someone else, highlighting the role of peers in adolescent smoking. However, the fact that a small number of participants started smoking on their own suggests that some adolescents may become addicted to cigarettes for their own reasons. Findings suggest that both family and peers influence adolescent behavior. Although peers appear to play an important role in smoking initiation, certain factors contribute to adolescent smoking behavior. In future studies, it is necessary to determine the relationship between these factors in order to better understand smoking behaviors in adolescents and to develop effective strategies to prevent smoking and encourage cessation. Lin et al., 2023[11].

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